

An Exploration of the Role of Reflective Practice in Entrepreneurial Learning through the Mini-enterprise Experience in Botswana Junior Secondary Schools

Gosaitse Ezekiel Solomon

(219026116)

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Supervisor: Prof. Suriamurthee M. Maistry

DECLARATION

I **Gosaitse Ezekiel Solomon** declare that:

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SUPERVISOR CERTIFICATE

I, Professor Suriamurthee M. Maistry, as the candidate's supervisor agree to the submission of this dissertation.

Supervisor's signature:_____ Date: _____

DEDICATION

This work is a dedication to my late beloved mother, Princess Solomon. I take inspiration from the stories of our childhood when she raised us and taught us to be resourceful, respectful, and love education and learning in general. The lessons were learned through both happy moments and difficult times when we struggled with life, but her entrepreneurial, self-reliant mindset, great work ethic and positive outlook on life kept her going even with very little education. Her untimely death when I was writing my final examinations for the Botswana General Certificate of Secondary Education (BGCSE), the same year that she was to also write her Standard Seven in non-formal adult education, has kept me pursuing personal development regardless of the strong current of circumstances of life conspiring against me. I guess when she always said, “Let books be your friends”, I took it almost literally. Besides God, they are one friend who sticks close and sharpens the mind of a man, inspires him with hope beyond belief, and forever sets apart the trajectory of his life. Writing these words at the end of my PhD journey is testimony to the timeless wisdom of her words that have steered my life in the past few decades.

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ABSTRACT

This study explores how learners experience reflective learning in the mini-enterprise projects (MEPs) of the Botswana Junior Secondary School Business Studies curriculum. It addresses the lacuna in entrepreneurship education regarding reflective learning from experience-based entrepreneurial activities such as mini-companies at the secondary education level. The purpose of this qualitative study was to explore how Business Studies learners participating in the MEPs at the junior secondary education level experience reflective learning in the mini-enterprise experience.

A pragmatism-oriented hermeneutic phenomenological theoretical framework and a conceptual model for the entrepreneurial reflective learning process were used to research reflection from a holistic learning perspective, through transactive interaction and adjustment to the world. This approach drew primarily from the philosophies of Heidegger, Merleau-Ponty, and Dewey, based on their ability to take into account the cognitive, embodied, enactive, affective, social, and context situatedness of learning.

The study employed a hermeneutic phenomenological case study design that involved three junior secondary schools in Gaborone, Botswana, to allow for detailed, in-depth descriptions and interpretations of learners' experiences of reflection. The study participants were seven Business Studies teachers with experience in supervising learners in the MEP, and 13 former Business Studies learners who had participated in the MEP in the last five years. The participants were selected through purposive sampling and snowball sampling strategies. Data was generated through individual interviews and analysed thematically.

The findings revealed that at the planning stage, learners experience anticipatory reflection; during the operation phase, they engage in reflection in action; and at the project completion phase, they engage in written reflection on action. Reflection was revealed to be a participatory process involving collective sense-making and action, occurring primarily through the platform of meetings. In this participatory process, the teachers' role in facilitating reflection was found to be invaluable – yet not satisfactory. Reflection was also found to be triggered by critical incidents and epistemic emotional experiences. Finally, learners engage in an intuitive reflective coping process using varying degrees of Dewey's inquiry process. The study contributes to a knowledge gap about reflection in entrepreneurship education at the secondary education level and may be useful to entrepreneurial education researchers, educators, learners, and policymakers. It highlights gaps in the conceptualisation of the MEP from the curriculum design perspective, concerning reflection to make learning meaningful. This is important because reflective learning at this level remains under-researched, and challenges remain on how to teach and incorporate it in experience-based entrepreneurial learning activities, despite its significance. Future research may focus on researching ways in which teachers can effectively teach and facilitate reflection.

Keywords

Entrepreneurship, entrepreneurship education, entrepreneurial learning, experiential learning, holistic learning, mini-enterprise projects, reflective learning, critical reflection, phenomenology.

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LIST OF ABBREVIATIONS AND ACRONYMS

BEC	Botswana Examinations Council
EMS	Economic and Management Sciences
ESK	Existing Stock of Knowledge
ETSSP	Education and Training Sector Strategic Plan
EU	European Union
MEP	Mini-enterprise Project
MoET	Ministry of Education and Training
NBEA	National Business Education Association
NCAF	National Curriculum and Assessment Framework
NFTE	Network for Teaching Entrepreneurship
PBL	Problem-based learning
PCK	Pedagogical content knowledge
PjBL	Project-based learning
RNPE	Revised National Policy on Education
SWOT	Strengths, weaknesses, opportunities, and threats
USA	United States of America
USAID	United States Agency for International Development
ZPD	Zone of proximal development

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CHAPTER ONE

INTRODUCTION

1.1. Introduction

Entrepreneurship and innovation have gained significant prominence on policy agendas in many countries, as they are believed to have the potential to drive sustainable economic development and foster a competitive edge (Jack & Anderson, 1999; Kassean et al., 2015; von Graevenitz et al., 2010). This recognition has led to a growing interest in entrepreneurship education, both in basic education and higher education settings (Kassean et al., 2015). Entrepreneurship is considered to be teachable and can shape learners' attitudes and intentions toward perceiving entrepreneurship as a viable career path (Karimi et al., 2012; Kuratko, 2005; Peterman & Kennedy, 2003). By equipping learners with the knowledge and skills necessary to establish and grow new businesses, entrepreneurship education fosters the development of managerial competencies, leadership abilities, and important attitudes such as creativity, innovation, perseverance, resilience, and risk-taking, all of which are needed for success in entrepreneurial endeavours. Moreover, entrepreneurship is closely associated with job creation, innovation, and globalisation.

As a result, entrepreneurship education has emerged as a rapidly growing field, particularly within higher education, aligning with the aforementioned expectations (Kuratko, 2005). However, the growth of entrepreneurship education in primary and secondary education has been comparatively slower in terms of course offerings and research, despite having the largest learner population (Elert et al., 2015; Testa & Frascheri, 2015). Although there is no consensus on specific teaching approaches, practical, action-oriented, and experiential methods are widely encouraged and implemented in various countries and schools (Johansen & Schanke, 2013; Kassean et al., 2015). Consequently, variants of entrepreneurship programmes, including mini-companies under the auspices of extracurricular entrepreneurship clubs, are used in different parts of the world for teaching entrepreneurship (European Commission (EU) & Enterprise and Industry Directorate General, 2005; Johansen & Somby, 2016; Peterman & Kennedy, 2003). Existing research at the secondary education level primarily focuses on the outcomes of these programmes from a positivist and causal perspective, examining their ability to influence knowledge, skills, and the desirability of pursuing an entrepreneurial career (do Paço et al., 2015; Elert et al., 2015; Oosterbeek et al., 2010; Peterman & Kennedy, 2003). However, less attention has been given to the learning process

itself, such as investigating which approaches are effective, why they work, and how they contribute to entrepreneurship education (Politis, 2005). According to Minniti and Bygrave (2001, p. 7), "entrepreneurship is a process of learning, and a theory of entrepreneurship requires a theory of learning."

The current study addresses a research gap that exists at the secondary education level by focusing on aspects that have received limited attention, particularly the lack of a theory of learning-informed entrepreneurship pedagogical practices. Specifically, the role of critical reflection and the facilitation of learners' reflection by teachers in entrepreneurial activities have not been thoroughly examined at this level, despite the belief that reflection plays a crucial role in entrepreneurial learning and the growing calls for the development of reflective practitioners in entrepreneurship (Higgins et al., 2013; Hunter Lindqvist, 2017; Kassean et al., 2015; Pittaway & Cope, 2007; Yeoh, 2017). Therefore, adopting a processual perspective, this study aims to investigate reflection and entrepreneurial learning within the context of the mini-enterprise experience, with the intent to develop a comprehensive understanding of how learners learn from this hands-on entrepreneurial experience.

Overall, this study aims to advance the field of entrepreneurship education at the secondary education level by investigating critical reflection and its role in entrepreneurial learning. By examining the specific practices and strategies used to facilitate learners' reflection within the context of mini-enterprises, this study attempts to make a humble contribution to the development of effective pedagogical approaches that promote an entrepreneurial mindset and competence among secondary school learners.

1.2. Background

1.2.1. The global rise of entrepreneurship education

Interest in entrepreneurship has been steadily increasing worldwide due to its perceived potential to stimulate economic competitiveness and growth, environmental sustainability, and social development, in both developed and developing countries (Garavan & O'Cinneide, 1994; Jack & Anderson, 1999; Johansen, 2022; Kuratko, 2005; Mason, 2011). This growing interest has led to the expansion of entrepreneurship education programmes and courses in institutions of higher education globally, driven in part by the belief that entrepreneurship is teachable (Kuratko, 2005). The prominence of entrepreneurship education has also extended to secondary education, with the

introduction of related programmes and subjects in the school curriculum (Johansen, 2022; Kakouris, 2015; Ringarp, 2013). In the United States of America (USA), for example, 42 states have developed curricula aimed at fostering proficiency in entrepreneurship education at the K-12 level, and 18 states have mandated upper secondary schools to offer entrepreneurship as a taught subject (Junior Achievement USA, 2015, as cited in Ni & Ye, 2018). In Europe alone, learners across 40 countries were reported to have participated in entrepreneurship education programmes in the last two decades, with an estimated growth rate of 25% (Johansen, 2022; Leffler, 2014; Oosterbeek et al., 2010; Rignarp, 2013). In the year 2018, around 340,000 learners were exposed to entrepreneurial programmes and they created upwards of 28,000 mini-enterprises (Junior Achievement Europe, 2018). Moreover, the growth of entrepreneurship education has also been observed in sub-Saharan African countries such as Botswana, Lesotho, Ghana, Kenya, Rwanda, and South Africa, among others (Blimpo & Pugatch, 2019; Farstad, 2002; Sithole & Lumadi, 2012; Thetsane & Matsela, 2014; Valerio et al., 2014).

1.2.2. Global perspectives on the practice of entrepreneurship in education

In recent decades entrepreneurship has been introduced and integrated into secondary schools worldwide. However, a variety of interpretations and implementations of entrepreneurship education at this level, stemming from different perspectives and objectives. In the literature, the terms *"entrepreneurship education"* and *"enterprise education"* are sometimes used interchangeably, while others prefer the term *"entrepreneurial education"* (Garavan & O'Cinneide, 1994; Jones & English, 2004; Mwasalwiba, 2010). The lack of clarity on differences between these terms has led to confusion and inconsistency in understanding and implementing entrepreneurship education, creating a challenge for educators at the basic education level (Haara et al., 2016; Leffler, 2009). Jones and Iredale (2010, p.10) advocate for greater clarity on these commonly used terminologies to reduce confusion, foster understanding, and enhance knowledge in the field. Achieving a clear understanding of the distinctions between entrepreneurship education and enterprise education is essential for effective pedagogy (Haara et al., 2016; Leffler, 2009).

1.2.2.1 Philosophical conceptions of entrepreneurship and enterprise education

Academic literature reveals that the distinction between entrepreneurship education and enterprise education goes beyond superficial taxonomy and encompasses differences in philosophy, purpose, implementation, and expected outcomes (Dal et al., 2016; Erkkilä, 2000; Gibb, 1993; Haara & Jenssen, 2016; Harte & Stewart, 2012; Jones & Iredale, 2010; Lackéus & Sävetun, 2019).

Philosophically, the difference between these terms is not merely geographical, where entrepreneurship education is the preferred terminology in the USA and Canada, while enterprise education is the equivalent in European countries, as some scholars seem to portray in the literature (Gibb, 1993; Lee & Wong, 2006; Mwasalwiba, 2010). Without placing much emphasis on the terminology, Kyrö (2006) argues that there are deeper conceptual and philosophical differences in the approach to entrepreneurship education between continental Europe and the USA. The European approach, according to Kyrö, adopts a holistic, non-dualistic perspective that perceives learners as an integral part of an organic, integrated system, inseparable from nature. In contrast, the USA approach takes a dualistic view, considering learners and nature as separate entities, leading to a more positivistic approach influenced by the pragmatic movement and scholars such as Charles S. Pierce, William James, and John Dewey. As a result, research in the USA has focused more on methodological issues in teaching and learning, developing models through empirical research and testing them in real-life situations, while the European approach emphasises strong theoretical foundations and the interplay between ontology, epistemology, axiology, didactics, and pedagogy.

Jones and Iredale (2010) extend the philosophical argument by suggesting that enterprise education aligns with the ideals of liberal education, encompassing broader values of personal liberty and freedom, even though it may have connections to business. In contrast, entrepreneurship education has a more libertarian or neoliberal foundation. This philosophical conflict between the humanistic values of enterprise education and the theoretical base of libertarianism or neoliberalism in entrepreneurship education has led to teachers refusing to teach entrepreneurship education in some European countries (Komulainen et al., 2013; Leffler, 2009). This rift emanates from the fact that neoliberalism is predicated on the values of capitalism, celebrating free market mechanisms such as risk-taking and competition for one's economic success, while exacerbating existing inequalities – which is diametrically opposed to the humanistic view of education that is founded on the values of equality, equity, and solidarity (Komulainen et al., 2013). The neoliberal foundation is considered problematic as it has the potential to perpetuate social injustice by widening gender, race, and social class disparities (Lackéus, 2017). Lackéus (2017) argues for the humanisation of entrepreneurial education by incorporating mores of creating value for others while pursuing sustainable profit. This approach seeks to strike a balance between self-oriented and others-oriented entrepreneurial education, as extreme adherence to either perspective may not be tenable in the real world that learners will enter post-graduation (Lackéus, 2017, p. 646).

1.2.2.2. Differences in the practice of entrepreneurship in education

1.2.2.2.1. *Practice of entrepreneurship education*

Having discussed the philosophical foundations, I now shift focus to discuss the implementation and expected outcomes of these two approaches to entrepreneurship in education. Entrepreneurship education takes an economic orientation, focusing on teaching entrepreneurship content with the aim to equip learners with entrepreneurial competencies for setting up, growing, and managing a successful business venture and developing entrepreneurs (Jones & Iredale, 2010; Lackéus & Sävetun, 2019). It is also called external entrepreneurship, especially in Finland and Sweden (Dal et al., 2016; Haara et al., 2016; Komulainen et al., 2013; Leffler, 2009; Ruskovaara & Pihkala, 2015), or the narrow approach of teaching entrepreneurship, and it focuses on teaching entrepreneurship content with the aim of developing knowledge, skills, and attitudes to develop an entrepreneur (Haara et al., 2016; Lackéus & Sävetun, 2019). This model of teaching entrepreneurship content at the basic education level seems to be prevalent globally, since it is commonly used in the USA, Asian countries like China and Hong Kong (Cheung, 2008; Ni & Ye, 2018) and different sub-Saharan African countries such as Botswana, Ghana, Mozambique, Kenya, Lesotho, Rwanda and South Africa (Blimpo & Pugatch, 2019; Nchu, 2016; Sithole & Lumadi, 2012; Thetsane & Matsela, 2014; Valerio et al., 2014), and in the higher secondary school grades and higher education in Europe (Haara & Jenssen, 2016; Haara et al., 2016; Leffler, 2009).

To illustrate, using a few African states, in the South African basic education system entrepreneurship made its debut in the year 2000 for Grades 3–9 through infusion into Economic and Management Sciences (EMS), while in the upper Grades of 10–12, it was introduced in 2005 within the Business Studies Curriculum (Nchu, 2016). In neighbouring Lesotho, in 2009 a new curriculum reform dubbed Curriculum and Assessment Policy, which espouses the ideals of neoliberalism such as self-reliance, self-determination, and self-employment through creativity, innovation and entrepreneurship, was introduced (Dungey & Ansell, 2022; Ministry of Education and Training [MoET], 2009). In this new reform, learners are expected to take subjects from five learning areas right from primary school to secondary school level. Entrepreneurship is found in the learning area of Creativity and Entrepreneurial and has been running for a few years across basic education (MoET, 2009; Dungey & Ansell, 2022). As recently as 2016 Rwanda introduced the revised entrepreneurship curriculum, which resulted in the requirement for all secondary school learners to take an entrepreneurship subject as part of their examinable curriculum (Blimpo & Pugatch, 2019).

Among the prominent ways of teaching entrepreneurship in different parts of the world to augment the formal curriculum or as the sole vehicle, is the use of learner clubs (commonly called entrepreneurship programmes in the literature) such as Junior Achievement-Young Enterprise (do Paço et al., 2015; Oosterbeek et al., 2010; Peterman & Kennedy, 2003; Pittaway et al., 2011). Valerio et al. (2014) have identified at least nine such programmes used at the secondary education level across the globe. Many of these operate as a localised version of affiliated global learner organisations. Examples include the South African Institute for Entrepreneurship, the Network for Teaching Entrepreneurship (NFTE) in the USA, and Junior Achievement in the Middle East, parts of Africa (including Botswana), Australia, and parts of Europe (Farstad, 2002; Peterman & Kennedy, 2003). This approach often takes the mould of extracurricular, meaning that it does not form part of the taught and tested curriculum. Membership is open, to include learners taking business subjects and those who do not. The teaching of entrepreneurship education in these learner clubs often uses a small business or mini-companies model run by learners within their schools to help them acquire knowledge, skills, and attitudes experientially through running an enterprise under the watch and care of a role model or mentor. In this model, learners in a small group raise capital through the sale of shares, organise the company with serving officers, produce and market the mini company's products or services; maintain its records, and hold shareholder meetings (Oosterbeek et al., 2010). While these learner enterprise programmes enjoy much goodwill and support, there is little empirical evidence about their effectiveness in imparting the entrepreneurial attitudes and self-efficacy that they are purported to foster (Oosterbeek et al., 2010; Testa & Frascheri, 2015).

1.2.2.2.2. *Practice of enterprise education*

On the opposite side of the spectrum, enterprise education – also known as enterprise pedagogy, enterprise learning (Garnett, 2013; Hytti & O'Gorman, 2004), pedagogical entrepreneurship (Dal et al., 2016; Haara et al., 2016) and internal entrepreneurship (Dal et al., 2016; Haara et al., 2016; Komulainen et al., 2013; Leffler, 2009; Ruskovaara & Pihkala, 2015) – is taught in European countries like Finland, Sweden and the United Kingdom. This approach is focused on the use of action-based teaching methods and strategies to develop enterprising individuals in the abilities, attributes and skills that can be deployed in various contexts (community, home, at work as an employee or in self-employment) throughout the course of their life (Jones & Iredale, 2010). Caird (1990) explains that an enterprising person shares the

psychological characteristics of an entrepreneur without a specific association to business ownership.

Enterprise education, therefore, focuses on pedagogical approaches rather than entrepreneurship content, and is often integrated across different subjects in the school curriculum, from preschool to secondary education level (Garnett, 2013; Haara et al., 2016; Jones & Iredale, 2010; Lackéus & Sävetun, 2019; Leffler, 2009). Based on the focus of this broader view of the delivery process, it has also been assigned the term pedagogical entrepreneurship, and its aim is to improve deeply social constructivist teaching and learning methods suitable for developing the requisite mindset of an enterprising individual (Dal et al., 2016). Enterprise education is also known as the broader approach or view of entrepreneurial education, because of its general education orientation that entails the use of pedagogical approaches meant to develop lifelong learning skills and personal attitudes that are not focused on setting up and running a business (Haara & Jenssen, 2016). In agreement, Lackéus and Sävetun (2019, p. 35) add that the broader view is premised on "an inverted definitional foundation; being about all those things deemed 'entrepreneurial' that remain when organisation creation and development has been ruled out." It also includes inculcating concepts of citizenship education, civic responsibilities, and aspects of work-related learning (Haara et al., 2016; Jones & Iredale, 2010; Leffler, 2009). In these European countries internal entrepreneurship is deemed to be the precondition for success in external entrepreneurship, as it is intended for younger learners while the other (external entrepreneurship) is intended for older ones (Haara & Jenssen, 2016; Haara et al., 2016; Leffler, 2009). In contrast, *entrepreneurial education* is an all-encompassing or umbrella term under which both approaches to teaching entrepreneurship are subsumed (Erkkilä, 2000; Lackéus & Sävetun, 2019).

1.2.2.2.3. *Challenges of enterprise education*

The first and biggest challenge of enterprise education seems to be confusion about how it is defined. This confusion affects policymakers, teachers, learners and even researchers in entrepreneurial education (Haara & Jenssen, 2016; Hytti & O'Gorman, 2004; Jones & Iredale, 2010; Leffler, 2009; Ruskovaara & Pihkala, 2015). A case in point is that although enterprise education is often presented as a pedagogical approach, Jones and Iredale (2010) and Hytti and O'Gorman (2004) include entrepreneurship with its economic overtones in their understanding. In practice, evidence also shows that the economic perspectives seem to prevail, even though this is seemingly discouraged. A study on the objectives and methods of enterprise education in Austria,

Finland, Ireland, and the United Kingdom by Hytti and O'Gorman (2004) found that the implementation of enterprise education programmes at the primary school level (for pupils under the age of 6 or 6–12 years) is pedagogical and focused on broader objectives of entrepreneurship. These objectives included improving learners' enterprising skills and developing an understanding of the world of work through connections with the community. Secondary education (13–19 years), tertiary education and adult education increasingly lean towards the economic model of creating new ventures. This is an interesting revelation for nations that seem to emphasise only a pedagogical approach at both primary and secondary education levels.

Although enterprise education is considered favourably in compulsory basic education and taught across the curriculum, teachers in subjects outside of business seem to struggle with uncertainty in defining it, its goals and even how to implement it in their classrooms (Leffler, 2009). This is not helped by the fact that it is not easy to find generally accepted conceptualisations of pedagogical entrepreneurship (Haara et al., 2016). Furthermore, Haara et al. (2016) observe that there are challenges between the policy and practice of enterprise education. The probable causes of tension arise from the lack of alignment between policymakers' intentions and their implementation in schools by teachers; the lack of coordination between subjects and the rift between traditional pedagogies and entrepreneurial pedagogies; and insufficient knowledge of entrepreneurship. Enterprise pedagogy's focus on developing social and psychological attributes or "soft" skills and its implicit approach has its own problems in terms of defining and assessing learning inputs and outcomes (Harte & Stewart, 2012; Lackéus & Sävetun, 2019). Harte and Stewart (2012) investigated the notion of explicit and implicit curriculum in relation to enterprise education and found that enterprise education is sometimes explicitly and implicitly integrated into different subjects. In the explicit curriculum, the teacher makes it clear that learners know they are engaged in enterprise education and the intended outcomes they should work towards. However, in the implicit curriculum, the teacher covertly infuses the attributes of enterprise education into the course, but learners would not be aware that they are doing enterprise education. This implicitness and intangibility of infused enterprise education was found to make it difficult to assess the learning input and outcomes in the curriculum, and learners on such programmes could not assert with confidence that they developed the desired skills and attributes from the course, compared to those involved in the explicit curriculum (Harte & Stewart, 2012).

A study by Moberg (2014) found that the exclusive use of education *through* enterprise among adolescents is only associated with the development of non-cognitive skills and engagement

in learning, but does not translate into entrepreneurial intentions for a career in entrepreneurship. In addition, the focus of pedagogical entrepreneurship on non-cognitive skills presents a challenge for educators, researchers and even policymakers in assessing its effectiveness in terms of achieving its intended learning outcomes (Lackéus & Sävetun, 2019; Moberg, 2014). Perhaps this raises the need for a genuine discussion of whether enterprise education in its conceived form is really entrepreneurial. Over a decade ago, Kuratko (2005) warned about what he termed the "dilution effect" of entrepreneurship, where everything novel and vague is termed entrepreneurial or entrepreneurship for purposes of accessing grants and funding. He discouraged as abuse the appellation of entrepreneurship to every new fad that only assumes the title, with no substance to it. This, he argued, posed a real danger of diluting the real meaning of entrepreneurship, and he called upon educators of entrepreneurship to defend its true meaning and intent. Harte and Stewart (2012) have even questioned the appropriateness of the name enterprise education, and have suggested the need for a word that captures and crystallises the whole concept. The challenges and limitations of enterprise education are sufficient grounds for a continued stream of entrepreneurship education in secondary education that combines entrepreneurship content and entrepreneurial pedagogies. However, an appreciation of enterprise education, its practice and its impact on entrepreneurial education provide useful insights for purposes of policymaking related to infusing entrepreneurship into different subjects across the curriculum. Nonetheless, this study focuses on entrepreneurship education as practised in Botswana.

1.2.3. Practice of entrepreneurship education in Botswana

The history of entrepreneurship education in the Botswana secondary education system is relatively young. Its introduction into formal education dates back to the early to mid-1990s, both within the taught and tested curriculum and extracurricular Junior Achievement programme which is not examinable. The Junior Achievement Botswana organisation was established and formally registered in Botswana in 1994, through collaboration between the United States Agency for International Development (USAID) and the Botswana Government (Junior Achievement Botswana Report, 2001, as cited in Kenosi, 2006). The programme's values include empowering young people to thrive in the workplace, to gain financial literacy, and development of entrepreneurial mindset (Junior Achievement Worldwide, 2022). Around the same time, the Second Commission on Education of 1993 was set up and resulted in the Revised National Policy on Education (RNPE) of 1994, which called for the vocationalisation of the academic or general

curriculum through the introduction of practical subjects to get learners ready for future careers, and also inculcate in them a spirit of self-reliance (Republic of Botswana, 1993, 1994).

This vocationalisation process led to the introduction of practical subjects at this level which included commercial subjects, Agriculture, Design and Technology and others. Business Studies, which is made up of the subjects Commerce and Office Procedures and Commerce and Accounting, was introduced at junior secondary school level in 1998, while at senior secondary education level Business Studies and Commerce were introduced in 1999 (Solomon & Sithole, 2019; Weeks, 2002). Upon implementation of this educational reform, entrepreneurship education at both these levels of education was integrated within the Business Studies syllabi, which consists of the subjects Commerce and Office Procedures and Commerce and Accounting at junior secondary education level (i.e. from Grade 8 to Grade 10). At senior secondary education level, entrepreneurship content is more represented in the Business Studies syllabus. These pioneer Business Studies syllabi for junior secondary education level were reviewed in 2002, but it does not seem there was much change in the objectives dealing with entrepreneurship, save for integration of emerging issues such as HIV/AIDS and information and communication technology into the Business Studies curriculum (Republic of Botswana, 2008a).

Presently, at Junior Certificate level, learners taking either of the abovementioned subjects cover entrepreneurship topics such as the entrepreneur, generating business ideas, business planning, financing the enterprise, starting to operate a business, customer service, and product promotion, among others (Republic of Botswana, 2008b, 2008a). On the more practical side, learners are also assigned to small groups to generate business ideas and prepare a business plan, and to implement their chosen idea through a mini-enterprise project (MEP) (Republic of Botswana, 2008a). The whole process of teaching entrepreneurship topics and later the operation of the MEP runs from the second term of Form 2 (Grade 9) to the first term or end of the second term of Form 3 (Grade 10) (Sithole, 2012; Swartland, n.d.). Regarding the MEP, learners start with the generation of business ideas, and the development of a business plan, with the creation and operation of mini-companies making use of their developed business plans. The teaching of entrepreneurship education content makes up 40% of instruction time and weighs 20% in the examination of the business education curriculum at this level. Whereas the MEP is similar to entrepreneurship clubs, in terms of setting up a business and operation, it holds higher stakes for learners because it is examinable, and learners are required to keep a portfolio of their project from the business planning stage to the actual operation of the enterprise. Notwithstanding the significant role the mini-

enterprise approach is assigned in the teaching of entrepreneurship in Botswana, there seems to be very little research on it.

It is worth noting that the commercial subjects discussed above are optional, which means that currently relatively few learners end up being introduced to entrepreneurship. However, much more recently the Botswana Education and Training Sector Strategic Plan ([ETSSP], 2015–2020), which seeks to overhaul and align the education system in Botswana with the demands of the 21st century, calls for the integration of entrepreneurship education into the curriculum across all disciplines and at all levels of education in "an attempt to make learners more innovative, creative and capable of translating theory into practice and to enhance their participation in the world of work" (Republic of Botswana, 2015a, p. 127). The National Curriculum and Assessment Framework [NCAF] of 2015, which serves to operationalise the ETSSP, shows that in the envisaged new dispensation or educational reform, Business Studies at the junior secondary level will now consist of Entrepreneurship and Accounting, and Entrepreneurship and Office Procedures, while at senior secondary level Entrepreneurship will be introduced as a standalone subject, replacing Commerce (Republic of Botswana, 2015b). It is evident that Botswana is taking a bolder approach towards entrepreneurship education at all levels of the education system; once implemented, this new policy will result in more learners being exposed to entrepreneurship at the basic education level.

1.2.4. Why the increased interest in entrepreneurship education in Botswana?

Entrepreneurship is given a high-ranking position on the policy agendas of many countries, just as it is in Botswana, due to the belief in its potential to influence the growth of economies and technological innovation (Jack & Anderson, 1999; von Graevenitz et al., 2010). For example, Dhahri and Omri (2018) submit that there are interactions between entrepreneurship and different Sustainable Development Goals in developing countries. In addition, they found that in developing countries entrepreneurship has a positive effect on social and economic-related Sustainable Development Goals, although impacting on the environment. Entrepreneurship education seems to influence learners' attitudes and intentions toward seeing entrepreneurship as a possible career path (Karimi et al., 2012; Peterman & Kennedy, 2003). It equips learners with knowledge and skills to set up and grow new businesses. Learners learn entrepreneurial knowledge and skills such as marketing, and managing an enterprise, leadership skills, problem-solving skills, critical and analytical thinking skills, and develop entrepreneurial attitudes such as self-efficacy, perseverance

and risk-taking and tolerance, that are essential for one to be a successful entrepreneur (Moberg, 2014; Sánchez, 2013). Furthermore, entrepreneurship is linked to job creation, innovation, and globalisation.

Thus, from a socio-economic perspective, entrepreneurship education seems attractive to policymakers of many developing countries (like Botswana), developed countries, and international organisations due to challenges facing their nations (Dhahri & Omri, 2018; Swartland, n.d.). For example, some of the challenges Botswana faces include: the need for national economic diversification, which seeks to shift the economy from minerals to a knowledge-based economy (Republic of Botswana, 2015a); poverty; high unemployment rate among the youth, which was reported to be at a staggering figure of 35%–41% in 2013 among the youth of 19–24 years of age and 18% among graduates (Mogomotsi & Madigele, 2017; Motlaleng & Narayana, 2014); and a high rate of insolvency and liquidation among new start-ups, with an estimated 70%–80% failing within the first 18 months and 80%–85% failing to survive the first five years of operation (Gagoitseope & Pansiri, 2012; Temtime & Pansiri, 2004). Consequently, pronouncements have been made in various policy documents emphasising entrepreneurship, innovation, and creativity, including entrepreneurship education, as wielding the potential to address these problems (Republic of Botswana, 1993, 1994, 1997).

As a further case in point, the recently ended national long-term vision for Botswana, commonly known as Vision 2016 (spanning from the year 2000 to 2016), tacitly states: "Batswana will need to be educated to understand better the importance of entrepreneurship skills… Entrepreneurship and business skills will be an integral part of all schooling" (Republic of Botswana, 1997, pp. 31, 55). The Second Commission on Education of 1993 and its subsequent Revised National Policy on Education of 1994, which led to the introduction of business subjects at the secondary education level, emphasise the development of a self-employment mindset, innovation and other characteristics associated with entrepreneurship (Republic of Botswana, 1993, 1994; Swartland, n.d.).

This perspective of viewing entrepreneurship (especially by the youth) as a panacea to solving socio-economic problems has its fair share of critics. Two decades ago, Jack and Anderson (1999) cautioned that these expected outcomes of economic and social adjustment are a weighty burden for entrepreneurship, and much worse for learners of entrepreneurship. Schramm (2018) shares similar sentiments, arguing that expectations on youth entrepreneurs to solve socio-economic

problems are highly unreasonable and burdensome, as entrepreneurship already carries a plethora of challenges. He points out that even in developed countries such as the USA, many successful entrepreneurs set up their ventures when aged in their forties, after accumulating a wealth of relevant industry expertise and networks. Shane (2009) criticises public policy that is geared towards recruiting a lot of people to become entrepreneurs as ill thought out and illogical, because a large number of the new start-ups have no growth perspective; they mostly employ their owners and do not survive for long enough to have a real lasting impact on the economy. He argues that it is even more prudent to subsidise and encourage high growth of large and established businesses, as they employ more people and have greater output in research, creativity, and innovation. Maistry and David (2017) take issue with the entrepreneurship textbooks that are used in basic education. Their study found that many of them use a language that glorifies entrepreneurship and the lives of entrepreneurs, making it appear very easy while deliberately omitting real challenges faced by entrepreneurs and entrepreneurship in general. All of these concerns are legitimate and worth heeding for a balanced and healthy approach towards entrepreneurship education.

1.2.5. Research on the Practice of Entrepreneurship Education in Secondary Education

Notwithstanding the socio-economic challenges, and the debates on the potential of entrepreneurship and entrepreneurship education to address them, research and practice of entrepreneurship education at secondary education level remains in its infancy. Testa and Frascheri (2015) observe that regardless of the call by many scholars for entrepreneurship education to commence at the lower education level, its effectiveness at this level remains largely unmeasured. Adding to this predicament is the fact that most of the research studies in entrepreneurship education have concentrated on higher education and practising entrepreneurs, leaving entrepreneurship education at the secondary education level highly under-researched (Hietanen & Järvi, 2015; Testa & Frascheri, 2015). Also, there are still debates on the appropriate teaching methods and practices for teaching entrepreneurship effectively (Mwasalwiba, 2010; Samuel & Rahman, 2018). For example, Neck and Greene (2011) wonder if entrepreneurship is teachable with the current teaching approaches used in schools. The question of the teachability of entrepreneurship lingers, as the maturity of learners at the basic education level participating in the mini-enterprise teaching approach is questionable (Sithole & Lumadi, 2012; Thetsane & Matsela, 2014).

Much research on entrepreneurship education at the secondary education level has focused on learner clubs and mostly examined the impacts of such programmes from a positivist approach

(do Paço et al., 2015; Elert et al., 2015; Oosterbeek et al., 2010; Peterman & Kennedy, 2003). Interestingly, research findings on the impact and effectiveness of learner programmes of this nature are contradictory (Kassean et al., 2015). Whereas some studies have found them to be effective in imparting entrepreneurial attitudes, attributes and self-efficacy, perceived desirability, feasibility and intentions to start a new business (do Paço et al., 2015; Fayolle et al., 2006; Jones & Colwill, 2013; Mwasalwiba, 2010; Peterman & Kennedy, 2003), other studies reported negative findings on the impact of entrepreneurship programmes (Fayolle & Gailly, 2009; Kassean et al., 2015; Oosterbeek et al., 2010; Testa & Frascheri, 2015; von Graevenitz et al., 2010). To illustrate, Testa and Frascheri (2015) report that a survey carried out in Italy among teens aged 16–19 years (1,364 entrepreneurship education learners) from 39 schools, found that only a paltry 25.5% (against 29% of those who did not participate in entrepreneurship education) were willing to consider entrepreneurship as a career option; 36% (versus 30% non-entrepreneurship education learners) wanted or were attracted to stable employment by a state-owned organisation rather than self-employment; 86.6% attributed success in entrepreneurship to luck; 87.5% showed higher risk aversion compared to 78.6% of their counterparts, and entrepreneurship education learners believed entrepreneurs are born with the requisite characteristics. Even in those studies which show a positive impact on participants' entrepreneurial attitudes, self-efficacy, and intentions, the link between entrepreneurial intentions and the actual behaviour of setting up a venture has been questioned, as very few people with such intentions start business organisations (Fayolle & Liñán, 2014; Oliveira & Rua, 2018). This is not helped by the fact that the setting up of businesses is far in the future for secondary school learners, and various factors could alter such intentions over time.

Alternatively, Politis (2005) argues that more could be learned by investigating the process of developing entrepreneurial knowledge among entrepreneurs, rather than being obsessed with researching the causal relationship between past entrepreneurship experience and future venture performance. Thus, research on entrepreneurship is still yet to explain how entrepreneurs build knowledge that later influences the performance of businesses. This call is in line with Gartner's (1988) call for a paradigm shift from trait studies which are more static to studying behaviours of entrepreneurs. Recent studies seem to have heeded this call, and focused attention on the entrepreneurial learning process of practising entrepreneurs (Cope, 2005a; Cope & Watts, 2000; Deakins & Freel, 1998; Pittaway & Cope, 2007; L. Pittaway & Thorpe, 2012; Rae, 2000). Also criticised in the entrepreneurial learning literature is the use of linear teaching approaches such as emphasising the business plan (Neck & Greene, 2011; Schramm, 2018). Entrepreneurship in real life is characterised by 'learning by doing' in an environment that is unpredictable, uncertain,

ambiguous, opportunity seeking, and can include exploitation, emotional exposure, social networks, and critical incidents that require critical reflection for higher-level and transformative learning to occur from experience (Cope, 2005a; Cope & Watts, 2000; Deakins & Freel, 1998; Minniti & Bygrave, 2001; Pittaway & Cope, 2007; Pittaway et al., 2011).

The findings about how practising entrepreneurs learn from the entrepreneurial process provide an opportunity for investigation of the extent to which entrepreneurship education programmes are designed to simulate authentic contexts in the world of entrepreneurs, and the way entrepreneurs learn to think and act entrepreneurially (Pittaway & Cope, 2007; Pittaway et al., 2011; Pittaway, 2015). Critical reflection is deemed an integral part of learning in hands-on, action-oriented, experiential, and entrepreneurial contexts (Cope, 2003, 2005a; Higgins et al., 2013; Pittaway & Cope, 2007; Yeoh, 2017). However, a study conducted by Yeoh (2017) found that university learners of entrepreneurship struggle with reflective practice. Similar findings were established by Hunter Lindqvist (2017), who found that school learners in Junior Achievement did not reflect on their experiences. As much as there is a call for producing entrepreneurs who are reflective practitioners and reflective pedagogy that allows learners to learn from failure (Higgins et al., 2013; Jack & Anderson, 1999; Kassean et al., 2015; Ruskovaara & Pihkala, 2015; Yeoh, 2017), reflexivity seems to be understudied in research pertaining to entrepreneurship education at the secondary education level. Hägg and Kurczewska (2016) lament that despite the valorisation, promotion, and advocacy for the inclusion of reflective learning in entrepreneurship education, its adoption remains low and there are challenges with how it should be incorporated in entrepreneurial activities that involve learning by doing, such as the MEP, which is the focus of this study.

1.3. Rationale of the study

Most of the research in entrepreneurship education has been carried out in higher education (Testa & Frascheri, 2015). There are also more programmes and courses in entrepreneurship targeted at learners in higher education than in secondary education (Fayolle, 2013; Kuratko, 2005; Maritz & Brown, 2013). Regardless, there are efforts made for similar courses to be developed in secondary education and lifelong learning (Kakouris, 2015). Elert et al. (2015) concur with this point but further add that the lack of focus in lower education is problematic, since it admits the largest number of learners globally. Ruskovaara (2014, p. 25) has criticised theories of entrepreneurship education in primary and secondary education as seemingly a mere "collection of theories from education and economics". This means additional research-based knowledge needs to be developed

by entrepreneurship education that is more grounded in entrepreneurship at the basic education level.

Research in entrepreneurship education seems to follow a static perspective that focuses mostly on the impact or outcomes of entrepreneurship experiences on entrepreneurial intentions and venture performance, and not the process of developing entrepreneurial knowledge through experiences (Politis, 2005). The result of this neglect is that there is a knowledge gap on "how entrepreneurs, through experiences, develop entrepreneurial knowledge that enables them to recognise and act on entrepreneurial opportunities and to organise and manage new ventures" (Politis, 2005, p. 400). In a similar vein, many studies at the secondary education level lean towards the psychological personalities of entrepreneurs, also known as the trait approach. This approach has been criticised for being static and for its failure to consider the possibility that people besides those already possessing the determinant traits can learn to think and act entrepreneurially (Gartner, 1988). Worse still, these trait studies are concentrated on measuring the effect of entrepreneurship programmes on learners' intentions to start new ventures, and have only churned out contradictory findings. For example, while Peterman and Kennedy (2003) and Jones and Colwill (2013) found positive effects of participating in entrepreneurship education programmes, Oosterbeek et al. (2010) and Testa and Frascheri (2015) found no intended effects on entrepreneurship skills and motivation, desirability for self-employment, high-risk aversion, and belief that entrepreneurs are born rather than made or taught among learners who took part in entrepreneurship education programmes.

Research increasingly shows that entrepreneurial intentions do not always translate into venture creation; rather, implementation intentions are a better predictor of entrepreneurship behaviour (Fayolle, 2013). Venture creation could be in the distant future for learners who are still at the secondary education level, which means that over time other factors could potentially derail these intentions. Longitudinal studies would perhaps establish the relationship between these early adolescent entrepreneurial intentions with new venture creation and success in adulthood. Furthermore, there are also methodological problems with many intention-based studies: they are mostly cross-sectional and do not have pre-test and post-test measures, which makes it difficult to establish whether the observed impacts result from interventions.

These challenges with earlier approaches to researching entrepreneurship education present a window of opportunity to examine entrepreneurship education from a process-oriented perspective and not an outcome-oriented one. Invoking entrepreneurial learning, which interrogates

how entrepreneurs experientially learn to think and act entrepreneurially through an entrepreneurial activity, provides an alternative approach to exploiting this research gap. Focusing on the process of entrepreneurial learning requires zeroing in to pedagogical approaches used in the classrooms and schools. Fayolle (2013) argues for the need to examine the most effective mix of objectives, content, and teaching approaches for specific types of learners from lower education to higher education.

Politis (2008) posits that learning an entrepreneurial context is experiential. In agreement, Mwasalwiba (2010) submits that entrepreneurship is a practical subject and thus more action-oriented, hands-on and experiential pedagogies are needed for effective teaching and learning. As a result, mini-companies in the mould of Junior Achievement clubs and related others have been recommended and used in many parts of the world (Peterman & Kennedy, 2003; Pittaway et al., 2011; Pittaway et al., 2015). By their nature these are extracurricular, which means they do not contribute to learners' grades at the secondary education level. However, the mini-enterprise approach in the Botswana Business Studies curriculum is similar to this approach to teaching entrepreneurship, but it has the added distinction of being part of the formal or taught curriculum and is examinable. This means that unlike the Junior Achievement or Young Enterprise programmes, Business Studies learners are also taught entrepreneurship content, do an actual business plan, run the mini-enterprise, and engage in record-keeping of all operations of their enterprise, all aspects of which are graded. This approach to teaching and learning entrepreneurship carries higher potential for learner participants, yet is seemingly under-researched. This means it offers more opportunities to examine what and how learners learn from this project. Research on the mini-enterprise approach will also open a door to how it and related programmes can be improved for better learning outcomes.

Among the tenets of effective experience-based learning and entrepreneurial learning is critical reflection, and hence reflective pedagogy has been called for to produce entrepreneurs who are reflective practitioners (Cope, 2003; Higgins et al., 2013; Pittaway & Cope, 2007; Yeoh, 2017). However, in studying learners in the Junior Achievement mini-companies at the upper secondary level in Sweden, Hunter Lindqvist (2017) found that they hardly take time to reflect on their practice and experiences. Research on how learners could be assisted to actively reflect on their projects has not yet been carried out, even though critical reflection is considered imperative for entrepreneurial learning. According to Yeoh (2017), learners who do not reflect on their experiences are likely to repeat mistakes and dysfunctional behaviours, attitudes, and decisions, consequently robbing their

ventures of attaining their optimal potential. Although reflection is recognised as an essential element of experiential and entrepreneurial learning, there seems to be very little research on it, especially at the secondary education level. Hunter Lindqvist (2017) has also called for research on the role of teachers in learners' reflections in entrepreneurship education.

Based on the arguments presented above, this study, taking a qualitative, hermeneutic phenomenological approach, seeks to examine what and how learners learn from the MEPs from an entrepreneurial learning perspective. Recognising the importance of critical reflection for both entrepreneurs as reflective practitioners and entrepreneurial learning in bridging the disparity between theory and practice (Cope & Watts, 2000; Hietanen & Järvi, 2015; Higgins et al., 2013; Neck & Greene, 2011; Yeoh, 2017), the study also seeks to explore learners' experiences of reflective learning, why reflection occurs in the way it does in this context, and the role of teachers in facilitating reflective learning among mini-enterprise participants at this level. Thus, the current study deliberately makes a shift from static and positivist approaches that try to focus on the impacts of entrepreneurship psychological personality traits of learner entrepreneurs and their entrepreneurial intentions, to the learning processes that help them to think and act entrepreneurially.

1.4. Context of the study

This study focuses on the mini-enterprise approach as one of the means for teaching entrepreneurship in the Botswana Junior Secondary School curriculum, since it is under-researched. It focuses mainly on learners' reflections on their experiences with the attempt to find out what and how learners learn from the mini-enterprise experience. A key aim of entrepreneurship education at the secondary education level is to raise learners' entrepreneurial mindsets and the desirability of entrepreneurship as a possible career choice. Most of the research in entrepreneurship education follows the positivist paradigm, with a trait or thought-based strategy, and has focused on learner entrepreneurship clubs, which are extracurricular (Aure, 2018; do Paço et al., 2015; Mothibi & Malebana, 2019; Peterman & Kennedy, 2003). In contrast, the current study employs the interpretivist paradigm through an emotion-based strategy that is learning process-oriented, to study the co-curricular mini-enterprise experience, which is an emerging approach to researching entrepreneurship education (Lackéus, 2014; Lackéus & Sävetun, 2019; Pittaway et al., 2011). It also studies the experiences of learners in their involvement with MEPs and their reflections on such experiences as part of entrepreneurial learning. In this way, it does not merely replicate what

has been done but contributes to the advancement of knowledge and understanding of reflective learning in the MEPs, which have not been given much attention in research thus far.

1.5. Purpose, aim, objectives and significance of the study

1.5.1. Purpose

The purpose of this qualitative study is to explore how Business Studies learners participating in the MEPs at the junior secondary education level experience reflective learning of entrepreneurship through participation in the mini-enterprise experience. It directs focused attention to unearthing their experiences of reflective learning; how and why they engage in reflection in the way they do; and their experiences with their teachers' role in supporting and facilitating their reflective learning. The study takes a process perspective to explore how learners learn to think and act entrepreneurially through the mini-enterprise experience.

1.5.2. Study aim

To develop an understanding of how learners experience the reflective learning of entrepreneurship through taking part in MEPs at the junior secondary education level. To achieve this aim, the objectives outlined in 1.5.8 shall be pursued.

1.5.3. Significance of the study

There is a growing interest from policymakers in entrepreneurship, since many believe that entrepreneurship has the potential to address many socioeconomic problems, such as poverty eradication and high unemployment. A research study on entrepreneurship education will potentially provide research-based evidence at the secondary school level that can inform the policymaking process, and translation of those policies by curriculum planners for implementation in entrepreneurship education programmes, especially in the context of Botswana (Berglund, 2015). Research on entrepreneurship education at the secondary education level holds potential that stands to benefit learners, teachers, teacher educators and researchers of entrepreneurship education. Ruskovaara (2014) argues that to raise the quality of entrepreneurship education, existing programmes and personnel must first be developed. Bennett (2006) observes that there seems to be no agreement and uniformity on the pedagogical practices of educators in entrepreneurship education, hence the need for a theoretical framework that informs methodology (Ruskovaara, 2014). This study will potentially develop a framework for entrepreneurial learning for learners at

the secondary education level. Teachers of business subjects would be provided with best practices for teaching entrepreneurship, and teacher educators (including the current writer) would also be aware of areas that need more focus in the training of teachers, and provide relevant teacher education that is research-based, especially from an entrepreneurial learning process perspective.

A research focus on entrepreneurship education closes knowledge gaps at this level, as most of the existing research and entrepreneurship focus is on tertiary education (Fayolle, 2013; Mwasalwiba, 2010). Furthermore, Ruskovaara (2014) observes that the majority of these studies have focused on developed countries in the global north (such as the USA and the United Kingdom) and therefore are not necessarily generalisable to southern African contexts, as the cultures, learner experiences and education systems are different.

The study takes a deliberate departure from trait-based studies at both tertiary and secondary education level, which have mostly focused on examining entrepreneurial intentions and their antecedent characteristics (Aure, 2018; Bignotti & Le Roux, 2016; Dinis et al., 2013; do Paço et al., 2015; Marques et al., 2012; Mothibi & Malebana, 2019; Peterman & Kennedy, 2003; Sánchez, 2013), to take a more learning process-oriented or entrepreneurial learning approach. The learning process-oriented approach assumes a holistic understanding of the learner and entrepreneurial learning, and uses group- and experience-based activity to study the learner as a whole person (that is, including their mind, actions, feelings, and emotions) (Cope, 2003; Lackéus, 2014; Lackéus & Sävetun, 2019; Pittaway et al., 2011). It will also hopefully extend the research focus to reflective practice in entrepreneurial learning through the mini-enterprise experience at the secondary education level. Although the literature shows the need to develop entrepreneurs who are reflective practitioners, and the value of reflection for learning from experience, reflection remains under-researched at the secondary education level; this study hopes to contribute a knowledge base to address this gap.

1.5.4. Study objectives

The study had the following objectives:

1. To describe learners' experiences of reflective practices in entrepreneurial learning through mini-enterprise projects.

2. To describe how learners engage in reflective learning in the mini-enterprise experience.

3. To find out why learners engage in reflection in the way they do in the mini-enterprise experience.

1.6. Problem statement

The teachability of entrepreneurship education remains a lingering question, with many learners who participate in MEPs demonstrating a lack of maturity, innovation and creativity in the running of their projects (Sithole & Lumadi, 2012; Thetsane & Matsela, 2014). Others, such as Neck and Greene (2011), have questioned whether teaching approaches inhibit the teachability of entrepreneurship.

Research emphasises the importance of past experiences in the development of entrepreneurial attitudes, knowledge, and skills for entrepreneurs. However, how entrepreneurs learn from past experiences remains a big question in entrepreneurship education (Cope, 2005b; Higgins et al., 2013; Pittaway & Cope, 2007; Rae, 2000). There is a paucity of application of findings on entrepreneurial learning among expert or practising entrepreneurs in teaching approaches in secondary education, especially as it relates to how people learn to think and act entrepreneurially as a result of the entrepreneurial process, such as the mini-enterprise experience (Elert et al., 2015; Hunter Lindqvist, 2017).

Politis (2008) observes that due to the static perspective of investing much effort in establishing the causal relationship between past experience and enterprise performance, the development of knowledge from such experiences has been largely neglected. Maritz and Brown (2013) have characterised entrepreneurship education programmes as a black box, because what about them works and does not work remains unknown. As a result, the best way to teach entrepreneurship to potential entrepreneurs remains a challenging and poorly understood issue (Maritz & Brown, 2013; Pihie & Bagheri, 2010). Furthermore, even though reflection is recognised as an integral part of learning from experience (Cope, 2003, 2005b; Higgins et al., 2013; Hunter Lindqvist, 2017; Pittaway & Cope, 2007; Pittaway & Thorpe, 2012; Yeoh, 2017), its uptake in entrepreneurship education remains low and challenges with how to teach reflection and how to incorporate it into action-oriented entrepreneurial activities persist (Hägg & Kurczewska, 2016). Therefore, there is a need for research that explains what learners learn and how they learn from

entrepreneurship-simulated experiences, more especially the role of reflective learning, for better entrepreneurial learning outcomes.

1.7. Research questions

Main question:

How do learners experience reflective learning of entrepreneurship through participation in mini-enterprise projects at the junior secondary school level?

Sub-questions:

1. What are the learners' experiences of reflective practice in entrepreneurial learning through the mini-enterprise projects?
2. How do learners engage in reflection in the mini-enterprise project?
3. Why do learners engage in reflection in entrepreneurial learning in the way they do in the mini-enterprise experience?

1.8. Research methodology and design

This research study is grounded in the qualitative research approach and explores the issues of critical reflection and entrepreneurial learning using a pragmatism-oriented phenomenological methodology. The pragmatist paradigm is chosen because it allows the exploration of entrepreneurship education from a different perspective to that of the positivist paradigm that has dominated entrepreneurship education research so far. Ontologically, pragmatism absorbs the process or fluid and dynamic nature of entrepreneurship and epistemologically values the construction of knowledge through human actions in a specific context (Kivinen & Ristelä, 2003; Kyrö, 2008; Selden & Fletcher, 2020). Furthermore, a pragmatist-oriented phenomenological methodology aligns with the purpose of this study, which includes providing a detailed description and interpretation of learners' subjective experiences in the real world and social contexts (Hägg & Kurczewska, 2021; Kyrö et al., 2011). This is relevant because MEPs operate through a group-based, interactive approach, something that has been neglected in entrepreneurship education research, with preference given to the individualistic approach to learning (Higgins et al., 2013; Leitch et al., 2010).

Research design describes the procedures that inform the process of data generation, data analysis, and reporting of findings (Creswell, 2012). The research design employed in this study is a hermeneutic phenomenological case study design. It combines hermeneutic phenomenology and case study design to maximise the benefits of their synergistic merger. Phenomenology is the brainchild of Edmund Husserl (1859–1938) and his learner, colleague, and later rival Martin Heidegger (1889–1976) (Berglund, 2007; Cope, 2005a; Sokolowski, 1999). It is centred on studying things at their most concrete level, especially "the meaningful ways in which they are experienced, made sense of and in everyday life" (Berglund, 2007, p. 75). It is concerned with returning to human experiences and their meanings or interpretations, with the intention of unearthing fresh, sophisticated, and rich descriptions of a phenomenon experienced in the most concrete form (Finlay, 2009). This makes it helpful to answer certain questions about the subjective experiences in the MEPs, which would otherwise not be satisfactorily addressed through other research designs, particularly those with a positivist leaning.

Phenomenology as employed in this study draws from hermeneutic phenomenology and existential phenomenology. It draws mainly on the philosophies of Heidegger and Merleau-Ponty, and therefore could be termed existential hermeneutic phenomenology, albeit leaning more towards hermeneutics. This is because this study ontologically rejects Cartesian dualism and the possibility of wholly suspending prior conceptions that bear a legacy of the positivist paradigm, thus making transcendental phenomenology an inappropriate tool. Existential phenomenology and hermeneutic phenomenology are closely related (Willig & Billin, 2011). Whereas the hermeneutic aspect covers issues of interpretation and language, the existential aspect takes care of issues around such themes as the human relationship with time, their bodies, their physical environment, and with other people connected with the MEP (Todres & Wheeler, 2001; Willig & Billin, 2011). This phenomenological approach is also applicable to other areas of the MEPs, such as uncertainty, related anxiety, meaning-making, crisis or critical incidents, and reflexivity, all of which are tied to entrepreneurial learning (Rolfe et al., 2017) . Furthermore, epistemologically it may be viewed as interpretivist because it seeks to understand how participants make sense of their lived experiences in situated contexts (Willig & Billin, 2011), an aspect that could be linked to learners' entrepreneurial learning and meaning-making of their mini-enterprise experience.

The case study design helps to narrow the focus towards the development of an in-depth description and analysis of a single case or several cases (Bloomberg & Volpe, 2012). In the present study a case study approach was applied to three schools, which served as the cases for study. It

offers a unique opportunity for a detailed description of the real-life settings and contextual conditions of entrepreneurial learners' reflective practices as participants in MEPs, using in-depth data collection methods and data sources (Roestenburg, Strydom, & Fouché, 2021). The use of a phenomenological case study design, although uncommon, is allowable (Dibley et al., 2022; Merriam & Tisdell, 2016). In line with the aforementioned, this project is inspired by a number of studies that have followed this approach in education and entrepreneurship (Crawford, 2016; Kovacev, 2008; Sumsion, 2002).

Initially, the intended primary participants of the study were to be 50 Form Three (or Grade 10) learners, divided into five focus groups, each consisting of ten learners. Each group was expected to represent a team that runs an MEP together, from each of the five different junior secondary schools in the South-Eastern district of Botswana. However, since the study was conducted during the height of the COVID-19 pandemic in the years 2020 and 2021, all of this had to be revised. Data generation proved impracticable due to the COVID-19 regulations that required learners to exercise social distancing, and avoid interaction, with all activities conducted outside the classroom to be suspended. This directly impacted the MEPs, because by their nature they are group projects that are interactive, and learners usually sell food items, the preparation of which was deemed a high-risk factor in the spread of COVID-19. The situation was not helped by the fact that in 2022, when COVID-19 restrictions were loosened, the Botswana Examination Council totally suspended the MEP, substituting it with a written examination paper.

As a result, I revised the primary participants of the study to focus on former learners who took part in MEPs in the last five years, triangulated using teacher respondents' data from the different schools in Gaborone. Although the initial target was to interview ten teachers from these schools, three withdrew from the study, resulting in seven teachers being interviewed and 13 former Business Studies learners who were engaged in the MEPs during their junior secondary education as the primary participants. The criteria used in this study to select respondents included purposive sampling and snowball sampling, because they needed to meet predetermined criteria of having participated in the mini-enterprise experience and possess a wealth of information from this experience (Creswell, 2012). The snowball strategy was necessitated by the fact that tracing former learners required participants to refer the investigator to their former school mates from the schools in Gaborone, who they still had contact with.

1.9. Conclusion and organisation of the study

This chapter introduced the current study, providing a background to entrepreneurship in education from a philosophical perspective, and practices globally and in Botswana. In addition, it gave the rationale of the study, its purpose and significance, as well as the research design and methodology.

Chapter Two focuses on a review of the literature on entrepreneurship education at the secondary education level. Although the focus is on the learning aspects, the review deliberately started with pedagogical aspects of entrepreneurship education which must be in place to facilitate and support effective learning of entrepreneurship at the secondary education level. The review brings together literature about the emergent research on entrepreneurial learning and reflective learning to help provide insights into how learning occurs in experiential and entrepreneurial learning contexts, while also highlighting the paucity of research on reflection at the secondary education level.

Chapter Three discusses the theoretical framework of the study, whose major guiding theory is hermeneutic phenomenology. Subsumed under hermeneutic phenomenology are Dewey's pragmatism theory of reflective thinking and action, constructivism, and problem-based learning. The chapter also presents a conceptual framework that provides a theoretical lens for understanding, interpreting, and explaining how learners experience reflective learning and the learning of entrepreneurship in the experiential, hands-on, and social contexts found in the mini-enterprise experience.

Chapter Four delves into describing the qualitative research, anchored on a pragmatism-oriented hermeneutic phenomenological methodology and a hermeneutic phenomenological case study design. Hermeneutic phenomenology is an interpretivist philosophy, and therefore the study naturally gravitates towards a social constructivist paradigm. However, taking into consideration the limitations of constructivism, I used Dewey's soft pragmatism as a paradigm for the study as it is more versatile and comprehensively takes into account the whole person view of the learner (mind, body, emotions and feelings, sensations), social processes, embeddedness of experience and action in a constantly changing environment through a series of interconnected events that learners interact with, adapt, and adjust to (Kivinen & Ristelä, 2003; Kyrö, 2008; Selden & Fletcher, 2020). A detailed discussion of this paradigm is presented in this chapter, together with the justification for its use. In addition, the chapter discusses the use of a case study hermeneutic phenomenology

research design for data generation and analysis, as well as the research method and techniques employed, study participants and sampling strategy.

Chapters Five and Six present the thematic analysis of findings: Chapter Five presents the findings that answer the research question about learners' experiences of reflection in the mini-enterprise project, while Chapter Six attempts to answer the second research question dealing with how learners engage in reflective learning in the MEP experience. Chapter Seven brings together the findings from Chapters Five and Six, and discusses them in the light of the literature and the theoretical and conceptual framework, in an attempt to develop an understanding of why learners engage in reflection in the way that they do.

Chapter Eight is the last and provides the conclusion to and recommendations of the study. Its major contribution is the development of the quintuple helix model of participatory reflection, which is a theorisation of how reflection occurs in project-based entrepreneurial learning activities. It also highlights the theoretical and practical contributions of this study and future research directions to be explored to extend the existing body of knowledge with respect to entrepreneurial education in general and entrepreneurial learning in particular.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter focuses on a review of the literature on entrepreneurship education, especially at the secondary education level. It describes the concept of entrepreneurship, the debates about teaching entrepreneurship at the secondary education level, the objective and expected learning outcomes, and studies on effectiveness towards achieving those outcomes. Furthermore, it discusses the pedagogical and learning aspects of entrepreneurship education, with a greater focus on entrepreneurial learning and reflective learning.

2.2. What is entrepreneurship?

Entrepreneurship has its roots in economics. Over time, it has evolved from the more economic orientation to include different conceptions. Due to varied and contested perceptions, entrepreneurship has been dubbed the "conceptual tower of Babel", as different people use the term to mean different things (Haara & Jenssen, 2016). Entrepreneurship has been defined as a process of "identifying opportunities, creatively breaking patterns, taking and managing risk, and organising and coordinating resources" (Heinonen & Poikkijoki, 2006, p. 82). The process of entrepreneurship is undertaken by an entrepreneur who identifies and pursues opportunities through a business organisation created for exploitation of those opportunities. Kuratko and Hodgetts (2004) show that it is a masterful and synergistic combination of knowledge, skills, personal attributes and resources for creation of value. Their conceptualisation of entrepreneurship is captured in the concise, yet detailed paragraph below (Kuratko & Hodgetts, 2004, p. 30):

> Entrepreneurship is a dynamic process of vision, change, and creation. It requires application of energy passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include willingness to take calculated risk – in terms of time, equity, or career, ability to formulate an effective venture team; the creative skill to marshal needed resources; and fundamental skill of building a solid business plan; and finally, the vision to recognise opportunity where others see chaos, contradiction and confusion.

Kuratko (2005) expands this thought, arguing that the knowledge and skills of entrepreneurship can be applied in various contexts. These contexts include situations within and outside profit-making organisations or non-profit-making organisations, and their activities that require creativity and innovation.

Komulainen et al. (2013) lament that entrepreneurship in education is often portrayed as universal across the globe, while different nations, economies and politics of nations have different perspectives in their practice of entrepreneurship. For this reason, they call for a paradigm shift from entrepreneurship with neoliberal economic undertones to conceptualisations that go beyond the economic or profit motif as often advanced in entrepreneurial education. Invoking a broader understanding, entrepreneurship can involve the pursuit of opportunities for creation of value, development and change for personal, social, cultural, and economic motivations (Leffler, 2009). The profit or economic orientation of conceiving entrepreneurship and entrepreneurs seems rather skewed and limited in explaining and even teaching entrepreneurship, as there are different forms of practice in the real world, a key example being social entrepreneurship (Komulainen et al., 2013; Leffler, 2009). Unfortunately, the traditional understanding of entrepreneurship is often pushed in entrepreneurial education, to the neglect of other reasons why people engage in entrepreneurial activities (Komulainen et al., 2013). It can be deduced from the literature that entrepreneurship is much broader in scope than the creation of a business. It exists in a myriad of contexts and perspectives depending on different factors, and as such a 'one size fits all' approach in its teaching could be very limited.

2.3. Entrepreneurship education at the secondary education level

Having explicated on the meaning of entrepreneurship, focus hereafter will be on entrepreneurship education at the secondary education level. To unpack this, the focus will be on the objectives of entrepreneurship education, the need for a research focus on entrepreneurship education, and the impacts of and challenges faced by implementation of entrepreneurship education.

2.3.1. Debates about teaching entrepreneurship education

The introduction of entrepreneurship education at the secondary education level has evoked passionate dialogue concerning its outcomes and effectiveness among scholars of entrepreneurship and entrepreneurship education. Questions have been raised on whether the outcome of the programmes is proportionate to the investments that continue to be made in entrepreneurship

education (Fayolle et al., 2006). Pihie and Bagheri (2010) aver that there is scepticism about the maturity and ability of adolescence learners to grapple with and comprehend the complexities and huddles entailed in the setting up and management of an enterprise. Similar questions relating to ability and maturity are raised specifically about the mini-enterprise approach (Sithole & Lumadi, 2012; Thetsane & Matsela, 2014).

To illustrate, in a study carried out in Lesotho by Thetsane and Matsela (2014) the results revealed that at least 61% of teachers reported that primary school learners lacked the maturity and mental readiness to run and make meaningful learning gains from the school-based mini-enterprises. Learners were only enamoured with business ideas that involved food items that they could eat and not the entrepreneurial knowledge, skills, and competencies they could gain from the enterprise experience. These findings corroborate earlier findings of a study carried out in Botswana by Sithole and Lumadi (2012). The duo found that learners doing MEPs at junior secondary education level are only interested in food-related business ideas, bringing into question the creativity and maturity beyond such choices and operation among junior secondary school learners in Botswana. A caveat of both these studies is that they report findings from the perspective of the teachers and not learners. They also do not investigate more deeply the teaching and learning processes involved in the mini-enterprise approach at this level.

Komulainen et al. (2013) seem to have a problem with entrepreneurship education because of its individualistic business model, since it is narrow and overlooks issues of social and ethical issues, economic empowerment, and learner participation. They also argue that policy documents take for granted the voice of learners and treat them as docile, willing subjects without a mind of their own, leading to them having problems with the ideals and pedagogy of entrepreneurship. Its 'one size fits all' approach that treats learners as a homogeneous group overlooks the rich diversity of learners, who come from different social backgrounds, status, religions, positions, and cultures that may have shaped their perspectives about entrepreneurship. They argue that adolescents "observe, adapt, interpret the culture around them" through a process of "interpretive reproduction" (Komulainen et al., 2013, p. 1081). Some of the resistance and criticisms come from teachers (especially in Finland), who prefer the pedagogical approach of entrepreneurship which aims at developing enterprising individuals rather than entrepreneurs with hard values of capitalism (Komulainen et al., 2013; Leffler, 2009).

Advocates of entrepreneurship education at the secondary education level contend that career preparation for learners must start early in their youth, because they are at a developmental stage where their mental faculties, dispositions and abilities are relatively more malleable to acquire entrepreneurial attitudes and abilities than at a later stage of development (Oosterbeek et al., 2010). In addition, some learners have an inherent desire to be entrepreneurs and find entrepreneurship education programmes appealing, and possess less risk aversion and more creativity, qualities which are essential for entrepreneurial success (Oosterbeek et al., 2010; Ringarp, 2013). For these reasons, it makes perfect sense to take advantage of these opportunities and nurture learners during their childhood and adolescence (Pihie & Bagheri, 2010; Gasse, 1985, as cited in Peterman & Kennedy, 2003). Without minimising the dissenting voices, the current study explores entrepreneurial learning at the secondary education level, focusing especially on how learners learn to be entrepreneurial through engagement on the MEPs.

2.3.2. Objectives of entrepreneurship education

Entrepreneurship education has three broader objectives (which are also tied to approaches), namely education *about* entrepreneurship, *for* entrepreneurship and practice *in* or *through* entrepreneurship (Gibb, 2002; Johansen & Schanke, 2013; Pittaway & Cope, 2007). The *about* objective is mostly intended to create awareness and understanding about entrepreneurship; education *for* entrepreneurship serves to equip learners with skills and competencies to become either entrepreneurs or intrapreneurial; and education *through* entrepreneurship uses practice or a business venture model/simulation to make participants entrepreneurs by emulating the way entrepreneurs learn in their ventures (Mwasalwiba, 2010; Pittaway & Cope, 2007). Education *for* entrepreneurship includes key elements such as creating a budget, business plans, marketing research and strategies and reflection on reasons for new venture creation; education *through* entrepreneurship is more encompassing and broader, extending to the competencies of identification of novel opportunities and their exploitation (Johansen & Schanke, 2013). Education *through* entrepreneurship serves to "create authentic and relevant learning experiences by focusing on pupils' own interests and ideas" (Moberg, 2014, p. 516). It appears that education *through* entrepreneurship is more of a teaching approach to achieve the *for* objective, rather than being an objective in itself (Mwasalwiba, 2010). The MEPs employed in Botswana junior secondary schools are a typical example of education through enterprise. Figure 1 below illustrates the key questions each objective seeks to answer.

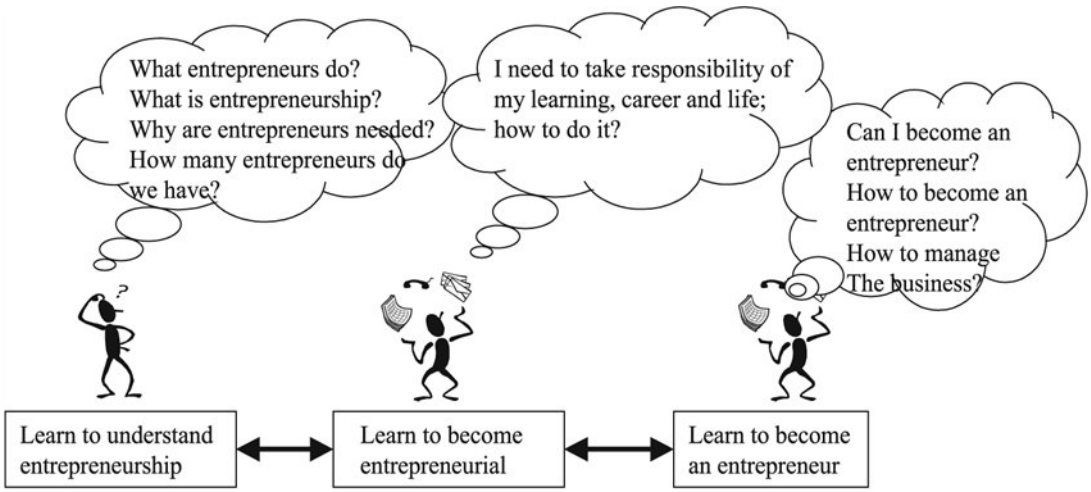


Figure 1: Objectives of entrepreneurship education (Hytti & O'Gorman, 2004)

2.3.3. Expected learning outcomes of entrepreneurship education

Chief among the expected learning outcomes of entrepreneurial education is the goal to develop learners' entrepreneurial competencies (Lackéus, 2014). These competencies refer to the "knowledge, skills and attitudes that affect the willingness and ability to perform the entrepreneurial job of new value creation" (Lackéus, 2014, p. 12). Entrepreneurial competencies or learning outcomes differ with the level of education or type of entrepreneurial education approach. The broader view of entrepreneurship often offered in primary education emphasises non-cognitive skills, while the narrow approach offered at secondary education and higher levels of education emphasises cognitive skills (Moberg, 2014).

Researchers of entrepreneurial education also place different emphasis on the types of competencies to be expected from entrepreneurship education programmes and courses. For example, Fiet (2001) observes that the core competencies of many programmes, especially at institutions of higher learning, focus on key topics covering different aspects of a business venture. These include idea generation or discovery, creativity and innovation, competitive analysis, risk assessment, financing, and managing growth, among others. Man et al. (2002) classified entrepreneurial competencies into the following six domains: opportunity seeking and development; forging and managing relationships with different stakeholders; possession of different conceptual abilities; organising different types of resources needed by the business; strategic thinking competencies; and commitment competencies.

Competencies have also been identified from the perspective of psychological traits and characteristics associated with entrepreneurship. These include the need for autonomy and power, locus of control, risk-taking propensity, endurance, self-efficacy, need for achievement, tolerance for uncertainty or ambiguity, creativity, innovativeness, and flexibility (Driessen & Zwart, 1999). The challenge with an exclusive focus on traits is that they are perceived to be fixed or stable and consistent, therefore not allowing room for learning for those not already possessing them. Hence there is an increased focus on entrepreneurial skills or competencies (Edwards-Schachter et al., 2015). This aligns with the basic assumption of entrepreneurship education that "entrepreneurial skills can be taught and are not a matter of innate personality characteristics" (Sánchez, 2013, p. 448).

Not many studies have focused on examining entrepreneurial competencies at the secondary education level. Consequently, how learners develop entrepreneurial competencies remains largely unknown (Egbert, 2014, as cited in Grewe & Brahm, 2020). Moberg (2014), studying learners at basic education level, has identified two classifications of skills that learners develop from entrepreneurial education, which are non-cognitive skills, and cognitive skills in older learners at the secondary education level. Sánchez (2013) studied the role played by entrepreneurship education in entrepreneurial competencies and intentions among secondary school learners, finding that entrepreneurship programmes seem to develop learners' competencies related to self-efficacy, proactiveness, risk-taking and intentions for self-employment. Grewe and Brahm (2020) used a three-dimensional approach to entrepreneurial competences, covering economic know-how, team skills, and personal competencies. They found that mini-companies positively impacted learners' economic or business knowledge. However, no positive impact was observed in non-cognitive and social skills such as creativity, decision-making, innovation, and self-awareness (Bird, 2019; Cheetham & Chivers, 1996, 1998; Le Deist & Winterton, 2005).

Lackéus (2015) does not view these skills as dichotomous, but rather as a continuum ranging from cognitive skills to noncognitive skills. Under cognitive competencies, there is *knowledge* (consisting of declarative knowledge, procedural knowledge, and self-knowledge) and *skills* (whose components include marketing skills, resource skills, opportunity skills, interpersonal skills, learning skills and strategy skills). At the other end of the spectrum are non-cognitive competencies consisting of attitudes such as entrepreneurial passion, self-efficacy, entrepreneurial identity, proactiveness, ambiguity or uncertainty tolerance, and perseverance. Drawing from these studies, it is plausible to deduce that entrepreneurship education must foster competencies within the

continuum of cognitive and non-cognitive skills (personal characteristics and attributes), even though the findings do not generally agree.

Drawing from management education and competency-based education, a multidimensional conceptual framework of competencies has been developed and applied to entrepreneurship education. The framework consists of four different components: cognitive competence, functional competence, personal competencies, and meta competencies.

Cognitive competence or knowledge-based competences refers to founding theories and concepts of entrepreneurship. It includes knowledge and understanding of processes and business contexts where they can be applied and the reasoning behind such use. By extension, the entrepreneurial learner must possess relevant work-related knowledge and be able to utilise it effectively. Cognitive competence entails forms of knowledge consisting of theoretical knowledge, procedural knowledge, practical knowledge, and contextual knowledge specific to the business and the sector it operates in. *Functional competence* describes the 'know-how' skills; that is, the psychomotor skills that a learner of entrepreneurship must be able to demonstrate beyond head knowledge. Examples of functional competence include presentation skills, communication, planning, organising and leadership. *Personal competencies* refer to the enduring characteristics that an entrepreneur should have that enable them to render excellent performance, leading to profits and growth of a venture. *Meta competencies* are the higher-order thinking skills that help the entrepreneur to cope and even thrive under conditions of uncertainty and ambiguity.

2.3.4. Research on the impacts of entrepreneurship education

Assessing the impact of entrepreneurship education at the secondary education level is an important way of measuring the outcomes against the investments made. Lackéus (2014) and Lackéus and Sävetun (2019) have identified and divided impact studies that have been undertaken in entrepreneurial education into three categories: thought-based approaches, action-based approaches, and emotion-based approaches or strategies. These classifications are based on the division of the mind into thoughts, actions, and emotions (Hilgard, 1980, as cited in Lackéus, 2014).

The *thought-based assessment strategies* measure the extent to which participants in entrepreneurship education think that the programmes have influenced their intentionality,

desirability and perceived behavioural control of a career in entrepreneurship. Different intention models, possessing little variation, have been developed and employed to study entrepreneurial intentions (Ajzen, 1991; Bird, 1988; Boyd & Vozikis, 1994; Davidsson, 1995; Drennan et al., 2005; Krueger & Carsrud, 1993; Shapero & Sokol, 1982). Notwithstanding, the theory of planned behaviour model seems to be that most commonly used (Ajzen, 1991; Peterman & Kennedy, 2003; do Paço et al., 2011; Sánchez, 2013; Aure, 2018; Mothibi & Malebana, 2019). Basically, thought-based studies attempt to find out whether entrepreneurship education interventions have an effect on learners' entrepreneurial self-efficacy, entrepreneurial attitudes and entrepreneurial intentions. They use a variation of statistical methods, some cross-sectional and some experimental, among others.

The findings of studies employing thought-based strategies seem to be conflicting in some cases. Those carried out by Peterman and Kennedy (2003) and Sánchez (2013) revealed that entrepreneurship education programmes increase entrepreneurial intentions (desirability and feasibility) of new venture creation and competencies. Aure (2018), taking a social entrepreneurial intention perspective, found that social entrepreneurial intentions and grit were influenced by prior experience and self-efficacy beliefs of secondary school learners. They found that agreeableness influenced intentions indirectly by influencing its predictors of social support, moral obligation, empathy, and self-efficacy. Analogous findings by Mothibi and Malebana (2019) confirmed self-efficacy, attitudes, and subjective norms to be predictors of entrepreneurial intentions, thus supporting the theory of planned behaviour as a model for measuring entrepreneurial intentions. Furthermore, the study explored the role of the media-perceived status of entrepreneurship, and knowledge of entrepreneurial support, which have never been examined before. It found them to be invaluable in the formation of entrepreneurial intentions for secondary school learners in South Africa.

Quite to the contrary, do Paço (2011) found that subjective norms, which are believed to be one of the antecedents of intentions, had an insignificant relationship with behavioural control and entrepreneurial intentions. In this study it is argued that emphasis should be placed on attitude change rather than knowledge. Analogous results by Marques et al. (2012), Dinis et al. (2013) and Bignotti and Le Roux (2016) found that entrepreneurship education and some entrepreneurial characteristics were not positively related to entrepreneurial intentions. Factors such as risk negatively influence intentions, while need achievement and confidence influenced intentions positively (Dinis et al., 2013). They also found no statistically significant correlation between other

characteristics (tolerance, ambiguity, personal behavioural control, and innovativeness) and the desirability of starting a new business. do Paço et al. (2015) found that girls exposed to entrepreneurship education had lower entrepreneurial intentions compared to boys who did not even share the same exposure. This indicates the possibility of other factors apart from entrepreneurship education as influencing intentions (do Paço et al., 2015). Intriguing as it may be for girls involved in entrepreneurship education to have lower intentions compared to boys who did not share the experience, the influence of gender on entrepreneurial intentions remains contradictory. To illustrate, Malebana (2014), Mahlaole and Malebana (2021) and Mothibi and Malebana (2019) have found gender to possess no significant correlation with entrepreneurial intentions, while other studies have found gender to be significantly correlated to desirability and feasibility of entrepreneurship (Gird & Bagraim, 2008; Shah & Soomro, 2017). Caution must be exercised in terms of the latter studies as they focused on learners in higher education.

Drennan et al. (2005) found that childhood experiences, such as family or parents owning a business, a challenging childhood and nomadic family life influenced the desirability and feasibility of venturing into business. These findings are corroborated by Georgescu and Herman (2020), who found that secondary school learners who had an entrepreneurial background seem to have higher entrepreneurial intentions than their peers who possess no similar background. They concluded that a combination of entrepreneurial education, personality traits and family background are potential predictors of venture creation desirability and perceived feasibility. A caveat worth noting though is that family support and community may negatively influence the desirability of a career in entrepreneurship (Bignotti & Le Roux, 2016; Marques et al., 2012; Mothibi & Malebana, 2019). Still on social contexts and entrepreneurship education, Bellò et al. (2018) found that peers and other role models of secondary school learners who encouraged them to be entrepreneurs influenced them to develop creativity and entrepreneurial intentions. This implies that the support and encouragement of peers are invaluable in fostering high levels of creativity and the desirability of a lifelong career in entrepreneurship.

In conclusion, the jury is still out on the impact of entrepreneurship education based on the thought-based approach, due to mixed findings among secondary school learners. Nonetheless, this approach has the advantage of ease of use, with large numbers of participants in an entrepreneurship programme. Unfortunately, it has methodological limitations of self-selection bias in the case where learners choose an entrepreneurship subject for themselves and neglect the learning process of developing the attributes and competencies (Lackéus & Sävetun, 2019). Other problems include

the lack of control groups, especially for cross-sectional studies, no pre-tests and post-tests, and over-reliance on self-reports of learners, which may be unreliable as they come from a place of naivety. According to Lackéus (2014) this approach fails to explain the process of entrepreneurial learning; that is, when and why the interventions facilitate the development of entrepreneurial competencies and other attributes.

The action-based assessment strategy attempts to find out whether entrepreneurship education programmes have resulted in entrepreneurial behaviour by way of setting up business ventures and other enterprising behaviour-related indicators (Lackéus & Sävetun, 2019). This strategy makes use of longitudinal studies that can track the alumni of the programmes. Few longitudinal studies that have investigated entrepreneurship education at a higher education level suggest that it may influence entrepreneurial intentions and actions long post-graduation (Joensuu-Salo et al., 2020; Lange et al., 2011; Lundqvist, 2014). Lange et al. (2011) studied 3755 alumni of Babson College in the USA who completed their studies between 1985 and 2009. They found that learners who took two or more courses in entrepreneurship possessed entrepreneurial intentions long after graduation, and that such courses also influenced entrepreneurial action. These findings were corroborated by another longitudinal study (between 2008 and 2018) carried out by Joensuu-Salo et al. (2020), who found that among graduates who took entrepreneurship courses at a university in Finland intentions may decrease while learners are still pursuing their studies, but remain constant for the long term.

There seems to be a paucity of research on the impact of learners who took part in entrepreneurship education at secondary school who ventured into business. Reasons for this gap could result from the infancy of research on entrepreneurship at the secondary education level. Other challenges may emanate from the fact that it is difficult to establish causation of venture creation because of participating in entrepreneurship education, self-selection bias, and the time difference between intervention and outcome, which may take many years for secondary school learners (Lackéus, 2014; Lackéus & Sävetun, 2019). This approach poses challenges to entrepreneurial learning because it is more outcome-oriented than process-oriented, thus making it difficult to establish what worked and how it worked in influencing the outcome, so that lessons may be drawn for teaching and learning purposes.

The emotion-based assessment strategy is a more recent approach and is founded on the role of emotion in learning. It is premised on the notion that emotional events are a link and catalyst

that mediates between entrepreneurial activity and resultant entrepreneurial competencies (Lackéus & Sävetun, 2019). With the foundation of studies that have been carried out on entrepreneurial learning, this approach attempts to move beyond the limitations of previous strategies which neglected the entrepreneurial learning process, by taking into consideration the role of critical and emotional events in the development of entrepreneurial knowledge, skills, and attributes (Cope & Watts, 2000; Pittaway & Thorpe, 2012).

Recent studies have applied it to educational contexts at both higher education and secondary education levels (Lackéus, 2014; Lackéus & Sävetun, 2019; Pittaway et al., 2011). In a nine-month longitudinal study of engineering learners, Lackéus (2014) investigated the connection between emotional triggers and entrepreneurial competencies. He found that collaborative work experience, uncertainty and ambiguity, and interaction with the outside world were strongly linked to the development of entrepreneurial knowledge, skills, and attitudes. Pittaway et al. (2011) and Pittaway et al. (2015) focused on learners' clubs and found that experiential learning in these settings seems to enhance reflective practices and accord learners the opportunity to learn through making errors and solving problems. The other benefit was the increased learning from social context and engagement with the community. The role of emotional exposure was also highlighted as leading to transformative learning in experience-based activities that simulate real-world businesses. Lackéus and Sävetun, (2019) extended this research to secondary school learners in enterprise education. The findings further cemented the value of peer collaboration, as learners gained increased self-efficacy, pride, and motivation as they explained their work to their peers. These effects require iterative collaborative work over extended periods, which allows for interaction with the outside world, feelings of ownership of work and getting insightful feedback from different stakeholders (i.e. peers, teachers, and the community). The current study employs this latter approach as it provides an opportunity to study entrepreneurship education from an entrepreneurial learning process perspective that is not afforded by the other two strategies.

2.4. Pedagogical and learning aspects of entrepreneurship education

Learning from an entrepreneurial perspective is "an enacted practice, in that learning is a process of knowing, a means of accounting for and shaping the entrepreneur's experiences revealing their tacit and embodied knowledge" (Higgins et al., 2013, p. 138). It requires researchers of entrepreneurial education to critically examine the conceptions of teaching, learning, identity of key actors in entrepreneurship education, and relationships between educators and learners of

entrepreneurship, beyond the mere introduction of new teaching methods. Teaching and learning are often used interchangeably, without due regard to the fact that at their deepest conceptualisation they differ in meaning and practice. Moon (2013) has noted the confusion of these words – teaching or instructing and learning. The author obverses that often people use them in a way that overlaps. However, teaching or instruction refers to the action undertaken by a teacher to help another person to learn, whereas learning is done with the action of the learner in acquiring knowledge, skills, and competencies. Albeit often occurring concurrently, teaching, and learning as separate operations and constructs can happen independently of each other. For example, under certain situations a learner may learn without the aid of a teacher, and teaching can happen separate from the learner and does not always guarantee learning. However, the learner is always the object of teaching or instruction. Noting the differences between these terms, research on teaching or pedagogical aspects and learning aspects of entrepreneurship is discussed separately below from a learning-centric, constructivist perspective.

2.4.1. Pedagogical aspects of entrepreneurship

2.4.1.1. The entrepreneurial teacher

According to Arends (2012), the ultimate goal of teaching is to produce learners who are independent and self-regulated. Pursuant to this ideal, an effective teacher must by requirement at least be academically able, have a good grasp of their teaching subject, care about the wellbeing of their learners, and produce good results in terms of academic achievement and social learning. The concept of pedagogical content knowledge (PCK) is a useful framework of the knowledge base (knowledge, skills, values, character) teachers should possess to meet the definition of effective expert practitioners (Fernandez, 2014; Park & Oliver, 2008). Park and Oliver (2008, p. 264) define PCK as "teachers' understanding and enactment of how to help a group of learners understand specific subject matter using multiple instructional strategies, representations, and assessments while working within the contextual, cultural, and social limitations in the learning environment." Shulman (1986) popularised the term to describe knowledge that differentiates a teacher from a specialist or expert in the discipline; for example, the distinction between a teacher of entrepreneurship and an expert entrepreneur.

PCK was initially categorised into *content knowledge* (which entails knowledge of ideas, concepts, theories, pieces of evidence, and strategies for developing this type of knowledge); *pedagogical knowledge* (consisting of educational purposes, the teaching methods, strategies,

techniques to effect learning and assessment dimension and strategies; and *general pedagogical knowledge* (which covers educational purposes and values, and knowledge of theories of learning and their classroom applications). In the context of the PCK framework, teaching can be understood as the transformation of entrepreneurship material of learning into forms that make it easier for learners to comprehend (Geddis & Wood, 1997; Park & Oliver, 2008). The importance of conceptualising PCK as the transformation of the content "is that it directs attention simultaneously to the subject matter, learners and educational purposes, and to the interactions among these different kinds of teacher knowledge in the pedagogical encounter" (Geddis & Wood, 1997, p. 612). To apply this conceptualisation of PCK to the understanding of the entrepreneurial teacher, the models of Magnusson et al. (1999) and Park and Oliver (2008) are invoked. The components of PCK as represented and adapted in this model include: (1) orientations to teaching entrepreneurship, (2) knowledge of learners' understanding of entrepreneurship, (3) knowledge of the entrepreneurship curriculum, (4) knowledge of learners' understanding of entrepreneurship, (5) teacher efficacy, (6) knowledge of teaching methods and strategies for teaching entrepreneurship, and (7) knowledge of assessment of entrepreneurial learning. These components are summarised and illustrated in Figure 2 below.

1. Orientations to teaching entrepreneurship: Orientations refer to the beliefs about the nature of entrepreneurship, the purposes of learning entrepreneurship, and decision-making in teaching. According to Fayolle and Gailly (2008) it is of paramount importance for teachers of entrepreneurship to clarify their philosophical positions as they set them apart from paraprofessionals, in the sense that it brings awareness and justification of one's professional practice. These philosophical orientations or beliefs of teachers about teaching, learners and schools are essential to their professional growth and have a bearing on practice (Saphier et al., 2008). They also crystallise in an idealistic fashion the goals, values, and attitudes that the professional teacher strives to achieve. For example, teaching in entrepreneurial education is increasingly leaning towards constructivist philosophy (Krueger, 2007; Löbler, 2006). Therefore, teachers must possess an understanding of entrepreneurship education, positive attitudes towards entrepreneurship, entrepreneurial ways of working, and skill in the use of innovative teaching to inculcate positive attitudes towards entrepreneurship (Leffler, 2009) guided by appropriate learning theories.

2. Knowledge of the entrepreneurship curriculum: Effective teachers of entrepreneurship must possess an in-depth understanding of the relevant materials for teaching entrepreneurship in the curriculum. They should demonstrate an understanding of entrepreneurship content regarding

both the vertical and horizontal curriculum. Another important aspect of this domain is a firm grasp of curricular saliency, which deals with the ability of the teacher to judge the importance of entrepreneurship topics within the curriculum as a whole. It also helps them identify core concepts of entrepreneurship that should be taught in greater depth, while simultaneously expertly modifying and discarding or dedicating less attention to aspects of the subject matter perceived as non-essential or peripheral to teaching and learning (Park & Oliver, 2008). To put it another way, curricular saliency is the balance between teaching for completing the syllabus and teaching for comprehension.

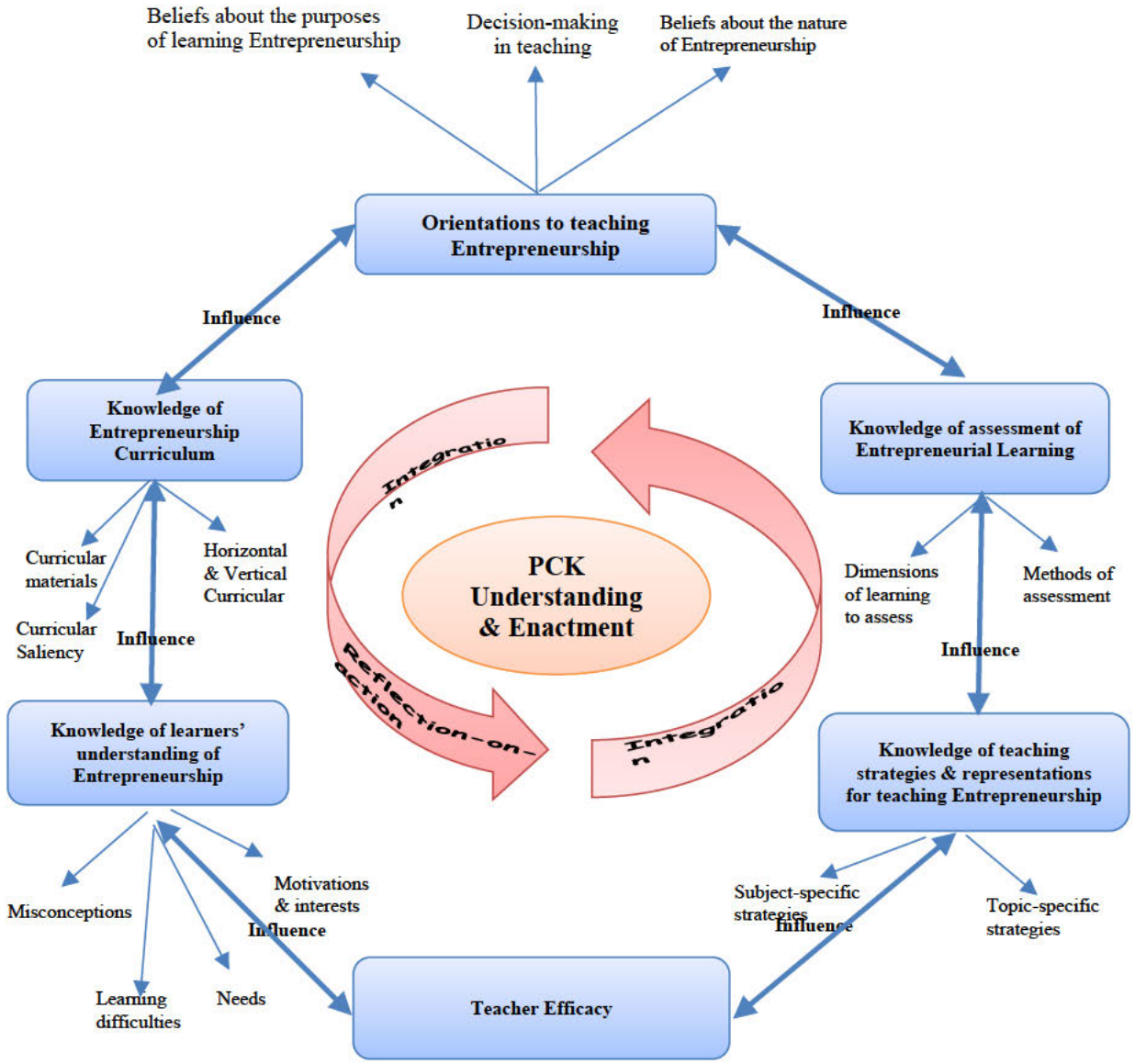


Figure 2: Entrepreneurial pedagogical content knowledge (adapted from Park & Oliver, 2008)

3. Knowledge of learners' understanding of entrepreneurship: According to Krueger (2007) prior knowledge, assumptions, and beliefs that learners bring may be problematic and even dysfunctional and consequently inhibit new learning. Therefore, the entrepreneurial teacher structures classroom activities and experiences from a learning-centric perspective to constructively support the development of new mental structures and help learners deal with cognitive discrepancies in their existing knowledge base and structures (Krueger, 2007; Löbler, 2006). This means that the teacher must know the areas where learners of entrepreneurship are most likely to have learning difficulties and misconceptions to proactively address them effectively. Understanding issues of learner motivation and learner diversity is also important so that instruction is differentiated to meet learners' needs, learning styles and preferences.

4. Knowledge of teaching methods and representations for teaching entrepreneurship: Teaching strategies and methods are the end products of transformation of content for effective teaching and learning. The teacher must understand the nature of entrepreneurship as a practical subject that requires action-oriented, hands-on, and experiential teaching strategies (Mwasalwiba, 2010). He or she should know what strategies would be useful for entrepreneurship in general and for specific topics (Park & Oliver, 2008). Representations are the different ways in which a teacher could capture and represent the entrepreneurship content using analogies, metaphors, examples, demonstrations and explanations; visual representations of other teaching aids; and learning activities including experiments, projects, equipment, models, simulations, excursions and other real-world connections that will make content more comprehensible to learners (Fernandez, 2014; Saphier et al., 2008).

5. Knowledge of assessment of entrepreneurial learning: Assessment serves to diagnose learners' strengths and weaknesses; monitor learners' academic progress; assign grades to learners' work; and measure the effectiveness of their teaching (Popham, 2015). Different types of assessments may be more suitable for specific forms or objectives (about, for, and through) of entrepreneurship education (Pittaway & Edwards, 2012). Therefore, teachers of entrepreneurship should know what dimensions of the subject should be assessed and also be competent in developing classroom assessment instruments of different forms (objective, subjective, and authentic) appropriate to assess learning in line with the expected educational outcomes of teaching (Fernandez, 2014; Park & Oliver, 2008; Pittaway & Edwards, 2012).

6. Teacher efficacy: Teacher efficacy is known to be a highly affective or emotive aspect of PCK, in the sense that it is a belief about one's own capability to perform a given task confidently and well, not knowledge as with the other components. Pihie and Bagheri (2011) posit that teachers of entrepreneurship with a high perception of self-efficacy can be expected to be highly motivated and confident about the effective use of entrepreneurial teaching methods, and resilient in dealing with classroom challenges. All these in turn will result in higher motivation, entrepreneurial self-efficacy levels and learning for learners.

In conclusion, a teacher of entrepreneurship, especially at the basic education level where learners may need more support and direction, needs to be well-rounded and possess different elements of the hexagonal PCK model.

2.4.1.2. Classroom learning environment

The teaching of entrepreneurship involves a repertoire of competencies, and these include the arts (career adaptability, opportunity seeking and exploitation orientation, creativity, innovative thinking, networking, and teamwork) and the sciences (entrepreneurship content-related competencies), all anchored on a teaching environment that closely resembles real life as much as practicably possible (Heinonen & Poikkijoki, 2006; Peltonen, 2015). In this sense, teachers of entrepreneurship are viewed as entrepreneurs who use classroom tasks and activities to cultivate entrepreneurial competencies in learners (Leffler, 2009; Peltonen, 2015). Therefore, they must create a conducive classroom environment that will make teaching and learning more effective, and ontologically and epistemologically align with the theory of learning and the nature of entrepreneurship education.

Education in entrepreneurship is anchored on the theories of social constructivism, situated learning, and experiential learning that are relevant to the world of work (Garnett, 2013; Haara & Jenssen, 2016; Leffler & Svedberg, 2005; Löbler, 2006). Its recommended teaching practices are characterised by creating a high-quality learning environment; authentic learning experiences; action-oriented tasks or activities that engage learners in learning by doing, taking control of a task, and asking questions; freedom to decide how learning outcomes will be achieved; responsibility for own learning; use of teamwork to develop values of collaborative and cooperative learning; focusing process orientation to learning rather than content; and networking with stakeholders such

as entrepreneurs outside school (Fiet, 2001; Garnett, 2013; Haara & Jenssen, 2016; Leffler & Svedberg, 2005; Ruskovaara & Pihkala, 2015).

Teachers as facilitators in experiential and entrepreneurial learning environments operate on the premise that learning is autonomous (self-regulated and propelled by learner interest and commitment) and holistic (affecting the learners as a whole person physically, perceptually, affectively, cognitively, conatively, socially, and culturally) (Fiet, 2001; Heinonen & Poikkijoki, 2006; Mulligan et al., 1992). For this reason, the focus is on engendering self-regulated learning as opposed to passing knowledge to passive learners. Consequently, they are characterised by a shift from one dimension decision mode to multiple decision modes on learning objectives, topics, pacing and progression of learning, learning activities, instructional resources, and assessment. These decision modes may involve situations where the facilitator makes decisions alone, or cooperatively with the learner, and allows them full autonomy in other circumstances. Also, as learners work on their self-managed or directed projects or experiential activities that require reflection, the teacher's responsibility is to facilitate learning through providing support or initiating discussion through cognitive apprenticeship (Fiet, 2001; Löbler, 2006). When learners engage in reflection, teachers are not expected to provide answers to learners but to allow them to work with their peers to reflect on and resolve cognitive discrepancies (Löbler, 2006; Rogoff, 1990).

The assumption is that as learners enjoy more freedom and autonomy, they will most likely be motivated to learn and develop confidence in their competencies in entrepreneurship. This free kind of learning environment ensures that they do not do things out of fear or mere compliance like automatons but freely think things through, thus increasing the likelihood of transfer of knowledge after graduation. One of the features of the traditional approach to teaching, true to its behaviourist roots, is the excessive use of punishment in incidents of failure. However, in experiential learning, 'unlearning' can be more important than learning. Therefore, flexibility and openness to the possibility of error or mistakes is an important aspect of learning that should be permitted (Moon, 2013). In agreement, Deakins and Freel (1998, p. 152) argue that entrepreneurs "need a culture that tolerates failure and does not penalize failure excessively" to learn effectively from experience.

2.4.1.3. Entrepreneurial teaching methods

According to Krueger (2007) pedagogy of entrepreneurship has evolved over the years from a purely behaviourist approach to a purely constructivist approach. Purely behaviourist teaching

includes a teacher-centred approach which involves transmitting the material of learning to passive learners and memorisation of entrepreneurial facts through lectures. This approach has since evolved to being teaching-centred, which perceives learning as a process and thus focuses more on developing skills and drilling learners (e.g. on use of business plan writing) (Krueger, 2007). The traditional approach to teaching and learning, also known as the transmission approach, is premised on the assumption that learning entails absorbing and storing the material of instruction in the same form as delivered by the teacher (Moon, 2013). Learning in this approach is characterised by memorisation and drill and practice, which ensures that during an assessment the learners reproduce the information as closely as possible to what was delivered to them.

Freire and Ramos (2009, p.164) have called this method "the 'banking' concept of education", where the teacher makes deposits through one-sided delivery of subject material while the learners are assigned the passive role of "receiving, filling, and storing the deposits". Moon (2013) uses a brick wall metaphor to describe this approach in her characterisation: like a builder, the teacher provides the bricks of knowledge to the learner, stacks the bricks one after the other creating a predetermined 'building of knowledge' after his or her own design, and takes out wrong or incorrect bricks of knowledge, replacing them with good ones, with little or no mental processing on the part of the learner. The classroom setting is more autocratic as the teacher solely selects the material of learning, delivers it, and controls classroom behaviour while learners are treated like blank slates or empty jars passively receiving the information. Consequently, this approach is teacher-dependent, and learning cannot occur apart from the teacher (Moon, 2013). Freire and Ramos (2009, p. 163) provide the following description of the transmission approach that makes it ill-suited for teaching entrepreneurship:

> The teacher talks about reality as if it were motionless, static, compartmentalized, and predictable. Or else he expounds on a topic completely alien to the existential experience of the learners. His talk is to "fill" the learners with the contents of his narration – contents which are detached from reality, disconnected from the totality that engendered them and could give significance. Words are emptied of their concreteness and become a hollow, alienated and alienating verbosity.

The nature of entrepreneurship, as often typified by uncertainty and ill-structured problems, where the only constant is change, dictates that entrepreneurs cannot depend on readymade textbooks or teacher-provided solutions. Entrepreneurs are behoved to generate their own road

maps befitting new situations at hand (Löbler, 2006). For this reason, traditional teaching methods fall far short of the potential to develop entrepreneurial thinking and acting characteristics in learners, and consequently make the case for a different approach inevitable and necessary.

Social constructivist teaching methods are increasingly advocated for as suitable for developing an entrepreneurial mindset and competencies, since they allow entrepreneurship learners to construct knowledge from experiences in social and cultural settings in the way expert entrepreneurs learn in the real world (Kakouris, 2017; Kakouris & Liargovas, 2021; Krueger, 2007; Löbler, 2006). Constructivist teaching methods have evolved from being learner-centric (where learners take ownership of learning and involve the use of case studies) to learning-centric (where learning is situated and more self-managed, with examples including project-based learning (PjBL) and problem-based learning (PBL)). However, teachers still use both traditional teaching methods (teacher-centric and teaching-centric) and action-oriented (learner-centric and learning-centric) teaching methods, albeit the latter to a lesser degree (Krueger, 2007; Mwasalwiba, 2010; Sithole, 2012). As a result, learners in such a classroom have a low level of engagement and meaningful learning and the teachers are thus deficient in providing the scaffolds for complex learning required to develop expert entrepreneurs (Krueger, 2007). Didactic traditional teaching methods used in entrepreneurship include lecturers, case studies, and group discussions (Mwasalwiba, 2010). These methods are used more because they are less demanding in terms of effort and time requirements on the part of the teacher (Fiet, 2001; Sithole, 2012).

Entrepreneurship education takes a holistic interest in the learners, that is, in their feelings, values, and interests, their thinking and decision-making processes, and consideration as a part of society (Heinonen & Poikkijoki, 2006). For this reason, it focuses on the knowledge or science of entrepreneurship and the arts part of it, which includes ways of thinking and behaving entrepreneurially. This requires traditional teaching methods to be replaced by more constructivist teaching methods, as on their own they are inimical to the development of entrepreneurial ways of thinking and acting (Fiet, 2001; Heinonen & Poikkijoki, 2006). Active and innovative teaching methods that are encouraged and used (although to a relatively low degree) in entrepreneurial education include business simulations, field trips, venture set-up, games and competitions, projects, presentations, videos, and filming (Hytti & O'Gorman, 2004; Mwasalwiba, 2010; Ruskovaara & Pihkala, 2015; Sithole & Lumadi, 2012).

In summary, pedagogy of entrepreneurial education is rooted in social constructivism and engages the whole learner and incorporates all of the following components: learner ownership of the learning process; teamwork over time; value created outside team or teacher; activity-based feedback or assessment; an iterative process; subject matter connections; interactions with the world outside class; and encouraging learning from failure (Garnett, 2013; Lackéus & Sävetun, 2019). Therefore, they have the potential to engender meaningful learning because they subscribe to the tenets of how humans learn from experience in real life – by doing, through trial and error in social settings. So, if teachers want to change cognitive structures it is important that they concentrate on methods that are laser-focused on knowledge structure rather than on mere content accumulation.

2.4.2. Learning aspects of entrepreneurship education: A holistic approach

2.4.2.1. Learning from a holistic perspective

The concept of a holistic approach to learning permeates this study, and it is imperative that it is properly defined. Illeris (2007) observes that learning is a broad word often used or understood as possessing very diverse meanings. Some of the basic understandings of learning that he notes include: the outcomes of learning; mental processes that can effect a change in learning outcomes; interaction processes involving engagement with other people, the subject matter or materials, and social environment; and lastly teaching. As much as the first three explanations are reasonable, the last one seems way off as its focus is on what the teacher does rather than the learner. However, Illeris (2007) himself defines learning as "any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or ageing". This view of learning seems too broad and vague compared to the three understandings of learning provided above, which seem to encompass what learning generally entails.

I now pivot to the definition by Jarvis and Parker (2005) and Jarvis (2012), which seems better thought out and comprehensive. Before I go to their definition, I want to concede upfront that Peter Jarvis is an adult learning scholar. However, his insightful work on human learning provides some useful insights that may enrich the understanding of learning in entrepreneurship education even at the secondary level of education. Jarvis (2012 points out that learning is a sophisticated process that endures a person's lifespan. As a result, he advises that children's learning should not be viewed as entirely different from more mature learners, even though the two are separated by

varying processes and social contexts. Accordingly, Jarvis and Parker (2005, p. 7) define learning in the following way:

> … a combination of processes whereby the whole person – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses) – is in a social situation and constructs an experience which is then transformed cognitively, emotively, or practically (or through any combination) and integrated into the individual's own biography resulting in a changed (more experienced) person (Jarvis, 2012, p.13).

This definition is loaded, and its conceptualisation of learning is captured and summarised in Figure 3 below. It emphasises the whole person, thus deliberately signalling a departure from the view of learning that focuses exclusively on the mind apart from the body and a person's environment. To expound further, this conception of learning is holistic in the sense that it recognises the value of embodiment (encompassing emotions, feelings, and actions) in interaction with the learners' social and cultural environment.

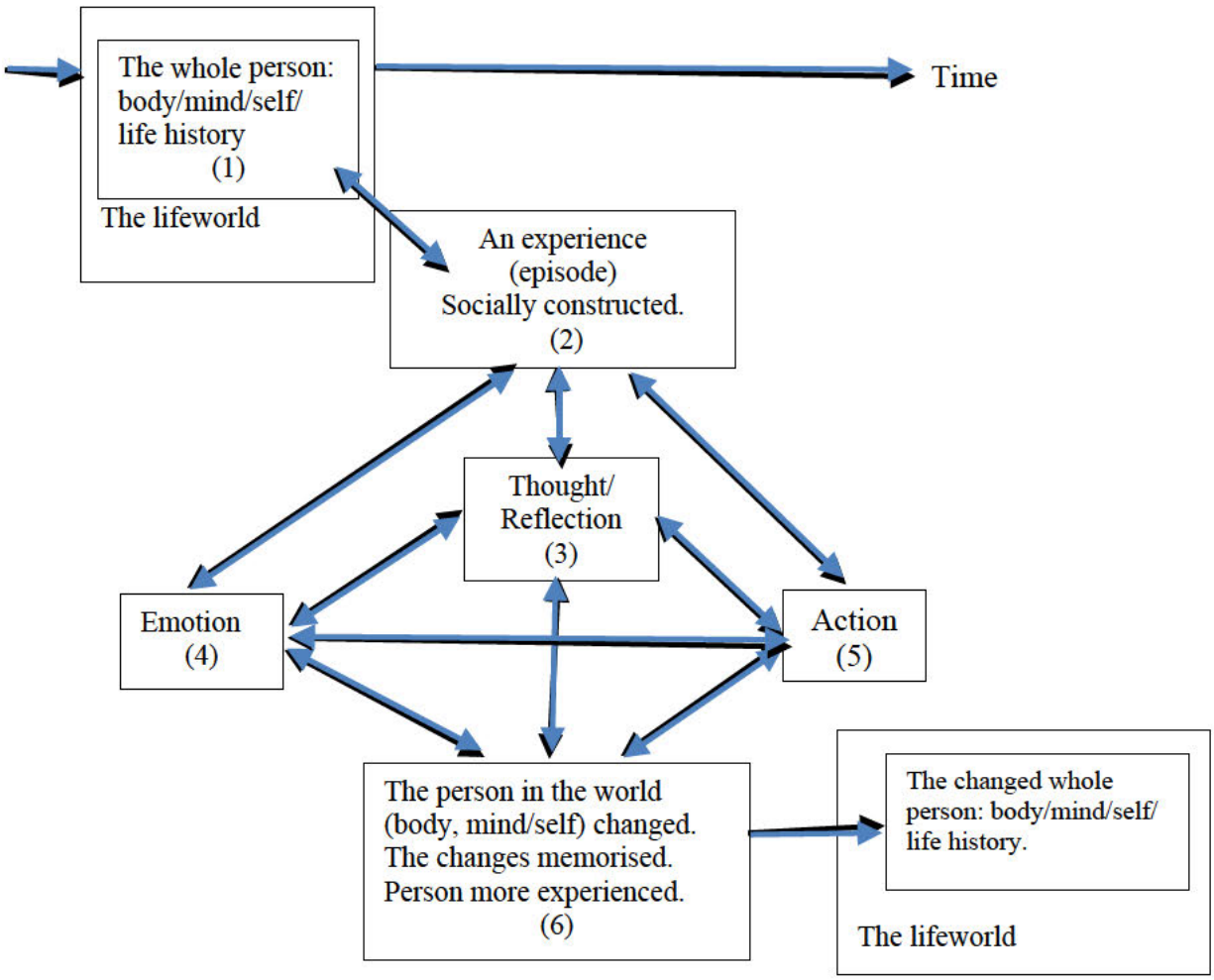


Figure 3: Jarvis model of human learning (Jarvis, 2012)

The latter suggests that learning is embodied, enactive and embedded in the learners' environment. This view aligns well with ideas of social cognition where the philosophical grounding is in both existentialist phenomenology and Dewey's soft pragmatism. This perspective perceives learning and cognition as not exclusively "enskulled", to borrow from Verny's (2021) terminology, but an embodied activity in which the subjects attempt to make sense of the environment in which they act (Candiotto, 2019).

A view of learning from a holistic perspective is invaluable to entrepreneurial learning, since it is non-reductionist, allowing for drawing insights about cognition from various fields such as philosophy, psychology, neuroscience and others (Jarvis, 2012; Johnson, 2017). For example, traditional views of education founded on Cartesian dualism have been mostly mentalistic, overlooking the role of the body in learning. Quite to the contrary, pragmatist and existentialist philosophers such as Dewey, Heidegger and Merleau-Ponty and, of recent, neuroscience, show that cognition is embodied. From these different disciplinary backgrounds there is evidence that emotions and feelings play an important role in learning and decision-making (Brady, 2013; Damasio, 1995, 1999; Johnson, 2017; Verny, 2021). The learners' feelings, emotions, and actions may aid in optimising the cognitive functions or suppress them, abetting learning as a result. They also play an important role in the effectiveness of learning in collaborative and cooperative learning settings (Candiotto, 2019). In addition, Cornelissen (2013) argues that bodily actions, such as talking, gesticulations and handling or working with material objects, are not a mere reflection and expression of thoughts that are past but play an essential role in the formation of new conceptualisations.

Furthermore, learning viewed from this perspective is not always an individualistic enterprise, but a process that also involves an active intersubjective experience, entailing embodied interaction among peers with fluid degrees of autonomous identity engaged in joint sense-making in their situated world where the subjects act (Candiotto, 2019; De Jaegher & Di Paolo, 2007). The continued interactions between the learner and her situated context, including interaction with peers, school community, family background and the whole socio-economic and cultural set-up, play an important role in learning. Jarvis and Parker (2005, p.13) therefore conclude that "[l]earning

then, is taking into the self through the process of transformation of that which is experienced as a result of being-in-the-world."

Illeris (2007) expands this thought, arguing that learning is a two-faced process, which consists of, first, the interaction between the learners and her environment, of which consciousness or "directedness" is an invaluable aspect. The second aspect of learning, what he terms "the psychological processing and acquisition" (Illeris, 2007, p. 22), is an internal biological process involving impulses and influences that are also a part of the interaction process. These processes of interaction and acquisition happen simultaneously, and acquisition provides the connection between novel impulses and influences and previous relevant knowledge or learning. This process of interaction and acquisition function within a broader process he terms the three dimensions of learning. These include the content, incentive, and the social and societal dimensions. Relating to the acquisition aspect of learning, the content dimension has to do with what is to be learned (knowledge, skills, attitudes, competences, etc.), while the incentive dimension refers to issues of motivation, emotions and willpower, as they are the energy forces that propel and sustain desire and interest in the learning experience for learning to occur.

The last dimension, namely the social and societal, is linked to the interaction process between the learner and the environment. In this model, Illeris (2007) is criticised for leaving out an important dimension of learning, which is action (Jarvis & Parker, 2005). This is also viewed as very important from Dewey's pragmatic view. Pragmatists would agree that the contribution of action in learning should be considered, because to them knowledge entails knowing the hidden consequences of action, that is, knowing what to do to achieve intended outcomes in a given situation (Määttänen, 2015). From a pragmatist perspective, the learner as acting agent (or knowing subject) is in the lived world, and finds themselves placed amidst a network of different interactions where they are met with the resistance of the objective conditions of their action in the environment. Therefore, from this worldview learning entails knowing what one can anticipate as the consequences of their actions in a particular situation.

Within the field of entrepreneurship, this conception of learning seems to align with an emerging area of research known as situated entrepreneurial cognition. Entrepreneurial cognition has been defined as "the knowledge structures that people use to make assessments, judgements or decisions involving opportunity evaluation and venture creation and growth" (Mitchell, 2002, as cited in Mitchell et al., 2007 p. 2). This research has its roots in social situated cognition (Mitchell

et al., 2007) and draws from pragmatic philosophers such as James William and John Dewey (Dew et al., 2015). It is therefore not surprising that prominent themes of entrepreneurial cognition in the literature include embodied cognition; situated cognition; action-oriented cognition/embedded cognition; and distributed cognition (Dew et al., 2015; Sassetti et al., 2018). Embodied cognition implies that it takes a non-dualistic view of the body-mind relationship in shaping the mind. Situatedness of entrepreneurial cognition means that it takes into consideration the communicative, relational and group contexts in which cognition and action take place. The theme of distributed cognition refers to the interactions between social agents and the environment.

The fundamental assumption of entrepreneurial cognition is that entrepreneurship is concerned with the distinctive ways of thinking and acting of entrepreneurs. As such, the overarching interest of entrepreneurial cognition studies is to investigate "[H]ow do entrepreneurs think, reason, and behave such that they create value and wealth through the identification and implementation of market opportunities?" (Mitchell et al., 2007, p. 5). Entrepreneurial cognition research seems to have been focused more on practising entrepreneurs, thus leaving a gap in entrepreneurial learning, especially at the basic education level, even though it could add value to our understanding of learning at this level. Yet drawing from existentialist phenomenology, Dewey's pragmatism and social cognition theory may provide a promising opportunity for understanding entrepreneurial learning and reflective learning from a more holistic perspective.

2.4.2.2. The entrepreneurial learner

Drawing from the understanding of learning in a holistic way, as given above, we are beholden to an existentialist phenomenological understanding of entrepreneurial learning and learners. In this line of thought, the entrepreneurial learner is understood as a whole person, whose constitution consists of both the body and mind joined inseparably and functioning interdependently to effect learning. The entrepreneurial learner is therefore always being, existing in the here and now lived world, and simultaneously in the process of becoming. As a whole person, the entrepreneurial learner experiences the lived world through his or her body (senses), through the mind (i.e. thoughts, ideas, attitudes, beliefs and values), through actions (practice, skills, competences) and affectively (emotions and feelings) (Jarvis, 2012; Jarvis & Parker, 2005). As such, what is of paramount importance and pre-eminence in the learning process is not the subject matter content to be taught and learned per se but the transformation of the learner proper (Jarvis, 2012) into a more entrepreneurial or enterprising being.

Notwithstanding, the learners of entrepreneurship are diverse, as are any learners in any given classroom. They differ in their life history, their personal interests, and expectations of possible outcomes of entrepreneurship education (Jones & Matlay, 2011) in any given learning situation. The possible outcomes of entrepreneurial education are also diverse, including learners becoming venture creators, buyers of businesses, intrapreneurial employees, social entrepreneurs, and others within the entrepreneurship space. Issues of social background, religion, political persuasions, and other forms of diversity, such as learning styles, preferences and interests, may play a role in what and how they learn in the classroom (Komulainen et al., 2013). However, research on the diversity of entrepreneurship learners is yet to emerge (Jones & Matlay, 2011). As already noted above, entrepreneurial education subscribes to the constructivist learning theory (which is compatible with Dewey's progressive view of education) that situates the learner in the nucleus of learning experiences in the process of creating knowledge with others (Krueger, 2007; Löbler, 2006). Learners in this type of classroom are not expected to be passive recipients of entrepreneurship knowledge from an all-knowing teacher – they are active creators of that knowledge, in an environment that allows them to generate ideas, and translate them into actions (Fiet, 2001; Leffler, 2009).

Entrepreneurial education is expected to produce learners who are entrepreneurial and enterprising. For this reason, learners in an entrepreneurship class are to be trusted, able and responsible individuals who are autonomous, have initiative, and are creative to learn through interaction with peers and actors from outside the school (Lackéus & Sävetun, 2019; Leffler, 2009; Leffler & Svedberg, 2005). Jones and Matlay (2011) put the learner of entrepreneurship at the heart of a conceptual framework that emphasises dialogic relations among the educational process, the teacher, the community, and the school. These reciprocal interrelationships represent the collaboration and situatedness that must exist in an entrepreneurial setting to develop a learner into an entrepreneurial or enterprising individual. In the end, entrepreneurial learning from a holistic learning perspective should not just result in head knowledge of entrepreneurship concepts but a total transformation of the whole person, who becomes more entrepreneurial and/or enterprising.

2.4.2.3. Entrepreneurial learning

Entrepreneurial learning is an area that has recently been gaining the interest of scholars of entrepreneurship. There is no one agreed definition of entrepreneurial learning. It has been defined as learning that happens through experiential involvement or engagement in the process of creating

a new business venture (Pittaway & Cope, 2007; Pittaway et al., 2011). It is also referred to as learning in the entrepreneurial process (Politis, 2005; Ravasi & Turati, 2005). Rae (2005, p. 324) has defined entrepreneurial learning as "learning to recognise and act on opportunities, and interacting socially to initiate, organise and manage ventures". Entrepreneurial learning involves "group oriented, project based, hands-on and context laden approach with facilitated reflection" (Lackéus, 2014, p. 374). It takes a holistic view of the learner by taking into consideration not just their intellect, but also their emotions and feelings in the process of learning. Research in this emerging area falls in the category emotion-based assessment strategy since it recognises the prominent role of emotional events to effect development of entrepreneurial competencies (Lackéus, 2014; Lackéus & Sävetun, 2019). In summary, the process of entrepreneurial learning entails the use of different experiential and cognitive processes for acquisition, retention, and application of entrepreneurial knowledge, skills, and competencies in identifying and acting on business opportunities through co-participation or a community of practice (Politis, 2005; Rae, 2005; Wang & Chugh, 2014).

Entrepreneurial learning draws a lot from organisational learning, by taking knowledge and concepts in organisational or management learning and applying them to entrepreneurs in their business organisations (Harrison & Leitch, 2005). Minniti and Bygrave (2001, p. 7) argue that "entrepreneurship is a process of learning, and a theory of entrepreneurship requires a theory of learning". Unfortunately, the lack of theoretical grounding to underpin pedagogical methods and practices is noted in many entrepreneurship education programmes (Fayolle, 2013; Harrison & Leitch, 2005; Kuratko, 2005; Robinson & Haynes, 1991). Kuratko et al. (2015) submit that entrepreneurship consists of a macro view which describes external factors outside the entrepreneur's sphere of control that influence a venture's success or failure, and a micro view which essentially describes those factors within the entrepreneur's locus of control. The macro perspective (consisting of environmental, financial/displacement, and displacement schools of thought) and micro perspective of entrepreneurship (consisting of traits of entrepreneurs, opportunity, and strategy formulation schools of thought), although providing a wealth of knowledge to the understanding of entrepreneurship, fail to provide a framework for putting such knowledge to practical use in the real world (Jones & English, 2004). The result of this predicament is an aloof academic perspective manifested in the disparity between theory taught in the classroom and the actual practice of entrepreneurs (Fayolle, 2013; Higgins et al., 2013; Jones & English, 2004). Hence Jones and English (2004, p. 420) have rhetorically asked: "Why not teach learners to think like entrepreneurs by designing a teaching strategy based on the entrepreneurial process?"

Entrepreneurial learning is part of the evolution of entrepreneurship education that fills the gap of neglecting "the role of practice as an epistemological means of learning, and how practice can contribute to entrepreneurial development which is distinctively different from traditional pedagogical approaches" (Higgins et al., 2013, p. 139). Research on entrepreneurial learning has attempted to investigate whether educational processes are designed and modelled following the way entrepreneurs learn (Pittaway & Cope, 2007; Pittaway et al., 2009). Armed with this understanding, similar experiences are simulated in instructional situations and contexts to improve learner learning (Pittaway et al., 2011; Rae & Carswell, 2001). Whereas research on entrepreneurial learning has tended to study entrepreneurs in business ventures, recent studies have applied it to educational contexts at both higher education and secondary education level (Lackéus, 2014; Lackéus & Sävetun, 2019; Pittaway et al., 2011). This is a groundbreaking shift from trends in research on learner programmes that have mostly focused on entrepreneurs' personality traits, self-efficacy and entrepreneurial intentions both at tertiary education and secondary education level.

Furthermore, research on entrepreneurial learning builds on the limitations of studies that put a lot of emphasis on studying the psychological traits of entrepreneurs and responding to calls for the development of a theory of entrepreneurship and of learning in entrepreneurship education (Rae, 2000). One of the major criticisms of the personality trait perspective is that it assumes traits of entrepreneurs are permanent, consequently precluding the potential for learning, development and change through involvement in an experiential and entrepreneurial activity or process (Cope, 2005a). Research findings on intentions studies are also contradictory (Kassean et al., 2015), and several recent studies seem to suggest that for various reasons entrepreneurial intentions do not always translate into behaviours and actions of new venture creation, except if there are implementation intentions (Fayolle, 2013; Fayolle & Liñán, 2014; Oliveira & Rua, 2018).

Rae (2000) argues that at the heart of these studies is a positivist approach that seeks to develop generalisable laws, theories and models while neglecting interpretivist approaches that investigate how entrepreneurs actually learn and work in entrepreneurial ways. He further posits that the quest for generalisable theories is far removed from entrepreneurs' experiences, to the exclusion of their reflections and voices. In line with Rae's criticism, trait and/or impact studies, which mostly have a quantitative leaning, tend to focus on the outcomes of entrepreneurship programmes, for example, showing whether the programme has increased the desirability and intentions of starting a venture. Taking a different perspective, which is process-orientated rather

than outcomes-orientated, entrepreneurial learning puts emphasis on what works and why it works in the acquisition, retention, and use of entrepreneurial skills (Minniti & Bygrave, 2001; Rae, 2000). This is in line with what Jones and English (2004) argued: that learners should be taught to think like entrepreneurs through the use of teaching strategies based on the entrepreneurial process.

2.4.2.4. Learning through experience: Factors for simulating entrepreneurial learning

Learning from an entrepreneurial perspective is "an enacted practice, in that learning is a process of knowing, a means of accounting for and shaping the entrepreneur's experiences revealing their tacit and embodied knowledge" (Higgins et al., 2013, p. 138). MEPs and mini-companies which epitomise experiential learning activities are used in entrepreneurial learning at the secondary education level to simulate the real-world ventures entrepreneurs operate and learn from. Invoking McGill and Waner Weil (1989, p. 248, as cited in Moon, 2013), from a generic learning perspective experiential learning can be explained as a "process where people individually and in association with others, engage in a direct encounter, then purposefully reflect upon, validate, transform, give personal meaning and seek to integrate their different ways of knowing." Experiential learning is different from learning from experience, which entails learning from everyday life situations. Experiential learning involves a deliberately and purposefully experience designed by a facilitator which includes an active phase (such as hands-on, action-oriented activities that involve learning by doing), from which knowledge can be derived through abstraction, and systematic observation and reflection on direct experience, such as role-plays, PjBL and simulations (Moon, 2013). According to Andresen et al. (2000) and Moon (2013), the features of experiential learning include unmediated direct experience as the material of learning, involvement of the whole person, recognition of prior experiences, reflection on experience to engender deeper learning, intentional design and purpose of learning experience, involvement of a facilitator, and a mechanism for assessment and feedback on learning outcomes.

Furthermore, Andresen et al. (2000) submit that these learning experiences must meet some essential criteria in terms of expected learning outcome (end goal) and enabling processes (means to achieving set educational goals). The overarching goal is to immerse learners in personally meaningful lived experience to construct knowledge through personal engagement, debriefing and reflection, holistic experience, recognition of relevant past experience, and self-direction in a supportive environment. Drawing from this generic view of learning, conceptualising experiential learning as constructed and having specific characteristics, it is clear even entrepreneurial learning

and constructed experience (such as mini-enterprises) must have some essential elements built-in from conception. In their studies Pittaway and Cope (2007) and Pittaway et al. (2011) have identified the following key factors as essential for learning through an entrepreneurial activity: action orientation and experience; uncertainty, ambiguity, and emotional exposure; opportunity exploration and problem solving; mistakes; crisis and failure; collaborative engagement; and self-efficacy and intentionality. These are explained in detail below.

Action-orientation and constructed experience: Entrepreneurs learn through experience because they are more action-oriented and hands-on and reflect on their experiences (Deakins & Freel, 1998; Kassean et al., 2015; Minniti & Bygrave, 2001; Pittaway & Thorpe, 2012). In the process of 'learning by doing' they engage in activities such as trial and error, problem solving, experimentation and discovery (Cope, 2003; Deakins & Freel, 1998). Significant learning occurs through engagement in 'learning by doing', which slowly changes an individual's orientation as a result of information gained through experience and reflective learning as the learner ruminates on the actions and decisions they have taken (Cope & Watts, 2000; Pittaway & Thorpe, 2012). In the process entrepreneurs learn from their experiences, both successes and failures, by continuously adjusting their 'stock of knowledge', depending on the outcomes of their decisions (Minniti & Bygrave, 2001). What works will most likely be repeated in similar future contexts, while what is not effective would be discarded, over time building knowledge and heuristics that minimise risks in uncertain situations. Moon (2013, p.113) points out that "'unlearning' can be a more important gain from experiential learning than 'learning'". This implies that learners of entrepreneurship should embrace a culture of flexibility and openness that tolerates the possibility of failure or mistakes and does not penalise failure excessively to learn from experience effectively (Deakins & Freel, 1998; Moon, 2013).

Opportunity exploration and problem solving: According to Shane (2003, p. xi) "the study of entrepreneurial opportunities, their origins, nature and their evolution – should form the core of the field of entrepreneurship." This view agrees with Rae (2000), who submits that learning from an entrepreneurial perspective entails learning how to seek, identify and exploit opportunities, and organise and manage an enterprise. The process of learning to recognise and exploit opportunities to solve problems involves active engagement in an experience that links the intellect and psychomotor skills, with the goal of helping the learner to become an entrepreneur in the future (Minniti & Bygrave, 2001; Pittaway et al., 2011; Pittaway et al., 2015; Rae, 2000). This implies

that experiential methods that involve opportunity seeking, identification and exploitation are suitable for helping one to be entrepreneurial and enterprising.

Ambiguity and uncertainty: Deeply experiential and entrepreneurial learning requires an environment that mirrors the uncertainty and ambiguity which entrepreneurs operate in (Ravasi & Turati, 2005). Uncertainty and ambiguity in the real world result from the challenge that entrepreneurs are often faced with ill-defined, complex, emotive, poorly understood and not fully developed problems (Higgins et al., 2013; Ravasi & Turati, 2005). To aptly and ably handle such complex situations, which are either recurrent or unique and novel, without precedent in their entrepreneurial ventures, entrepreneurs need both higher-level generative learning and lower-level adaptive learning (Pittaway & Thorpe, 2012). Adaptive learning is necessary for routine or repetitive tasks such as those which managers face or deal with daily, while generative learning enables one to cope with unfamiliar situations and come up with new and unique solutions and innovations. According to Easterby-Smith (1984, as cited in Moon, 2013), experiences that provide the most profound development are those where managers are faced with unprecedented ill-structured or challenging situations and problems which render current knowledge inadequate. Thus, experiential learning activities must possess attributes of ambiguity, uncertainty and ill-structured or appropriately challenging situations to engender deep entrepreneurial learning and development.

Personal emotional exposure and critical incidents: Closely tied to uncertainty and ambiguity is the concept of personal or emotional exposure. Entrepreneurs often take the risk of committing their resources, financial and otherwise, to set up and manage a business venture, consequently exposing themselves and their relations to possible emotional, financial, and social risks, especially during phases of critical incidents or discontinuity or crisis (Cope, 2003). Cope (2003) has found that managing the growth of a business venture through its life cycle is a "difficult and traumatic process" that forces entrepreneurs to learn "harsh and expensive lessons," hence having emotional exposure (p. 116). The phrase "critical incident" refers to an "emotional event, in that it represents a period of intense feelings, both at the time and during its subsequent reflective interpretation" (Cope & Watts, 2000, p. 114). Discontinuities are understood as a disruption to the normal functioning of a business (Nicolini & Mesnar, 1995, as cited in Pittaway & Thorpe, 2012).

Arpiainen et al. (2013) have identified a novel learning environment, collaborative learning, and challenging tasks to be sources of emotions and critical incidents in entrepreneurial learning

situations. They also found triggers in new learning environments to include support from outside, the conflict between theory and practice, and uncertainty and confusion. In collaborative teamwork, specific triggers of emotions and feelings include teamwork issues, time management issues, and learners' individual differences. Lastly, problems of interacting with the real world, issues of leadership and people management, and effectively dealing with knowledge and skill gaps stood out under the broader theme of challenging tasks.

Arpiainen et al. (2013) further submit that continuous dialogue, free exchange of knowledge and feelings, reflection and feedback among learners and their teachers help learners to cope with and ameliorate negative emotions. This is in agreement with Cope (2003) and Pittaway and Thorpe (2012), who posit that through resolving and reflecting on these critical incidents or discontinuities in the entrepreneurial process, entrepreneurs are believed to develop transformative learning, which challenges and changes how an entrepreneur understands themselves. Double-loop learning, transformative learning and higher-order learning were found to be developed through discontinuous events and critical reflection (Cope, 2003). It is expected that learners in the mini-enterprise experience will face some crises or critical incidents; however, how far they can transform these experiences into higher-order thinking skills has not been researched at the secondary education level, and that is what this current study seeks to explore.

Social and context dimensions: Literature on entrepreneurial learning also emphasises social and context dimensions of learning (Cope, 2005b; Higgins et al., 2013; Pittaway et al., 2011; Rae, 2005; Taylor & Thorpe, 2004). This perspective draws from situated learning theory, which perceives learning as occurring in situ and within specific contexts where knowledge is to be applied, and also as involving the social exchange of knowledge and ideas within a 'community of practice' (Lave & Wenger, 1991). The social and context dimensions result in contextual learning, the description and outcomes of which are captured by Rae (2005, p. 328).

Contextual learning occurs through involvement with various stakeholders and settings in learning, such as the community, the business industry and other relevant networks, bringing together a wealth of experiences that can be compared and transformed into shared meanings. Through these situated experiences and relationships people can develop intuition and the ability to recognise opportunities. Such learning connects personal emergence with the negotiation of the enterprise, as people learn in their social context 'who they can become' and 'how to work with others to achieve their ends' as well as the realism of 'what can and cannot be'.

This implies that it is imperative to understand the environment which entrepreneurs operate in and to ensure that this becomes an essential element in the teaching of entrepreneurship. Higgins et al. (2013) criticise entrepreneurship education for having been overly focused on individualistic approaches to learning, to the neglect of the social context within which entrepreneurs operate.

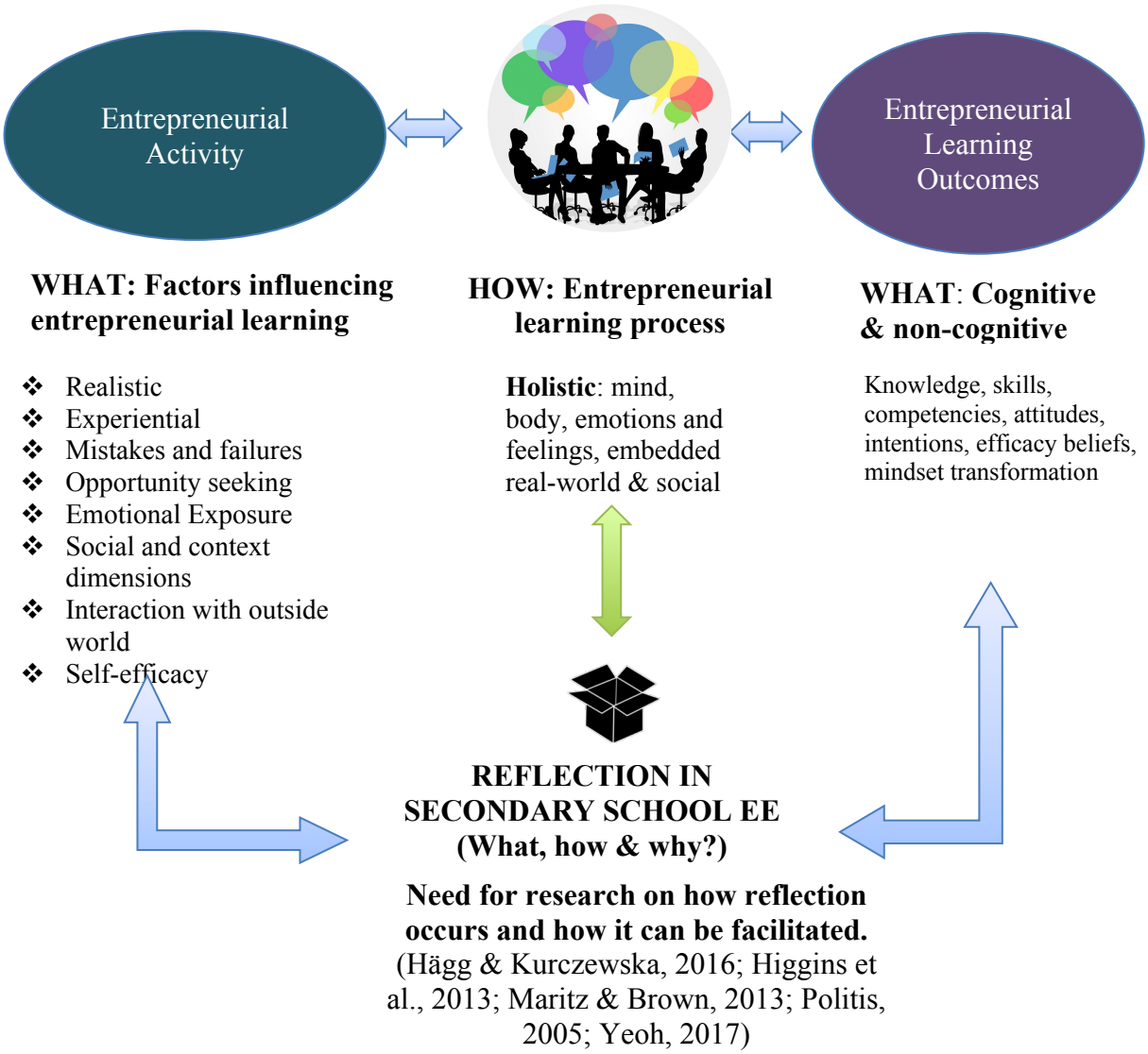


Figure 4: Summary of literature and identification of gaps

Higgins et al. (2013, p. 138) argue that "everyday conversations and interactions are critical to how the entrepreneur's practice is influenced". In addition, the social relationships in the entrepreneurial process are potent with opportunities for conflicts, which may result in higher-level forms of learning (Cope 2005b; Pittaway & Thorpe, 2012). Relevant instructional design and pedagogy must

replicate or simulate the real world that entrepreneurs operate in, as well as involving social dialogue and support of expert entrepreneurs, examples of which include guest speakers, field trips and internships in enterprises, and team-based MEPs (Pittaway & Thorpe, 2012). The role of social dimensions and emotional exposure as they relate to entrepreneurial in the MEP seem to be under-researched. Issues of social and group dynamics are prevalent in the mini-enterprise experience, and their role in entrepreneurial learning still needs to be explored more deeply (Solomon et al., 2018). Lackéus (2014) and Lackéus and Sävetun (2019) have recently extended research in these areas and identified the following emotional events: individual differences, overcoming competency lacunae, interaction with the outside world, theory versus practice, and leadership and managing people.

These factors are important in the design of entrepreneurial activities to ensure that these are truly experiential and include all the essential elements for entrepreneurial learning. However, as important as they are, they do not fully explain how learners learn meaningfully from such activities. Therefore, the next section reviews literature on the process of how learners make sense of experience.

2.4.2.5. Making sense of experience: Integrating experience with reflection in entrepreneurial learning

2.4.2.5.1. Reflection and entrepreneurial learning

A recurring theme that seems to be inextricably intertwined with different aspects of entrepreneurial learning, yet under-researched, is reflection or reflective learning (Cope, 2005b; Cope & Watts, 2000; Krueger, 2007; Mwasalwiba, 2010). Different words and phrases are used in the literature to discuss reflection, and these include: ‘reflection’, ‘reflective learning’, ‘reflective practice’, ‘critical reflection’ and ‘reflexivity’. Boud et al. (2013) define reflection s a process that follows experience, which entails stepping back to recapture, carefully think about and evaluate it (experience). It involves engagement of the cognitive and affective faculties to gain new knowledge, skills, attitudes, insights and perspectives from experience, either individually or collaboratively (Cope, 2005b). Reflective learning is often used interchangeably with reflection, and it describes learning that comes about as an outcome of the process of reflection. Reflective writing describes the process of writing down one’s experiences and evaluating them for knowledge and insights, as way of engaging in reflective learning and representing learning that has occurred (Moon, 2013). It captures the learner’s current understanding, as well as revisions in their

understanding. As a result, it makes an effective process through which learners learn, and also use the representation as material of learning in the future. Reflective practice is a phrase that is often applied to workplace situations whereby professionals or experts engage in reflection to improve their decision-making skills, problem-solving skills and overall performance (Moon, 2006, 2013). Lastly, critical reflection, also referred to as reflexivity, describes the highest form of reflection that questions the often taken-for-granted social, ethical, and political assumptions and perspectives to effect higher-order thinking skills and lifelong transformative learning. This section therefore examines how reflection is integrated with experience to effect experiential learning. The concepts from generic learning, awareness of experience, experiential and reflective learning are examined in greater detail in the context of education in entrepreneurship.

2.4.3. Experience as perception and action

The previous section showed that entrepreneurial education is essentially experiential, and identified the factors that must be in place for such experiences to have the potential to foster entrepreneurial learning. However, no matter how invaluable these factors are to the discourse of entrepreneurial learning, they do not do enough to delve deep into the process of learning from experience – for which reflection is imperative. Moon (2006) avers that all learning comes from experience, and this experience is sometimes mediated. Mediation here refers to the act of a teacher manipulating and reorganising and delivering content in a manner that is cognitively accessible to learners. As such instruction is mediated experience, regardless of the teaching methods and strategies employed.

The value of mediated experience in entrepreneurship education is acknowledged, especially in that learners must be taught entrepreneurship content before proceeding to prepare a business plan and setting up and running an enterprise. However, the interest of this study is in the constructed experience in the form of setting up and running the mini-enterprise, which is generally unmediated in the sense of teaching. If anything, mediation is by expectation relatively minimal, in the form of teachers facilitating and coaching learners in the entrepreneurial activity or the MEP. The direct experience in the form of an entrepreneurial activity is the material of learning.

Learning in experiential learning and entrepreneurship involves the whole person, their intellect, the body, feelings, emotions, and other bodily senses (Andresen et al., 2000; Heinonen & Poikkijoki, 2006; Mulligan et al., 1992). Mulligan et al. (1992) have identified the following

internal processors that are involved when learners immerse themselves in a holistic experience for learning purposes: will, memory, thought, emotion, sensation, intuition, and imagination. The appeal of unabridged direct experience is that it invokes the richest sense of impressions through our senses, and is thus suited to engender deeper learning. The perspective of classical empiricism on experience is that of viewing it as mostly passive perception where sense organs receive impressions from the environment (Määttänen, 2015). While this view may seem to align well with existential phenomenology in terms of researching learning from a holistic perspective, it does not go deep enough, as it seems to support what Dewey criticised as the spectator view of knowledge that characterises the traditional classroom. Pragmatism offers a more robust alternative to understanding how learning occurs from experience from an active and hands-on progressive education perspective characterised by learning by doing. From a pragmatic perspective, experience extends beyond mere perception, as experience is viewed as being an active agent in the world (Määttänen, 2015). Therefore, perception and action are two inseparable parts of a whole, that is experience, functioning together simultaneously towards one end. Peirce, one of the early prominent pragmatists, distinguished action from perception as follows: in action, the acting agents' modification of objects or events is more pronounced than their reaction to subjects (acting agents), whereas in perception the effect of the objects or events on subjects (acting agents) greatly surpasses the subjects' effect on them (Peirce, 1931, as cited in Määttänen, 2015). Furthermore, when we encounter a given object or event, it is both "an object of perception or an object of motor action" at the same time (Määttänen, 2015). As an object of perception, the encountered object or event is interpreted with the lens of the subject's existing meanings, concepts, beliefs and theories, whereas the latter implies viewing the object as an object of possible action involving the opposing forces of muscular effort and, resistance. It is in this sense that action plays a role in how we perceive the world, as it determines what the subject does or what he knows how to do (Määttänen, 2015; Noë, 2004). This broad perspective on experience provides a strong foundation for insights on how learners experience learning through conscious awareness of an encounter with an experiential task.

According to Marton and Booth (2013), in order to experience something, humans must be able to discern it and relate it to a context or its immediate environment. Having recognised it from its environment, we identify it by assigning it meaning or identifying it by its name. The "structure of an object of interest presupposes meaning, and the meaning presupposes structure" (Marton & Booth, 2013, p. 87). In other words, the structure of an object (consisting of specific qualities or features) makes it identifiable for what it is, and such identity implies that the object must have

certain identifying characteristics. These two aspects form what is termed the structural aspect and the referential aspect (also known as the meaning aspect). The structural aspect entails the whole from the immediate context where the object of experience is situated as well as the constituent parts in relation to each other and to the whole (Marton & Booth, 2013). The referential aspect has to do with the meaning that may be drawn or inferred from the object of interest. To elucidate, the duo borrows concepts of external horizon and internal horizon from phenomenology. The external horizon refers to the context from where the object is perceived, and how it is related to the context, while the internal horizon has to do with the whole and the parts of the object (Marton & Booth, 2013). What is implied here is that to experience something we must relate it to its immediate contexts as well as to other contexts. Also related to the concept of awareness is the concept of appresentation. This implies that when learners are exposed to an experience through their senses, they are able to fill in the gaps of the aspect of the experience not immediately exposed to their senses. This is usually due to the benefit of past experience of the phenomenon or experience (Marton & Booth, 2013; Moon, 2013).

What of action as experience, which contemporaneously occurs with awareness or perception? The MEP is not just an object to be experienced, but also an event or series of events that make the experience, which requires the entrepreneurial learners' action to transform it. Määttänen (2015) argues that perception better applies to objects brought before the subject, while the word experience is more applicable to an event, which he defines as "a temporal process that involves some kind of change" (p. 45). He further notes that often in an event a situation is changed to another event, but even if the change occurs without the subject's input or influence, the acting agent often has a propensity to desire "to know what to do about it or what events can be brought about" (Määttänen, 2015, p. 46). This desire or interest stimulates action or a set of operations that brings about change from the first situation, resulting in the second situation, which would be an outcome of the operation. This implies that as much as the subject perceives a situation, they experience it as possibilities to effect changes or, more precisely, as possibilities of action.

This ties in neatly with the object of knowledge in pragmatism, which views knowledge as prospective rather than retrospective, characterised by controlled processes where subjects transform one situation to another as an end to their goals. The learner is interested in knowing what to do to achieve a desired outcome through action in a given future situation. Accordingly, the learner experiences the lived world "as possibilities for action" wherein each situation presents a myriad of possibilities of action and outcomes (Määttänen, 2015, p. 48). The first situation, often

perceived as problematic, makes the learner contemplate consequences that may be anticipated from their action, and what they would perceive in the resultant situation, based on their stock of knowledge and experiences. The environment is both an object of action and perception, wherein the objects of knowledge are controlled operations or processes of change, where the learner transforms a problematic situation into a more desirable one. In this sense, knowledge is viewed as prospective rather than retrospective, as the knowing agent wants to know what to do to achieve a desired situation as a result of his or her action. The desired or anticipated situation is hidden in the first situation, but will become manifest if knowledge of the acting agent is sufficient. Jarvis (2012) agrees with this notion that experience extends beyond perception to include action, but also emotion and reflection or thought, thus emphasising that experience involves the interaction of the whole person and their immediate world.

Building on this understanding of the invaluable role of action in experience, pragmatism is predicated on process ontology. The basic assumption of process philosophy is that reality always undergoes change in our lived world (Kilpinen, 2008). This means that even if people do not change the circumstances in their world, the circumstances will change regardless. The entrepreneurial learner may approach the business world on the basis of their beliefs and expectations, but circumstances in the business world may pay no heed to those beliefs and actions and just take its course, affecting the venture as a result. This then requires the knowing agent to act to bring out a steady relation between himself or herself and the world through concrete doings (Kilpinen, 2008). For this reason action is treated as the central philosophical question in pragmatism which ascribes to it an importance equivalent to that of knowledge, as it plays a pivotal role in rendering the world predicable. Thus, a conclusion could be made that "[w]e act in the world and acquire knowledge about the world on the basis of our action" (Pihlstrom, 1998, p. 83, as cited in Kilpinen, 2008).

2.4.3.1 Making sense of experience

Meaning-making or sense-making are terms often used to draw meaning from experience and interpret it. From a holistic perspective of learning, the learner is deemed to be an active autonomous agent who regulates his or her interaction with his or her environment because they are focused on the continuity of their self-identity. Consequently, the regulation process gives the knowing agent a perspective in the world where they are situated at the centre of activity in the environment that they are a part of. Put another way, meaning-making is an active process anchored on a relational and emotionally intense process that involves regulated transaction between the

knowing agent and their learning environment. This means it is an embodied and enactive process that involves the whole person (mind, emotions and body) in creation of the perspective of value in the world. Meaning-making is a relatively more general aspect of the coupling and exchange between the knowing agent and their environment than action and perception, where there are more specific engagements with the world and later specialisations of the activity of creation and appreciation of meaning (De Jaegher & Di Paolo, 2007, p. 35). To illustrate that perception is a form of sense-making, De Jaegher and Di Paolo (2007) give an example of the softness of a sponge, arguing that this is not exclusively a property of the sponge: it involves a "particular encounter between an embodied 'questioning' and 'probing' agent and a 'reacting' and 'responding' segment of the world results in the perception of softness" (De Jaegher & Di Paolo, 2007, p. 36). It is a foregone conclusion in the literature that sense-making can occur at both an individual and participatory level (De Jaegher & Di Paolo, 2007; Di Paolo & De Jaegher, 2017; Moon, 2006, 2013). This concept of sense-making at both these two levels is explored below.

Meaning-making at an individual level: When learners engage with the direct experience as the material of learning, they bring with them prior knowledge within their cognitive structure as a foundation for which new knowledge will be shaped and extended as they interact with the direct experience (Moon, 2006, 2013). Moon (2006, 2013) calls this prior knowledge *internal experience*, and it entails the totality of all prior experiences a learner brings to a new learning situation or experiential activity. On the opposite side is the *external experience*, which refers to the material of learning or purposeful direct experience that resides outside of the learner, such as MEPs, simulations or field trips and so on. The process of making sense of experience does not usually happen when things are running smoothly. According to Jarvis (2012) this happens when a learner experiences a disjuncture. This he describes as "when our biographical repertoire is no longer sufficient to cope automatically with our situation, so that our unthinking harmony with our world is disturbed and we feel unease" (Jarvis, 2012 p. 6). This has a tendency to create tension between subjects and their environment, making them more conscious of or sensitive to the situation in their immediate world.

From a cognitive constructivist perspective, the *disjunctural situation* seems closer to a state of disequilibrium. To bring back the state of equilibrium, learning experientially involves the process of *assimilation*, where the learner attempts to make sense of and understand different aspects of the direct experience through the navigational guide of the internal experience. According to Pritchard (2009, p. 20) "new knowledge is incorporated into existing mental structures. The

knowledge bank is increased to include new information." For example, in the case of the MEPs (external experience), as the learner engages with the different aspects of setting up and running the enterprise, thus constructing their experience under the guidance of the facilitator-teacher, they bring to the fore the concepts of entrepreneurship taught in class and derived from life experiences (internal experience) prior to that moment. This internal experience is the foundation in the learners' existing cognitive structures that guides their educational adventure, in order to develop their own knowledge and understanding of entrepreneurship. It is the stock of all knowledge, feelings, skills, beliefs, and attitudes they bring to the experience about the external experience. Reflection plays an important function here of unpacking the experience after observation and experiencing it, assisting the learner to make sense of the experience by comparing the external experience with the stock knowledge embedded in their existing cognitive structure.

In other learning situations learners may observe discrepancies between the new material of learning and established mental structures. In that case, cognitive dissonance occurs in the mind of the learner. To resolve this contradiction, learners may adjust their internal experience because of the encounter with the direct experience. This may imply changing perspective as a result of attaining new insights. This altercation of the existing cognitive structure to align with new knowledge takes place through the process of *accommodation*: the process of reflection, either through writing or any other approach, as the learner asks themselves how the new idea or experience relates to what they already know and how they may resolve apparent contradictions (Moon, 2006). Equilibrium occurs when the learner no longer experiences a contradiction between new knowledge and existing internal knowledge systems.

Moon's (2006, 2013) work provides a good foundation to the concept of meaning-making from a constructivist perspective as applied to reflective learning; however, the constructivist approach may be problematic since its view of learning seems more mentalistic through emphasis and focus on mental structures, consequently falling short from a holistic approach to learning. In contrast, Deweyan pragmatism conceptualises learning as the formation of habits of action (Kivinen & Ristelä, 2003; Määttänen, 2015). According to Dewey (1987, as cited in Määttänen, 2015) meaning is defined in terms of the habits it involves, implying that actions and their consequences must be linked to perception, the relation of which gives meaning. Put another way, entrepreneurial learners as acting agents can anticipate certain outcomes or consequences of a given situation as a result of their action. As a result, learners can make sense of the situation and interpret it based on

the understanding that "different observed aspects and things (which involve habits) refer to these potential consequences" (Määttänen, 2015).

From a holistic human learning perspective, Jarvis (2012) describes an episodic experience as a situation that often triggers learners to move from their comfort zone and pursue new learning. He argues that this begins when a subject becomes aware of a disjuncture in the external world, a situation where his biography and interpretation of his immediate environment seem at odds, forcing the actor not to take their actions for granted but to reflect on the situation. The disjuncture therefore becomes a motivating factor that drives the subject to learn and take action to re-establish harmony through new learning. These *disjunctures* can be understood as the critical incidents that cause some disequilibrium in learners' cognitive structures as well as evoking learners' emotions and feelings, both positive and negative. For the experience to result in development it must be complex and 'messy' or ill-structured. Deakins and Freel (1998) affirm this, positing that entrepreneurial learning often comes about because of the train of reactions to critical incidents that force entrepreneurs to process information, revise strategies, and make decisions. All of this results in transformation of the content of experience through reflection/thinking, taking action, and experiencing emotion (Jarvis, 2012). Emotions are important because they influence learners' thoughts, motivations, beliefs, attitudes, and values.

Meaning-making through peer interaction: Invoking individual constructivism discussed above, Moon (2006, p. 21) summarises learning from experience thus: "the nature of experience is individual, in the sense that it is an individual who experiences it but social in the sense that all experiences are mediated by social surroundings." However, scholars of entrepreneurial learning are moving from viewing learning as an exclusively cognitive activity to increasingly perceive it as a contextual, social, and enactive phenomenon where the nascent entrepreneur learns through the collective involvement of the business community in the form of suppliers, customers and other entrepreneurs (Cope, 2005a; Rae, 2005; Taylor & Thorpe, 2004). A study by Bellò et al. (2018) found peer interaction among learners taking part in entrepreneurship education at secondary school to be associated with perceived desirability and feasibility of future venture creation. The formation of entrepreneurial intentions seems to be resulting from peers encouraging their partners in entrepreneurial activities to be entrepreneurs, thus influencing them to develop creativity and entrepreneurial intentions (Bellò et al., 2018). The power of cooperative and collaborative engagement is found in the multiplied outcomes and power of synergy. That is to say, the collaborative work of peers in a group always exceeds the added total of each individual member's

contribution (Liu & Matthews, 2005). The concept of intersubjectivity helps explain how learners with their peers learn in collaborative and cooperative settings through free exchange of knowledge, ideas and perspectives. Intersubjectivity is defined by Rogoff (1990, p. 71) as the "shared understanding based on a common focus of attention and some shared presuppositions that form the ground for communication. […] It is both the recognition and control of cooperative intentions and joint patterns of awareness." Furthermore, Rogoff (1990) points out that intersubjectivity may be invaluable in problem solving by engendering the development of "inaccessible" mental processes that are not easy to explain, such as a change in perspective and grasping of some complex knowledge and skills.

This is demonstrated in cognitive and social constructivist explanations of how through intersubjectivity peers in interpersonal and cultural settings influence each other to change perspectives or learn more sophisticated concepts and skills. Piagetian research focused on how learners experienced qualitative shifts in perspectives. He argues that social interaction influences a change in perspective among adolescent peers (or equals) as they engage in robust discussion in an attempt to reconcile their differing views, to achieve equilibrium in their understandings by weighting in on competing ideas or conception (Piaget, 1977, as cited in Rogoff, 1990). Vygotskian constructivism focuses on development of understanding and skills through explanation or demonstration of a particular skill set or knowledge by a peer who is more knowledgeable. For these efforts to be successful in entrepreneurial learning situations, learners must be willing and committed to opening up to and exploring views that differ from their own, with intersubjectivity among peers to appreciate and explore alternative viewpoints. They should also be willing to learn from their peers who may be knowledgeable to share or even scaffold concepts that are within their zone of proximal development, and acquire an entrepreneurial culture and mindset through intersubjectivity.

Woolfolk (2011) recognises the culture as cognition as employing a variety of tools and practices in a given cultural setting (language, computers, music, and others) by more knowledgeable peers to engender cultural values and understanding. That is to say, the cultural heritage and entrepreneurial culture may create cognition as peers engage with those more competent among them as they develop new ways of doing things and solutions, which are then grafted into the group's skills, attitudes and entrepreneurial mindset or culture toolbox. According to Moon (2013) reflection is an essential ingredient to change in mental structures in either individual or social settings. It facilitates this change not through accumulating new content but by

review of insights and perspectives through discussion and critique. She notes that the other way in which reflection is engaged in learning is through generation of new knowledge that may not be connected to prior knowledge possessed by the learner before experiencing the reflective activity and reflection. This implies that during reflection learners, especially when working on ill-structured problems, may identify their knowledge gaps and find out for themselves information that may be required to address the problem at hand. In the end the process of peer interaction must aim at helping each individual learner to develop individual mastery and rise above, due to the capability of the mind to create personal meaning and understanding (Liu & Matthews, 2005).

Reflective pedagogy and teachers' role: Although critical reflection is considered important, it does not come naturally to many learners – they need to be taught to be reflective (Neck & Greene, 2011). As a result, Higgins et al. (2013) have called for what they coined "reflective pedagogy" in entrepreneurship education. Reflexive pedagogy is based on the understanding that "learning is an enacted product of experience where educators and [learner] entrepreneurs are co-constructors of the learning experience" (Higgins et al., 2013, p. 139). It demands social intercourse where people with different ideas work together while simultaneously questioning their views and opening up to different ways of dealing with problems in an entrepreneurial activity (Higgins et al., 2013). Learners' knowledge and skills of doing meaningful critical reflection determines the extent to which they can learn from the mini-enterprise experience. There is already evidence that entrepreneurship learners either struggle with reflection or do not do it at all (Hunter Lindqvist, 2017; Yeoh, 2017). This is where the teachers' role in assisting learners to learn how to do critical reflection through scaffolding instruction is needed. Scaffolding instruction helps learners to move beyond their zone of proximal development until they are confident without support (Coulson & Harvey, 2013). Unfortunately, not all teachers have prowess in doing critical reflection or have the passion to do it, thus limiting how much learners can learn from experiential situations (Coulson & Harvey, 2013; Kreber & Castleden, 2009). According to Coulson and Harvey (2013) teacher support fortifies the nexus between reflection and experience-based learning in the following ways: providing guidance, structure and support to enhance learning; providing opportunities for debriefing and taking care of social aspects of the experience; helping learners to develop skills and competencies of reflection; and structuring opportunities for reflection before, during and after the experience to deal with experience-based learning challenges and complexities. To do this effectively they suggest four non-linear learning phases of scaffolding reflection for learning, consisting of teaching learners how to reflect, reflecting for action, reflection in action, and reflection on action.

Cope and Watts (2000) are among the researchers that discuss the duties of a mentor figure in the reflective process. First, they note that he or she must create a conducive and free atmosphere that allows free discourse, immediate feedback, and advice. The mentor should also help learner entrepreneurs to detach themselves from critical events in order to be able to objectively find the cause of the problem and the best solution. Lastly, mentors can also assist in transferring past learning to future similar situations and avoid the crisis dragging on for too long. The idea of teaching learners how to write a reflective log and do critical incident analysis and reflection would help learners to develop attributes of reflective practitioners. However, Hunter Lindqvist (2017) observes that regarding entrepreneurship education, especially when experience-based, no research has been carried out on the role of the teacher as it relates to learner reflection, which indicates a research gap.

2.4.4. Operationalising experiential and reflective learning

2.4.4.1. Learners' reflective writing

Having explicated the value of critical reflection to entrepreneurship, the need for a reflexive pedagogy, and the role of teachers in learner reflection, I now focus on the process of reflection itself. Although entrepreneurs may not have a systematic approach and process to reflective practice, classroom settings require such a process for effectiveness. Reflective thinking is a skill and competency that can be taught and learned (Coulson & Harvey, 2013; Moon, 2006). Reflective learning journals provide some guidance, encouragement, prompts or questions so that the process yields the desired outcome. Learners use reflective learning logs to record a concrete experience, reflect on and record their observations about it, infuse their observations into abstract concepts or theories, and apply the abstract conceptions or theories to decision-making and problem solving. Written reflections carry more power than verbal reporting on one's experience for several reasons. As Menary (2007, p. 622) aptly puts it, "writing is thinking in action". Written learning journals are therefore a mirror of learners' thinking processes that gives teachers information on the learning progress of the learners (Yeoh, 2017). For the learner, this reflective process encourages metacognition. That is, the learner gets to learn about their own process of learning. It also facilitates learning from experience, ill-structured and messy situations as it forces learners to compare the concepts they learn in class and reality, especially where there are noted seeming disparities. They may even reflect on taught concepts that could be useful to resolving problems, thus marrying theory with practice. In this process, learners get more clarification of ideas and concepts, clear up

some misconceptions, and gain more knowledge about entrepreneurship, while gaining ownership of the learning process (Moon, 2006; Yeoh, 2017). Emotional exposure is an innate property of entrepreneurial learning that arises from social networks and critical incidents, and it is encouraged in the design of entrepreneurship simulated learning activities (Pittaway & Thorpe, 2012). Reflective learning logs involve recognition of human emotion and feelings as a part of reflective learning (Moon, 2006).

Regardless of the abovementioned benefits of reflective journaling and calls to develop reflective practitioners in entrepreneurship (Higgins et al., 2013), very little research has been carried out on reflective learning in entrepreneurship education. The few existing studies show that learners of entrepreneurship either struggle with it or do not do it at all. As a case in point, Yeoh (2017) studied reflexivity among university learners in Malaysia who were taking an entrepreneurship class. As a requirement for the class, learners were asked to keep a reflective log through the semester. The study found that many learners did not have any prior experience of being reflective, and many struggled with critical reflection. In another study by Hunter Lindqvist (2017), that studied learners running mini-enterprises at upper secondary education level in Sweden, learners were found not to reflect on their experience as they were running their businesses. They reflected for the first time during the interview process with the researcher. This indicates that there is indeed a research gap to be explored regarding reflective practice in entrepreneurial activities for both learners and their teachers.

2.4.4.2. Models of reflection

In many professional fields and educational contexts reflection is done through various models and operationalised through reflective journals or logs. There are five different types of models for reflection (namely, "structured, hierarchical, iterative, synthetic and holistic"), and they differ "in their levels of prescription, explanation, criticality, and reflexivity"; however, the majority of them are retrospective, focusing on reflection on action (Finlay, 2009, p. 7). Their reflective processes are three-phased, consisting of: *retrospection* (ruminating on past experience); *self-evaluation* (critical analysis and evaluation of actions and feelings through the lens of theoretical perspectives); and *reorientation* (using the findings of self-evaluation to deal with related situations in the future) (Finlay, 2009). From an entrepreneurship learning perspective, critical reflection is a dynamic process, revolving around and drawing from four areas: (1) moving *backwards* to one's stock of experience; (2) *inwards* through self-introspection; (3) *outwards* by interacting with others;

and (4) *forwards*, looking into the future (Pittaway & Thorpe, 2012). Some of the models that are used to guide the reflective process include Gibbs' reflective cycle (Gibbs, 1988), Boud et al.'s (2013) model for collaborative learning; Jay and Johnson's (2002) model, Johns' model of structured reflection (John, 1994); Hutchinson and Allen's (1997) reflection integration model (Taylor & Thorpe, 2004); Cowan's reflective model (Cowan, 2006), and Kolb's experiential learning model (Kolb, 1984). Below is a discussion of a few selected models of reflection.

1. The Kolb experiential learning model: Different models have been developed over the years to help learners learn effectively from experience. The earliest and most used model in educational settings is Kolb's (1984) experiential learning model. Kolb's theory of experiential learning draws from earlier theorists, which include John Dewey, Kurt Lewin, and Piaget (Cowan, 2006; Kolb, 1984). Kolb (1984, p. 38) explains experiential learning as "the process whereby knowledge is transformed through experience." As such, his model conceptualised learning from experience as a cycle consisting of a series of four main learning activities, described hereafter. *Concrete experience* requires that learners be involved fully in some experience which forms the basis and stimulus for learning. *Reflection observation* entails learners observing and thinking about the experience from different perspectives. *Abstract conceptualisation* involves creating new concepts that are an amalgamation and infusion of observations into logical theories, developed from revision of previously taken-for-granted assumptions. *Active experimentation* entails application of newly developed theories in decision-making and problem solving in new situations or experiences. These new experiences are essentially new concrete experiences for further processing in the cycle.

This means the cycle is not static but may be recycled as many times as necessary and can also be entered at any point without breaking the order of sequence; learners are expected to go through the cycle several times (Healey & Jenkins, 2000; Kolb, 1984; Moon, 2013). Kolb also acknowledged that some people operated more or less effectively in certain stages of the cycle; for example, they may be more interested in making observations about a phenomenon rather than the active experimentation stage. This model has its fair share of criticisms. Some have argued that it is too simplistic, does not delve into other issues of learning, such as transfer, it is too neat and logical, and it neglects the social and affective aspects of learning from experience (Moon, 2006, 2013). Kolb's model seems to fall short in elaborating on the nature of reflection and how it is to be done to qualify as effective (Cowan, 2006). Furthermore, Cowan (2006, p. 37) laments that the "endless cycling of the Kolb cycle, from a beginning which is difficult to identify, is depressing or

misleading-or both" Moon (2013), however, submits that the problem may not lie with the model but with its interpretation, that sometimes renders it problematic.

2. Cowan's reflective model: Owing to perceived shortcomings of David Kolb's model, John Cowan (2006) developed an alternative model. This model modified Kolb's cycle, drawing it like an outstretched spring and incorporates components of Schön's (1983) reflective process. Cowan (2006, p. 41) views the process of experiential learning as commencing with an anticipatory set of some sort, where the learning goals of an experiential activity are identified. Here learners engage in a type of analytical reflection that asks the question, "What is it that I need to be able to do?" This stage coincides with Schön's *reflection for action*. The purpose of this activity is to identify potential problems they might encounter and proactively prepare for them. Having engaged in reflection for action prior to engaging in the activity, learners now embark on exploration of the experience or learning task. At the end of the session(s) they engage in reflection in action. In this stage, they engage in analytic reflection questions of whether they should do the task well. They identify the progress made to this end in terms of learning and thinking, as well as the challenges encountered that inhibited their progress, and those that needed facilitative help. They then consolidate lessons learned and the feedback plus guidance received from the facilitators and apply them in the following session(s) of working on the task. As they continue with the learning task, they attempt to take corrective actions on the deficiencies that they identified as they reflected on the experience, and this corresponds with the abstract conceptualisation stage in Kolb's (1984) experiential learning cycle (Bubnys & Žydžiūnaitė, 2010). Then finally they do *reflection on action*, which is evaluative of the whole experience. At this stage the learner identifies the learning and development that has taken place thus far and the knowledge and learning that is still needed. The learner evaluates if the learning is sufficient for them to move on to other activities in which new learning may be employed, or continue with further learning until the desired progress has been satisfactorily attained. This model has positives in that it includes an element of facilitation that does not appear in Kolb's (1984) and spells out clearly and in more detail how reflection should occur at each stage. However, it does not seem to deliberately cover other important issues, such as working collaboratively and issues of emotion that are pertinent in entrepreneurial learning.

3. Boud et al.'s (1985/2013) reflective model: This model was first developed and published in 1985 and republished in subsequent years with little to no alteration to it. This model was developed to deliberately include and emphasise the socio-cultural nature of learning, learner agency, and the internal and external barriers to learning (such as issues of emotion and feelings)

(Boud et al., 2013) that have seemingly been overlooked in the other models. The model seeks to promote learner reflection by emphasising the process of reflection and what learners can do either individually or in a group setting to enhance learning from experience through reflection. To achieve this, Boud et al. (2013) emphasise the importance of strengthening the link between the direct experience and reflection by allocating time for reflection, either through group debriefing (expression and sharing of acquired experience) or reflective journal writing detailing events and reactions experienced. This model consists of three distinctive stages: return to the experience, attending to feelings, and re-evaluating the experience as represented in Figure 5 below. These stages are discussed next.

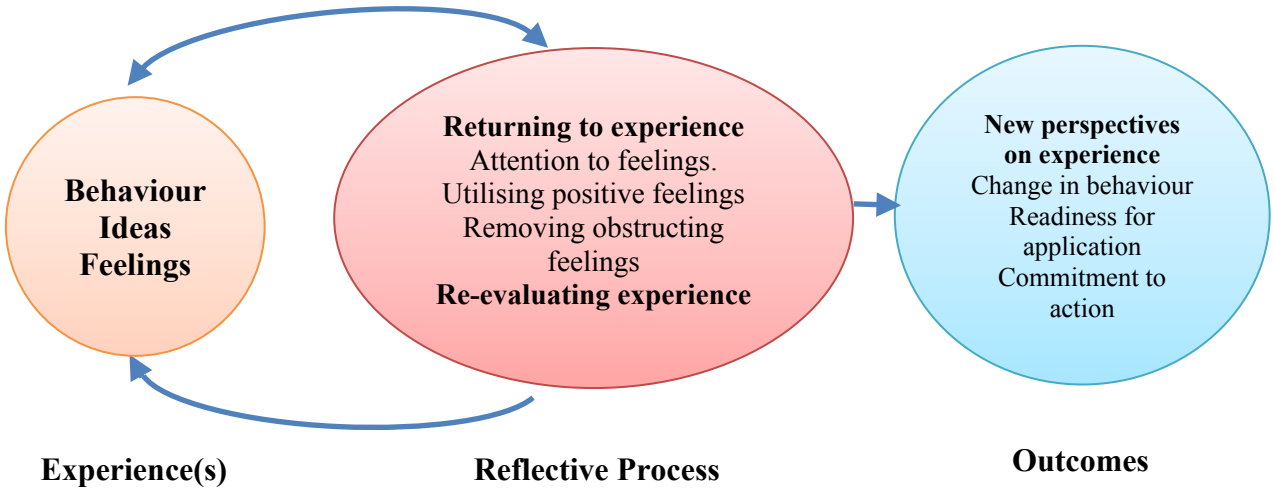


Figure 5: Boud et al.'s (1985/2013) reflective model

Return to the experience: The first thing that the learner does at this stage is to make a recollection and rehearsal of the experience in their mind and try to observe how events rolled out in their chronological order, as well as the reactions they caused in the learner. This recollection should also be detailed and could be written down or shared with group members, without making judgements. As events and responses are recalled in the order in which they occurred, details that were overlooked during the event are brought to the fore. Descriptive recollection builds up data for subsequent processing, and helps ensure that the reflection is founded on the events as they occurred rather than clouded perceptions of what might have happened. The authors encourage repeating the exercise of recollection for as many times as possible and from different perspectives, such as focusing on the external events, attended feelings, associated ideas elicited, how others saw her, as well as the broader context of the experience. Whereas learners are not supposed to make

judgements at this level, they can freely note down the judgements and interpretations that were made in the heat of the moment when the event occurred or some immediate time after the event. Learners are also to provide a description of emotions and feelings evoked by the experience, as they are invaluable to learning.

Attending to feelings: This stage mainly deals with employment of positive feelings and elimination of negative ones. Boud et al. (2013) are of the view that positive emotions can enhance the possibilities of reflection and eventually learning, while negative emotions and feelings can be a hindrance of these. For this reason, they argue that negative feelings should be identified and got rid of. In contrast, positive emotions should be celebrated for their potential to increase learner motivation and interest to continue with learning. Successfully working on or solving a complex and challenging problem may serve as a catalyst of positive emotions and a feeling of confidence. These positive emotions and feelings may then motivate the learner to persevere with learning, even when tasks are challenging. They also argue that negative emotions and feelings could be a stumbling block to learning. This means that if an experience or classroom environment triggers such negative emotions they need to be dealt with before meaningful learning occurs. This process may involve group debriefing, where peers express the negative emotions which they felt and deal with them amicably. Arpiainen et al. (2013) found continuous dialogue, free exchange of knowledge and feelings, reflection, and feedback among learners and their teachers to help learners to cope and to ameliorate negative emotions. In addition, failure to address emotional issues in collaborative environments may cause team dysfunction through overwhelming negative emotions and experiences. When learners are dealing with challenging tasks, Arpiainen et al. (2013) caution that necessary support should be provided to learners so that unpleasant emotions are turned into desirable learning outcomes. However, Michelson (1996, as cited in Jordi, 2011, p. 5) finds the idea of eliminating negative emotions to allow for exclusive cognitive processing of the experience problematic, as it "is very different from embracing emotions and feelings as important sources of knowledge." In agreement, Arpiainen et al. (2013) argue that negative emotions are an important source of deeper learning that should be carefully monitored, with necessary support given to learners so that learning and motivation are not hindered by frustration. On this basis, negative emotions could be dealt with not by discarding them, but by cooling off so that reflection is not done with tension, especially in group projects.

Re-evaluating the experience: In their considered view, Boud et al. (2013) believe that even though it would be much easier for the step of 're-evaluating the experience' to immediately follow

the experience, doing so without standing back from the experience and rehearsing it and attending to feelings reduces the possibility of working with false assumptions and information that is not well understood. The first two stages serve the purpose of minimising the potential of this predicament happening. The authors identify four aspects, that should be taken together holistically and not in stages in the re-evaluation of the experience. First, association, which refers to relating new information from the direct experience with the learners' prior knowledge. Second, integration, which involves finding relationships among pieces of information. Third, validation, which entails establishing the authenticity of ideas and feelings which emanate from the experience. Lastly, appropriation, which refers to personalising or owning up to new knowledge gained from the experience.

Boud et al. (2013) further submit that reflection is not an end in itself, but a means to an end. As such there are outcomes that may be expected as a result of engaging in the experience itself and the reflective process. The result of the whole process may include the development of new insights, a new set of skills, new behaviours, and solutions to problems. Furthermore, they note that the learners may develop new cognitive structures as new ideas and perspectives are developed, assimilated, and accommodated in one's mental map through appropriation. Other outcomes of reflection include more readiness or preparedness to transfer new knowledge to new contexts, and a commitment to put new knowledge to practical use. Further than capturing the experience through the description of events, analysing, evaluating the experience, and mapping a way forward, this model captures the emotions of the one doing the reflecting and allows for reflections in teams working on a project together. These are some of the aspects that Kolb's learning cycle and Cowan's model seem to overlook.

2.4.4.3. Quality and depth of reflection

Learner reflection is not always critical. Like any activity that learners engage in as a curriculum requirement, it has levels to it, ranging from superficial (descriptive) to critical (deep approach) forms or levels of reflection (Moon, 2006, 2013). It appears that is it more difficult to get learners to move from superficial reflection to critical levels of reflection than to get them started with reflective writing (Yeoh, 2017). The quality of reflective writing varies in degrees of depth. Therefore, it can be understood as a continuum ranging from superficial to critical levels of reflection rather than a dichotomy. The degrees of depth are determined by different hierarchical models of assessing and evaluating reflective activity. Moon (2006) provides the following examples of hierarchical models of reflection related to educational practice: Taylor's (1987)

reflective model, Van Manen's (1977) reflective model, Wedman and Martin's (1986) model, Hatton and Smith's (1995) model, and King and Kitchener's (1994) model.

King and Kitchener (1994) take a reflective thinking perspective, and developed a seven-stage model (initially in 1981 and updated in 1994) of developing critical thinking or the highest form of reflection, which they term reflective judgement. They classify the stages into categories: the first category being pre-reflective thinking (stage 1, 2, and 3); quasi-reflective thinking (stages 4 and 5), and reflective judgement (consisting of stages 6 and 7). Van Manen's model (1977, as cited in Moon, 2006) consists of three levels, namely technical rationality, practical rationality, and critical rationality. Technical rationality focuses on use of technical knowledge to arrive at known outcomes. In other words, this level of reflection places emphasis on teaching functions or skills and reflecting on aspects of the lesson as isolated events (Larrivee, 2008). Practical rationality focuses on the ability of teachers to deal with complex and multifaceted practical problems related to their practice. At this level teachers demonstrate the ability to deal with uncertainty and confusion and to assess the likely implications for practice in such situations. In sum, it considers the theory and rationale for current practice (Larrivee, 2008). Lastly, critical rationality adds a dimension of incorporating issues of ethics and morality when reflecting on practical classroom situations. It questions the extent to which educational goals, experiences, and activities are responsive or considerate of social justice issues, resulting in just and equitable outcomes for learners. At this level teachers reflect on the ethical, social, and political outcomes of their practice and purposes of schooling for their learners (Larrivee, 2008). These levels could also fairly represent the professional growth of an individual teacher from the infancy stage of their professional journey to becoming a more accomplished master teacher (Larrivee, 2008). Larrivee (2008) avers that Van Manen's model of 1977 was one of the earliest models of levels of reflection, and was either used as is or adapted to different tools of assessing levels of reflection in the 1990s and 2000s.

Hatton and Smith's (1994) model is one of those that was developed based on Van Manen's model and also has four levels of assessing reflective writing. These consist of descriptive writing, descriptive reflection, dialogic reflection, and critical reflection (Moon, 2006, 2013). *Descriptive writing* is at the lowest level, and work that falls in this level just captures events or literature reports without discussion beyond mere description. *Descriptive reflection* is evidenced by a mostly descriptive narration of events, with an attempt to look at alternative viewpoints in the discussion of the reflective activity or experience. *Dialogic reflection* takes reflection a step further, and the written material shows evidence of stepping back from the reflective experience and taking an in-

depth approach to thinking about events and actions. The work of learner teachers that meets this level of reflection shows the use of reflective judgement and consideration of different possible explanations and hypotheses. It is "analytical or integrative, linking factors and perspectives" (Moon, 2006, p. 118). *Critical reflection* extends the idea of reflection further from the understanding or awareness that events and actions are not only rooted and explained by multiple perspectives but are located in and influenced by different socio-political and historical contexts. Although commonly applied to teacher education, this model has been used to assess learner reflections in entrepreneurship education (Kheng & Sethela, 2015; Yeoh, 2017).

2.5. Conclusion

This chapter reviewed the literature on entrepreneurship education in secondary education to date. It identified the main objectives of entrepreneurship education, expected learning outcomes, and the research strategies undertaken so far in entrepreneurship education to lay a foundation for this study. Based on the understanding that although the study focuses more on entrepreneurial learning, pedagogical aspects of entrepreneurship education in terms of what makes an entrepreneurial teacher, appropriate teaching methods, and the classroom learning environment required to optimise learning in the entrepreneurship class were examined. Learning aspects were also discussed in greater detail, in terms of defining entrepreneurial learning and factors that influence entrepreneurial learning. Issues of reflection and how they relate to learning were also looked at in greater detail. It is clear from the literature that entrepreneurship education research has not dedicated efforts to this aspect, yet it is pregnant with potential in terms of explaining how learners learn to think and act entrepreneurially from experiential programmes such as MEPs. In the next chapter the theoretical framework of the study is developed and discussed.

CHAPTER THREE

THEORETICAL AND CONCEPTUAL FRAMEWORK

3.1. Towards a theoretical framework

According to Lederman and Lederman (2015) a theoretical framework forms an invaluable part of a dissertation, be it a qualitative, quantitative or mixed-method type of study. Although theoretical frameworks are often used in qualitative studies, as in the current one (Anfara & Mertz, 2015), Larsen and Adu (2021) argue that conceptual frameworks are more aligned with qualitative research because they are used to develop theories rather than testing them in quantitative research. In this study I take a leaf out of Ravitch and Riggan's (2017) book, who perceive theoretical framework and a subset of conceptual framework. They argue that theory informs the conceptual framework, while the conceptual framework is a reasoned argument about the importance of the research topic and "why the means proposed to study it are appropriate and rigorous" (p. 5). In this sense it serves as a blueprint that guides the methodology and data analysis of the study.

In Chapter One and Chapter Two I established that entrepreneurship education is still grappling with the "big question" of how entrepreneurs learn from past experiences (Cope, 2003, 2005a; Higgins et al., 2013; Pittaway & Cope, 2007; Rae, 2000) and demonstrated that research in this field is now shifting towards a processual approach to learning entrepreneurship, from static and psychological studies that focused on entrepreneurial traits and intentions. In addition, I have also demonstrated that there is a paucity of research that focuses on reflective learning among secondary school learners, even though calls have been made to that effect, especially in experiential learning contexts such as those of the mini-enterprise experience. Although advocates of reflective learning in entrepreneurship education at both higher education level and basic education level are growing (Cope, 2003; Higgins et al., 2013; Hunter Lindqvist, 2017; Kassean et al., 2015; Pepin, 2012; Pittaway & Cope, 2007; Rae & Carswell, 2001; Yeoh, 2017), Hägg and Kurczewska (2016) lament the lack of certainty about how it is to be implemented and justification of its importance from a theoretical standpoint. They further note that the incorporation of reflective learning into teaching and learning remains low and the field remains challenged about how to teach reflection and how to operationalise it in action-oriented entrepreneurial activities. As the focus of this study is to find out how learners experience reflective and entrepreneurial learning in

the mini-enterprise experience, this chapter seeks to develop a theoretical and conceptual framework to guide this study in a defensible and rigorous manner.

According to Jarvinen (1998, as cited in Fenwick, 2001) experiential learning could be studied from three perspectives or traditions, namely: (1) phenomenology, (2) critical theory, and (3) situated and active theory. The question of how learners experience reflective and entrepreneurial learning in this study leans more towards phenomenology, soft pragmatism, and other theories of learning. Peoples (2021) argues that a study that is phenomenological in orientation should without question be underpinned by a theory of phenomenology (either hermeneutic or transcendental) and, if need be, other supporting theories outside of phenomenology may be added. Drawing from Larsen and Adu (2021), the development of my theoretical and conceptual framework is built on a scoping review of literature guided by the scoping review question: "*What theories could potentially explain how learners experience entrepreneurial learning in experience-based contexts that emphasise reflective learning and meaning or sense-making of experiences?"* Although many theories could be applicable, I decided to ground my study on the theories of hermeneutic phenomenology, Dewey's theory of reflective thought and action, and constructivism. The theories of situated learning and PjBL are also invoked, but their role is not as comparatively pronounced, albeit playing a supportive role to the aforementioned.

3.2. Hermeneutic phenomenology

This study is largely anchored on the theoretical foundations of interpretive or hermeneutic phenomenology. Due to the complexity of learning in experiential learning and the holistic approach that the study takes towards entrepreneurial learning, one theorist of phenomenology would not do justice in examining how learners experience reflective learning in the mini-enterprise experience. Therefore, I take leaf from Van Manen (2014, 2016), who advises that an interpretive phenomenological researcher should feel at liberty to draw from several theorists that help him or her to achieve the intents and purposes of their study. This approach is also followed by Smith et al. (2009) in interpretive phenomenological analysis. In the same vein, my use of hermeneutics draws from Heidegger and Merleau-Ponty. I do not discuss each one of them in great detail, but provide an overview of their key ideas invoked in the current study.

3.2.1. Martin Heidegger's hermeneutic phenomenology

Martin Heidegger (1889–1976) was interested in pursuing the question of ontology, being in the world. Therefore, his phenomenological school of thought, broadly identified as hermeneutics, doubles as a phenomenology of ontology, existence in a world embedded in everyday lived experiences and epistemology in the hermeneutic interpretation and understanding of everyday experiences the subjects encounter in the world (Seymour, 2006). As a result, it focuses on understanding and interpretation of people's being in the world and how their varied ways of being in the world influence our understanding of things (Kakkori, 2009). According to Van Manen (2014, p. 105) Heideggerian phenomenology is interested in the question of "how the being of beings (things) shows themselves to us as a revealing of Being itself." Stated in another way, its main objective "is to uncover the meanings of phenomena that occur in the world, as understood through the interpretation of lived experiences of the phenomenon under investigation" (Dibley et al., 2020, p. 19). Moules et al. (2015) further posit that hermeneutics is built around disrupting and questioning narratives and things are assumed to be true without deeper examination. Moules et al. (2015) further point out that hermeneutics is interested in drawing attention to the particular, in an effort to conserve, celebrate, and make it stand out. Applied to entrepreneurial learning contexts, by uncovering the meaning of reflection to learners, it also helps us to understand what it means to be an entrepreneurial learner in the mini-enterprise experience. In this section I discuss the core tenets of Heideggerian hermeneutics that were applied to guide this study and also decipher how reflective and entrepreneurial learning occurs in the mini-enterprise experience.

Heidegger used the word 'Dasein' (translated as there being or being there) to describe the state of experiencing meaningful existence in a situated, contextual world. According to Elpidorou and Freeman (2015) far beyond just our physical location in the world, "being-in-the world is a basic constitution of our Being and to exist in the world means to be embedded in it within a complex web of relations, to be familiar with it, and to be open to it in a way that matters to us" (p. 662). Therefore, Heidegger rejects Cartesian dualism that presumes separation of the human mind from the material world, but believes that humans' encounters with the world are not distant and detached as it were, but rather there is great interconnectedness between humans and the world they inhabit, which gives meaning to their lived experience. Dibley et al. (2020), expounding further on this relationship with nature from Heidegger's perspective, submit that in their interaction with phenomena people engage in decision-making and develop understanding about it through their lived experience of the world. They further argue that this process, however, is characterised by

pre-reflective interaction with the natural world or lived experience, that is, without thoughtful consciousness. Through this seemingly unconscious process, people develop habits of thinking, rules, background practices and everyday coping skills that enable them to work around their experience and live or function within their community. These skills are often taken for granted and are hardly ever questioned as they become part of everyday functioning in the lived world.

Heidegger also believes that people think about things within the environment they take place in, not outside of it. Expanding this thought, awareness is part of Dasein in the sense that humans are concerned with their own existence, and they also understand the existence of other things in the world. Although in agreement with Husserl on the holistic understanding of the phenomena under investigation and the world, he rejected the idea of bracketing or suspension and reduction of one's knowledge and experiences as a means of arriving at true knowledge, but emphasised interpretation rather than description of human experience (Berglund, 2007; McConnell-Henry et al., 2009). This rejection was based on the belief that reduction and bracketing were not wholly possible and prior understanding augmented interpretation (McConnell-Henry et al., 2009). He criticised reduction for attempting to explore an individual's consciousness and apart from the situated environments or their interaction with the world, proposing rather a focus on "the totality of human-being-in-the-world" (Horrigan-Kelly et al., 2016; Thompson et al., 1989). This means he recognises the situatedness of all human experiences and therefore seeks to describe it in its prevailing or current experiential context. In other words, people exist in the world and consequently the source of meaning resides in the web of continuous and situated activities that characterise their lives. This he termed *referential totality*, which Berglund (2007, p. 79) describes as "the historically learned practices and background understandings we have of the world as a holistic web of interrelated things."

In addition, Heidegger's theory believes in the concept of "thrown-ness" or "fallenness" of Dasein into the world. By this idea, he means that people come into existence and are thrown as it were into a world with fully fledged norms, values and culture already in place (Horrigan-Kelly et al., 2016). That is, the social environment and the educational set-up we are born into are often taken for granted, but they play a major role in shaping the direction our lives will take. In expounding this influence and shaping by the "they" (das Man), he argues that the social reality of Dasein can be understood in the interaction with equipment, nature and others who share "similar characteristics, beliefs, norms, and values" (Horrigan-Kelly et al., 2016, p. 3).

The idea of thrown-ness presents an opportunity for the two modes of existence possible to the human subject: the authentic self and unauthentic self (Dibley et al., 2020; Horrigan-Kelly et al., 2016). The authentic self presents the opportunity of reaching one's optimal potential (the authentic self), while the latter poses the risk of Dasein, living an unauthentic life. To illustrate, a learner of entrepreneurship could represent the essence and epitome of an entrepreneurial learner and over time develop the entrepreneurial mindset for a career in entrepreneurship or just be intrapreneurial, in their authentic self. In contrast, in their unauthentic self an entrepreneurial learner could resign himself or herself to a passive role that robs her or him of their selfhood (their personal responsibility, and power to freely make own decisions or choices) by succumbing to the pressures of norms and values of his or her learner community with whom he or she is working on the MEP together.

Heidegger also believes that people tend to take for granted the tools, objects and physiological functioning at their disposal (Dibley et al., 2020). This concept is known as the ready at hand or unready at hand. To illustrate, learners of entrepreneurship may not think much about the machines and equipment they will use in their production, unconsciously thinking they are ready for use (ready at hand), only to awake to the realisation that they have a malfunction of some sort and therefore are unready at hand. Technology is another key tenet of Heideggerian phenomenology. He warns about the common experiential ways of thinking and acting being taken over by technology, to the detrimental loss of practical human skills.

Another important tenet of Heidegger's phenomenology is the care structure. According to this tenet, people reveal who they are by the things they care about, are concerned about or deem important in their lives (Elpidorou & Freeman, 2015; Horrigan-Kelly et al., 2016). As a result, the care structure reveals a lot about the meaning and purpose they attach to their being in the world. Elpidorou and Freeman (2015) argue that people often find themselves engaged in projects and social situations that matter to them and appeal to their emotions because they are "mooded" beings. Examination of subjects' moods and emotions presents an opportunity for comprehension of "affectivity that relates to and discloses the meaningfulness of our complex worldly and social existence" (p. 662). Unfortunately, Heidegger does not go beyond mood in his discussion about affectivity, but Elpidorou and Freeman (2015) argue that moods could be the starting point or foundations of emotion and feelings. Applied to the mini-enterprise experience, we could learn a lot about what it means to be an entrepreneurial learner by examining their desires, aspirations, motivations, cares, and concerns. Learners' views about reflection and even their reflections could

bring to light insights about their care structure or what learners deem to be of great importance to them as they work on MEPs. This may also be revealed through their goals, aims, aspirations about the future, and emotions and feelings.

The concept of time or temporality shares a close affinity with care structure (Horrigan-Kelly et al., 2016). According to Van Manen (2016) phenomenological time is perceived differently, subject to what one is going through. For example, days with unpleasant events can be perceived as long while those that are enjoyable may be perceived as short. Phenomenological time is viewed from a different perspective to the common chronological time, as "a succession of 'nows'" (Larsen & Adu, 2021, p. 29). In this perspective people do not exist in momentary experiences that follow each other in quick succession and disappear, but a unity of future, past, and present, representing current beliefs about what transpired in the past in an effort to cope with challenges presently experienced and also to understand their own being (Larsen & Adu, 2021).

As a human science, hermeneutic phenomenology takes a keen interest in the subjective experiences of people, either as individuals or groups in the lived world through their stories (Kafle, 2011; Van Manen, 2014); as such it can be applied to researching collaborative learning that occurs within the MEPs. The subjective experiences are often studied through interviews of those who experienced a phenomenon of interest and stories of subjects are believed to be an interpretation or meaning-making of their experience; the researchers' description of these experiences is also an interpretive process, generated through a hermeneutic cycle (Kafle, 2011).

Assuming human subjects as capable of interpreting to their own world, Heidegger views interpretation as interlinked with understanding, which could be explained as drawing out what already implicitly exists in understanding. He uses the concepts, the "as structure" and the "fore structure" to explain the process of interpretation (Horrigan-Kelly et al., 2016). The "as structure" refers to the interpretation assigned to the phenomenon, or other useful things the subject encounters in the lived world. That is, interpretation reveals the perceived purposes and totality of involvement with a specific experience as it manifests to and is made sense of by the human subject. Horrigan-Kelly et al. (2016) explain "fore structure" as referring to the background knowledge of the world one brings to an experience or to the process of sense-making. This means one unwittingly interprets lived experiences in the light of the wealth of possessed prior knowledge as they encounter the phenomenon. Thus, hermeneutic phenomenology as a study of human experiences and their being in the world encompasses "past knowledge and teaching, current everyday experiences and

expressions, and recognition of future possibilities" (Dibley et al., 2020, p. 16). This tenet could be applied to the mini-enterprise to examine the relationship between learners' meaning-making process and the taught background knowledge they bring to the mini-enterprise experience.

3.2.2. Merleau-Ponty

Merleau-Ponty shares Heidegger's emphasis on the situated and interpretive nature of our knowledge of the world. However, while Heidegger emphasised the worldliness of our experience, Merleau-Ponty gravitates more towards examining and describing the embodied nature of people's interaction with the world, as body subjects, including how that relationship influences their situated or context-based view of the world (Smith et al., 2009). This means that Heidegger's phenomenology provides good insights that could be of help in the understanding of the meaning of being an entrepreneurial learner in the world, its ontological emphasis. Merleau-Ponty builds on the holistic perspective upon which such existence could be understood. He bridges this gap by narrowing the attention of his philosophy to perception and psychological phenomena or embodied consciousness (Larsen & Adu, 2021; Moran, 2000).

Merleau-Ponty's (2012) philosophy also explicates the role of "consciousness in the act of learning" (p. 210). He does this by contrasting his philosophy with intellectualism and empiricism. He argues that "we need to know what we are looking for, otherwise we would not go looking for it;" and also that "we need to be ignorant of what we are looking for, or again we would not go looking for it" (p. 209). Applied to experiential situations such as the MEP, experience has not much value unless it is clear what learners do not know yet, and the knowledge which they are seeking to develop, and also they need to know what they should be consciously paying attention to in order to fill their knowledge gaps. This makes the consciousness invaluable in directing attention to aspects of perceived phenomena in bringing to light the indeterminate horizon (what was previously hidden or unknown), while destabilising established or known aspects. The indeterminate situation or object creates a "knowing event" that is transformed through the focus of "attention as needing-to-be-determined" (Merleau-Ponty, 2012, p. 213). Merleau-Ponty also emphasises the role of judgement – the learner making a distinction between correct interpretation (true perception) and incorrect interpretation (false perception) in knowing about events that they are exposed to.

Merleau-Ponty views perception as the gateway to cognitive functions and processes and activates consciousness' capability to reveal representations of the world (Larsen & Adu, 2021). In this perspective the meaning of experience is not the exclusive reserve of abstract reasoning, but can be accessed through the analysis of perceptions of events and things in the lived world. This is because he believed that our relations to worldly objects are always mediated by our bodies' sensory system, making it impossible to mentally conceive anything that we cannot perceive through our senses. He posited that the body and mind work together as one harmonious whole, all-inclusive and for that reason human action cannot be ascribed to the body and consciousness separately (Larsen & Adu, 2021). Building on Merleau-Ponty's understanding of the pivotal role played by the body in experience and mental processes, and relating it to the educational contexts, Koopman and Koopman (2020) draw from Shapiro's (2004) embodied cognition thesis, the notion of embodied knowledge or embodied cognition. This theory assumes that cognition is not an exclusive function of the brain but a result of the harmonious working together of different parts and systems of the body. This ties in well with Merleau-Ponty's view of perception as not just a passive process in which the body encounters events or an object but also active process involving different bodily structures. On the idea of perception being an enactive and embodied experience, Koopman and Koopman (2020) submit that every time a subject learns something new in the world, their perception also changes, because perception is not static but fluid or dynamic, and wholly dependent on the subject's engagement with an object or others in the world.

Merleau-Ponty (2012) employed the notion of sedimentation to describe how subjects experience holistic learning over time through a process of adaptation to the lived world. Although the word sedimentation is borrowed from geology, it should not be understood as a passive process of stratification as it occurs in nature. Rather, it describes an active and interactive process of the subject's adaptation to the world. In Merleau-Ponty's perspective, the body accumulates layers of past experiences which are reactivated in similar current situations and serve as a latent background for making sense of emergent experiences. In this regard, the notion of sedimentation implies that experiences are accumulated with their unique features and associated emotions and feelings within the context in which they occur (Magrì & McQueen, 2022). Applied to the MEP, it means that when certain events occur that bear similarity to some previous experiences, they are more likely to elicit certain emotions (such as fear, suspicion, interest, unease, etc.) and predispositions to act in a particular way, in line with lessons drawn from past experiences. For example, a learner with challenges of working with numbers may have feelings of unease if they are asked to handle finances and give change to customers, while another may take up the task with interest if they

enjoy working with numbers and are good at it. What can be drawn from this is the body's relations to the environment are assumed to be mediated by dispositions that are both subjective and dependent on context (Magrì & McQueen, 2022).

Furthermore, Merleau-Ponty seems to subscribe to a non-representational view of cognition in his conceptualisation of the sedimentation process. He warns that "sedimentation" should not bring the idea of understanding knowledge as "an inert mass at the foundation of our consciousness," and expounding further he illustrates his conception in the following manner (Merleau-Ponty, 2012, p. 364):

> For me, my apartment is not a series of strongly connected images. It only remains around me as my familiar domain if I still hold 'in my hands' or 'in my legs' its principal distances and directions, and only if a multitude of intentional threads run towards it from my body.

This understanding of cognition is quite informative, as it goes against the information-processing theory, which assumes that the mind works like a computer, capturing representations of the external world in visual form. For Merleau-Pony, no such visual representations exist! Neither are the mental stores of past experiences an abstract deposit; instead they are a part of the circuit of networks through which the body communicates with the world (Magrì & McQueen, 2022). Furthermore, Merleau-Ponty views learning through the sedimentation metaphor as resulting from this embodied familial interaction with the environment, forming intelligent habits through retention of past experiences and adjusting to new situations. His philosophy mostly focuses on habit formation of body schema, without reflection on experience priming the subject for action as new opportunities arise in the world. Accordingly, human subjects form habits through this process and continuously adjust and integrate new learned movements, and affective dispositions into the repertoire of their existing subject- and context-dependent body structures. This implies that habits in Merleau-Ponty's philosophy are not just mindless operations, but intelligent reactions of the body schema which changes, transforms and extends human subjects' interaction with the environment (Magrì & McQueen, 2022; Merleau-Ponty, 2012).

According to Koopman and Koopman (2020), the implication of Merleau-Ponty's phenomenology for research is that the investigator must be invested in the perceptual mindset of the participants. To achieve this, the investigator must tacitly investigate details of how the participants perceive their world through the way they organise their world for themselves. Furthermore, the researcher must invest effort in "analysing the impact of the 'conditions of

existence' to make explicit how the social world with all its rules and structures shapes or inhibits the individual's thinking" (Koopman & Koopman, 2020, p. 42). Applied to this project, this means that the researcher much invest effort in examining the educational context wherein entrepreneurial learning occurs through the MEP. This may require examination of relationships among peers since it is a collaborative project, the relationship between learners and their teachers who happen to be sponsors and supervisors of the project, the school setting, the business community, the curriculum as represented by government bodies and their policies that have a bearing on learners' experiences in the MEP.

Furthermore, due to his emphatic assertion on the inextricable connectedness and function of the body and mind, perceived as one whole, Merleau-Ponty like Heidegger rejects bracketing and reduction. He argues that phenomenological reduction is not fully possible due to people's embeddedness in the world. As a result, they cannot divorce themselves altogether from the attachment to the real world (Larsen & Adu, 2021). Extending his view on the subjectivity and embodied nature of experience, Merleau-Ponty further postulated on how people relate to each other; that is, while we may be empathetic to one another, people cannot share each other's experiences due to their experience being part of their embodied position in the world. Thus Smith et al. (2009, p. 19) conclude that, "[t]he intentional quality of and meaning of 'mineness' and 'aboutness' of an experience are always personal to the body subject." As a result, interviews are predominantly recommended and used in phenomenological research, because they "contain their subjects' disclosures and attestations with regard to their experiences" (Larsen & Adu, 2021). Also, in the light of the aforementioned, it makes sense that phenomenological research collects data from those who have had direct encounters with the experience (Cope, 2005b).

3.2.3. Conclusion

To conclude this section, I note that the overarching aim of hermeneutic phenomenology is to facilitate our increased comprehension of the meaning and interpretations people make of their lived experiences (Dibley et al., 2020). The meaning of a phenomenon is captured not as an isolated engagement with the phenomenon at the exclusion of its context, but rather it involves historical and holistic perspectives where an individual makes sense of a particular aspect of the world (Berglund, 2007). Invoking Marleu-Ponty, Van Manen (2016) calls this capturing of original lived experience a 'poetising project' or activity that attempts "an incantative, evocative speaking, a primal telling, wherein the aim is to involve the voice in an original singing of the world" (p. 13).

In other words, knowledge and understanding of the world at individual level is reached by bringing one's recollections and engagements with different aspects of the world and personal experiences, and attempting to relate them to each other in a comprehensive structure. This implies that to understand any aspect of the world it is categorically imperative to have knowledge of the context where it is situated as a fraction of the greater whole.

For the current study on reflective learning in the mini-enterprise experience, Heidegger offers emphasis on being in the world, which is characterised by objects, relationships and language. In addition, his main contribution is in the understanding that "our being in the world is always perspectival, always temporal, and always in relation to something – and consequently that the interpretation of people's meaning-making activities is central to phenomenological inquiry" (Smith et al., 2009, p. 18). The view of the embodied nature of experience from Merleau-Ponty is important, as it helps bring to the fore the contribution of bodily experiences, feelings and emotions that play a role in reflections and the meaning-making process.

3.3. John Dewey's theory of reflective thinking and action

3.3.1. Dewey – philosophy of learning from experience

Reflection as a critical component of learning from experience dates back to John Dewey (1859–1952) in the early 1900s. His philosophical writings have set a broad philosophical system and groundwork anchored on his philosophy of experience that can be applied to various fields of study, including entrepreneurship education (Pepin, 2012; Hägg & Kurczewska, 2021). Dewey's philosophy of education was founded on pragmatism, also known as progressive education. Pragmatism is not one unitary school of thought, but a philosophy whose scholars hold divergent views (Biesta & Burbules, 2003; Määttänen, 2015). Therefore, in the current study I use Dewey's pragmatism, to differentiate it from other streams of pragmatism. Dewey revolutionised the understanding of how people acquire knowledge, premised on the notion that knowledge is developed through action. Action in present experience plays an important role in the creation of knowledge, according to his philosophy. He emphasised experience-based approaches to learning such as learning by doing, experiential learning, hands-on projects, PBL, and collaborative work that develops critical thinking, democratic values, and social skills (Imbuya, 2020). This makes his philosophy relevant for experience-based education (Biesta & Burbules, 2003; Määttänen, 2015; Roberts, 2009) and more particularly entrepreneurship education as a practical subject (Hägg & Kurczewska, 2021; Mwasalwiba, 2010; Pepin, 2012). Pedagogy in entrepreneurship education

aligns with pragmatism since its recommended teaching and learning approaches lean more towards concepts such as learning by doing, action learning, experiential learning, PBL and other related theories, models and approaches that centre around experience and future orientation (Cope, 2003; Kassean et al., 2015; Minniti & Bygrave, 2001; Mwasalwiba, 2010; Pittaway & Thorpe, 2012).

Dewey's goal was to "reintegrate human knowledge and action in the general framework of reality and natural processes" (Dewey, 1939, p. 80, as cited in Biesta & Burbules, 2003). Consequently, he takes a transactional approach to knowledge construction, where knowledge is developed through the human organism's interaction with its environment in "an active, adaptive and adjustive process" as it attempts to maintain balance with a continuously changing environment (Biesta & Burbules, 2003, p. 10). It is through reflection on one's experiences in this transactional process between the learner and the environment where current knowledge claims are revisited, challenged, and revised, with indeterminable or problematic situations and resultant insights arising from new experiences, that knowledge is created by solving problems (Hägg & Kurczewska, 2021).

In his classical and philosophical works such as *How We Think* (1933), *Experience and Education* (1986) and others, John Dewey develops and crystallises his concepts of experience-based education and the role of reflective thinking and action in learning from experience. His philosophy of education could help decipher how learning occurs where learners are engaged in experience-based learning and where reflection is required. He understood experience as possessing a dualistic nature, consisting of: (1) engagement with a concrete experience characterised by actual doing or performance of action-based activities; and (2) reflection on experience. The first he called primary experience and the latter he called secondary experience.

Primary experience refers to the rawest form of encounter with "a hierarchy of stimuli, interaction and activity and response within a scope of sequentially related events" (Steinaker & Bell, 1979, p. 9, as cited in Hägg & Kurczewska, 2021). This form of experience does not involve reflection and as a result, if not followed up with reflection, it would be of inconsequential value. In addition, for the development of entrepreneurial knowledge and lessons that could be transferred to similar situations in the future to be impactful, experience must have continuity, which is essential for linking past experiences with future or subsequent experiences (Dewey, 1986). For example, the continuous running over time of the MEPs provides opportunities for gaining experiences, which may include problems or perplexing situations which learners try to understand, formulate ways to resolve, implement their solutions and evaluate them. The recurring nature of

the experience provides a myriad of opportunities for learning through sense-making, experimenting, learning from mistakes, and trial and error, which are integral in entrepreneurial learning. Broadly conceived, continuity of experience influences attitudes and results in the renewing and transformation of a social group (Dewey, 1958). In this way progressive experiential education makes it possible for society to be more progressive and civilised.

According to Dewey (1986) experience must be educative and not mis-educative. It must be educative in the sense of widening the field of experience and knowledge, increasing awareness and leading to informed action in future similar contexts. This also relates to the purposefulness of experience. It must be teleological, meaning it must have clear and intentional goals to be achieved at the end of it. Designed with "orientation towards ends" is an imperative precondition for "obtaining intelligent experience … that draws on judgement in the selection of means providing fit with ends-in-view" (Pepin, 2012, p. 806). This means that as learners engage in MEPs it must be purposeful action and experience with specific learning outcomes for it to be educative. In contrast, a mis-educative experience results in routine action that does not increase broadness and richness of experiences, thus limiting the meaning-making that could be drawn from it for future use. It robs the learner of moral and intellectual growth, leading to unproductive and undesired practices as they are unaware of the effects of their actions on the environment.

Therefore, for learning to occur from the primary experiences, either formal (e.g. guest speakers, projects, field trips, etc.) or informal, in that they are not created in the classroom by the entrepreneurship teacher, secondary experience (reflection) is the connecting link of making sense and deriving meaning from such experiences. Linking reflection with experience, Dewey used the term reflective thinking to define this secondary experience as follows: "reflective thought is an active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends" (Dewey, 1997, p. 6). In agreement, Boud et al. (2013, p. 18) have explained reflection as "an important human activity in which people recapture their experience, think about it, mull it over and evaluate it." Rodgers (2002), interpreting Dewey's conception of education or learning states that it can be equated with reflection, which in essence is a "process of reconstruction and reorganisation of experience which adds to the meaning of experience" (Dewey, 1938, p. 49, as cited in Rodgers, 2002). This is a purposeful process that stimulates and facilitates a deliberate, intentional, self-regulated and metacognitive learning process. I must state that in Dewey's (1986) view knowledge is not a product

of reflection per se, but when expected consequences occur following action directed to a problematic or indeterminate situation.

This means that when learners are faced with a problematic situation, through reflection they conceptualise possible causes of actions and their anticipated consequences. They would then have to choose one solution and implement it. When the solution works after being acted upon, action becomes the most plausible way of confirming the cognitive operations (reflective thinking) and new knowledge developed by transforming hypotheses into warranted assertions, in Dewey's parlance. It is in this light that Dewey believed that without action on an idea, "no conceivable amount or kind of intellectualistic procedure can confirm or refute the idea or throw any light upon its validity" (Dewey, 1907, p. 85, as cited in Biesta & Burbules, 2003). It is in this sense that action can be understood to be a "process through which ideas are transformed into knowledge" (Biesta & Burbules, 2003, p. 68). In a much broader sense, Dewey conceptualised knowledge construction as occurring through a cycle of action-reflection-action.

According to Boud et al. (2013) and Hägg and Kurczewska (2021), even though Dewey perceived learners as reflecting at an unconscious level, reflection must be conscious and deliberate to enable learners to make conscious and intentional decisions regarding their learning, through making sense of experience to develop entrepreneurial knowledge. This implies that pedagogy in entrepreneurship education should encourage the design and use of learning experiences that involve an iterative and sustained interplay between primary experience and secondary experience to develop knowledge and understanding of entrepreneurship (Hägg & Kurczewska, 2021). The reason why reflective learning has been advocated for or called for in entrepreneurship education (Lackéus, 2014; Pittaway & Cope, 2007; Pittaway et al., 2015) is because it is in this sense linked with learning by doing and learning from experience, concepts deeply rooted in Dewey's views on learning. The generation of entrepreneurial knowledge, as entailing either formation of novel knowledge structures or expanding existing ones, emanates from this interplay. It does this by synthesising learners' past experiences and forming a foundation for new ones, creating a chain of connected experiences that ensures continuity and transfer between learning experiences. As learners attempt to make sense of the interplay between experiences, development of entrepreneurial knowledge is internalised, thereby creating a springboard for externalising the knowledge gained through transfer to future concrete experiences in the real world (Hägg & Kurczewska, 2021).

3.3.2. Dewey's criteria for reflection

For effective learning to occur, reflection is an elaborate, complex, and systematic process that does not happen haphazardly. From his study of Dewey's writings, Rodgers (2002) highlights four criteria necessary for effective reflection: (1) reflection as a sense-making process; (2) a systematic and rigorous process grounded in inquiry; (3) community and interaction with others; and (4) an inclination or quest for personal growth and the growth of others.

Reflection as a sense-making process: Reflection in this criterion consists of several invaluable components. First it is how Dewey viewed the purpose of education and what it means to be educated. He viewed education as a process and an endeavour that cultivates intellectual, moral, and emotional growth of learners which would eventually spill over to a democratic society to transform it. In the light of this understanding, education is the process of reconstructing or reorganising one's experience to make meaning out of it, with the aim of drawing lessons that increase one's ability and capacity to transfer knowledge to future related experiences (Rodgers, 2002). Experience in this sense requires one to first *interact* with his or her environment directly (entrepreneurship projects, field trips to business enterprises) or vicariously (e.g. reading books about entrepreneurship, media related to entrepreneurship and others, including entrepreneurs and peers). The interactions process, also known as the transaction principle, involves internal conditions (an individual learner's interests and potential or capacities) and surrounding conditions (the totality of the environment where the experience takes place). The environment in this case consists of all conditions that engage an individual's "needs, desires, purposes, and capacities" to make the lived experience in real time (Dewey, 1986, p. 44). Furthermore, experience entails an active dimension and a passive dimension (Pepin, 2012). The former refers to the opportunity to act and test one's desires and plans, while the latter refers to the unplanned and unexpected effects of an experience that must be addressed. This means that in any given experiential learning circumstance, learners must proactively reflect on the outcomes of their experiences, and not just react to them, for learning to occur. This is especially important because experience is not cognitive.

In sum, learners make sense of current experiences based on past experiences and prior knowledge as raw material for learning. The principles of transaction or interaction between the learners' internal conditions and their environment, and continuity of experience are necessary for learning from experience. Dewey argues that experience is not valuable for its own sake since it is not cognitive. What is rather important is the sense we make of it that gives it value, and this value

is premised on the relationships or continuities to which it directs the learner to create meaning through reflection. For learners to derive the intended meaning, there must be clear ends in view so that the experience is educative, and learners engage in purposeful action as they engage with the experience. This is when reflection becomes relevant and a fruitful learning exercise resulting from attempting to make sense of the experience.

Reflection in community: This component speaks to the value of sharing one's thoughts or ideas with others. This is an invaluable part of reflection since it brings to the fore the strengths and gaps in an individual's thinking processes. Through sharing or communication, one distances himself from the experience, and sees it from other people's perspective, broadening it as a result. According to Rodgers (2002) sharing affirms the value of one's experience, opens the mind to new perspectives, and support the processes of inquiry. A reflective community in this case could be teachers of entrepreneurship, colleagues or entrepreneur learners sharing with their peers. Such a platform creates a testing ground for ideas, perspectives and getting alternative views, increasing learning as a result. In addition, learners of entrepreneurship working on collaborative and cooperative projects need to reflect as a community about their plans, challenges, and proposed solutions. Learners can also test their ideas on their peers in an environment that is accommodative and democratic, thus providing rich opportunities for learning and correcting misconceptions. A friendly atmosphere goes a far way to make possible the kind of learning environment created by a teacher that encourages free sharing of ideas.

Reflection as a set of attitudes: This aspect focuses on the affective domain of learning, which is often overlooked. Attitudes, emotions, and feelings such as fear, desire, excitement, exhaustion, and others play an important role in either enhancing learning or hindering it in the process of inquiry. Attitudes, emotions, and feelings have a great effect on one's potential to engage in effective reflection, consequently stimulating learning or inhibiting it (Boud et al., 2013; Rodgers, 2002). As a result, it is important for one to be mindful of their attitudes and emotions and possess the necessary discipline to use them in a way that yields positive results; this is required for good reflective thinkers (Rodgers, 2002). According to Boud et al. (2013) successfully working on or solving challenging problems may serve as a catalyst for positive emotions and a feeling of confidence. These positive emotions and feelings may then motivate the learner to persevere with learning, even when tasks are challenging. In contrast, negative emotions and feelings could be a stumbling block to learning. This means if an experience or classroom environment triggers such negative emotions they need to be dealt with before meaningful learning can occur. Reflecting on

critical incidents that trigger these emotions helps to unpack and deal with them productively to facilitate learning from experience. Research on entrepreneurial learning has called for investigation of the epistemic contribution of emotions on entrepreneurial learning. There is evidence to the effect that MEPs involve learners dealing with emotions, as conflicts are common among peers when they operate mini-enterprises (see Solomon et al., 2018). Group-based reflections done as debriefings or reordered in tapes using Boud et al.'s (2013) reflective model process can help learners to deal with tensions and unpleasant emotions and refocus on learning.

Unlike entrepreneurial learning by practising entrepreneurs, emotional triggers in the classroom environment may also result from issues of classroom management and discipline, which are rarely discussed in entrepreneurship education literature. With reference to experiential learning or learning by doing, Dewey (2001) argues that teachers and learners alike experience nervous strain and fatigue resulting from too much taxing of the mind at the exclusion of the body. This neglect of hands-on activities with an exclusive focus on the mind, he believed to be the cause of disciplinary issues in the classroom as learners inevitably engage in unproductive and disruptive behaviours when their potent energy is not put to productive use. Whereas there is much focus on constructivist pedagogies in entrepreneurship education, there is need to look more directly into constructivist classroom management practices that will lead to a conducive learning environment that has the potential for experiential and reflective learning for development of an entrepreneurial mindset. Reflection that is poised for broadening knowledge and awareness must be "guided by wholeheartedness, directness, open-mindedness, and responsibility" (Rodgers, 2002, p. 858).

Reflection as disciplined and rigorous way of thinking: Reflective thinking entails bringing together definite closely related units as a means to a common end. It involves use of the imagination to review past experiences and other similar or different experiences to draw valuable lessons. As a rigorous, active, and persistent way of thinking, it does not necessarily seek to confirm conventional ways of thinking and doing, rather it confronts taken-for-granted perceptions based on new evidence, thus extending knowledge (Rodgers, 2002). Reflection connects different experiences over time, making it possible for growth and learning. When a learner is engaged with an experience or situation that up till then they do not fully comprehend, they get perplexed, unsettled or cognitive disequilibrium. Through inquiry or reflection as the learner grapples with the situation, trying to and finally successfully resolving it, they revert back to equilibrium or normalcy. Curiosity is another factor that can invoke and motivate reflection as learners are baffled by an experience or aspects of it.

Dewey (1933) identified five main phases or aspects of reflection. Pepin (2012) suggests that these five aspects of reflection are underpinned by what he has called the pre-action reflection phase, the reflection in-action phase, and reflection on action. He submits that it is important for learners of entrepreneurship to engage in pre-action reflection to develop the purposes of the experience and what it hopes to achieve as learning outcomes. This is intended to ensure that learners engage in hands-on action with ends in view, in the language of Dewey. Therefore, a clear plan of action and all the resources to operationalise the project are in place before commencement. The reflection in action phase involves a process of logical and systematic inquiry into problems or issues that arise once the project has begun and is fully operational. It serves to identify problems and learning opportunities, resolve or make necessary adjustments to the plan of action, and draw lessons from it while ensuring smooth continuation of the project and avoiding derailing from the ultimate ends. Lastly, a reflexive process is undertaken at the end of an experience.

As different problems and opportunities for action arise during involvement with the primary experience, Dewey's five-step model of reflective thought and action is set in motion in pursuit of a solution and learning from experience (Dewey, 1933; Miettinen, 2000). Firstly, the learner experiences a situation that causes them to have a shock, doubt, hesitation, disbelief, perplexity, and mental difficulty resulting from disruption of the normal flow of actions in the external experience. They observe that the conventional ways of dealing with the situation are not helpful. This consequently forces them to engage in reflective thinking in the quest to find a solution to resolve the disequilibrium experienced. In the words of Dewey (1933, p. 14), reflective thinking starts when there is "a situation that is ambiguous, that presents a dilemma, that proposes alternatives." At this stage, Dewey suggests that all action must stop, and attention be focused on solving the problem at hand.

Secondly, having observed or experienced a situation that triggers their shock or some emotional reflexive response and a hindrance to normal action, learners define the problem through examination of the prevailing conditions. Dewey called this step intellectualising since it entails a transition from an emotional and perceptual assessment of the situation to a more cognitive one. In the third step, after careful examining of the conditions (material and social) under which the problem or issues arose, learners have to formulate a working hypothesis. That is, coming up with a possible explanation and potential solution to the problem. After formulating a working hypothesis, learners engage in in-depth and laser-focused reasoning that entails expounding on the

implications of the working hypothesis and possible outcomes of its implementation. Such an exercise could lead to revision of the working hypothesis. This is the fourth step. The fifth and last step in the process of inquiry is subjecting the hypothesis to testing through action. If the solution works, the problem is considered resolved, necessary adjustments are made, and essential lessons are drawn. However, if the problem persists, the whole cycle is repeated. It is worth noting, however, that Dewey (1933) believes that these five steps do not need to follow a strict sequential order.

I must state that the model of reflective thought and action, based on Darwinian theory of adaptation and logic of inquiry (Miettinen, 2000), has been criticised for establishing the divide between knowledge and experience, lavishing preferential focus on knowledge above experience (Hébert, 2015). Perhaps the strongest criticism by Hébert (2015) is that it is too much of a "rationalist technicist model", leaning more towards scientism or positivism methodologically (p. 362). This is because Dewey requires for all action to stop once a problem arises and data to be collected for all possible consequences and solutions, to eliminate all possible doubt before implementing a solution through rigorous use of rational analysis. Furthermore, the model is criticised for being ends-based, driven by a problem that needs to be resolved. This means that where there are no problems or disruptions that require solutions, one may not engage in reflection. It also overlooks questioning societal norms and values unless in situations where they are deemed problematic. With these observations in mind, where necessary I draw insights from the experiential intuitive models to make up for Dewey's shortcomings. The experiential intuitive model, in addition to cognitive forms of knowledge, takes seriously tacit, practical knowledge, and know-how, which may not be emanating from a rational process of rigorous prior mental processes. In other words, in the event of uncertainties, an entrepreneurial actor and learner may use their creative intuition as they reflect on action without having to stop, engaging in a laborious process of inquiry to find solutions first (Schön, 1987, as cited in Hébert, 2015). As much as reflection must be systematically and rigorously done for learners to develop entrepreneurial knowledge from it (Hägg & Kurczewska, 2016), on other occasions it may be necessary to suspend the bifurcation and lacunae between reflection and action, by taking reflection as a form of action in the heat and recency of practice (Bleakley, 1999).

3.4. Constructivist learning theory

Although hermeneutic phenomenology is a double-edged philosophy of experience that encompasses ontology and epistemology, it seems to fall short in explicating the internal cognitive processes and meaning-making processes in collaborative learning settings such as those of the MEP. Therefore, to further examine the reciprocal interaction between primary experience and secondary experience in the acquisition and building of entrepreneurial knowledge, theories that focus on experience and knowledge construction in a socially negotiated learning environment become imperative. To that effect, I draw from the constructivist theories of learning. With foundations in philosophy and psychology, constructivists believe that people learn by actively constructing knowledge and meaning from prior experiences (Doolittle & Camp, 1999). This postulation "relies on an epistemology that stresses subjectivism and relativism, the concept that while reality may exist separate from experience, it can only be known through experience, resulting in a personally unique reality" (Doolittle & Camp, 1999, p. 5).

Constructivism is premised on the following core principles: (1) knowledge is acquired through active engagement of the mind; (2) cognition is adaptive and enables the learner to function in a given environment; (3) the mind organises and makes sense of the learner's experience, resulting in subjective reality; and (4) knowing is a function of both the biological and social (including culture and language) aspects of learners (Doolittle & Camp, 1999). The constructivist learning theory can be classified into three main types, namely cognitive/individual constructivism, social constructivism, and radical constructivism. The difference between these types of constructivism depends on the extent to which each invokes the above-mentioned epistemological tenets of constructivism. Cognitive constructivism is founded on the first two; radical constructivism invokes the first three tenets and the fourth partly; and social constructivism emphasises all of the tenets (Doolittle & Camp, 1999). Notwithstanding the fact that social constructivism seems to espouse all the mentioned tenets of constructivism, this study employs cognitive constructivism and social constructivism for the reasons expounded in the next paragraph.

This study takes a developmentalist approach to entrepreneurial learning. To this end, I look at development of an entrepreneur as involving both the adolescent learner and their social environment. Over time, the history of education and developmental psychology research has oscillated between assuming the determinants of an individual's behaviour to be dictated by their genetic constitution (nature) or their experiences in the external world (nurture) (Rogoff, 1990;

Sameroff, 2010). The proclivity to pit nature against nurture has not escaped research in entrepreneurship, as the debates on whether entrepreneurs are born (nature) or taught/made (nurture) has raged over the years. According to Rogoff (1990, p. 27), increasingly the majority of developmentalists believe in the intertwined interaction of nature and nurture working together to produce development, as they deem development as neither happening as the exclusive reserve of individual effort or pre-programming alone, nor solely driven entirely by the environment in a deterministic fashion.

Furthermore, learning from experience and in entrepreneurship is deemed holistic, involving the whole person: their intellect, actions, feelings, emotions, and other senses (Andresen et al., 2000; Boud et al., 2013; Heinonen & Poikkijoki, 2006; Mulligan et al., 1992), all which are experienced through interdependent interaction with the external world. However, the majority of experiential learning and reflection literature seems to have the proclivity to focus exclusively on the mind and cognitive meaning-making of experience, at the exclusion of the embodied experience with its attendant subjective (emotions, feelings), contextual, social, and cultural aspects that characterise human experience (Fenwick, 2001; Illeris, 2007; Jordi, 2011). For this reason, Jordi (2011, p. 6) has called for an integrated process that "involves and requires reflective processes that pay as much attention to the body as the mind and that embrace feelings and emotions as sources of experiential knowledge."

Cognitive constructivism puts more emphasis on the individual learner's role in the development of knowledge from a strongly rationalist perspective (Jordi, 2011; Marton & Booth, 2013). It regards external representation as best explained by internal experiences in the mental structure. In contrast, social constructivism places more emphasis on the importance of social interaction, language and cultural practices in the development of knowledge. As a result, the internal experiences are influenced and best explained by external experiences. According to Cole and Wertsch (1996) the consigning of Piagetian constructivism does not fully represent reality in terms of how Piaget saw the role of social influence on learning. They contend that he did not deny it because he said, "there is no longer any need to choose between the primacy of the social or that of the intellect: collective intellect is the social equilibrium resulting from the interplay of the operations that enter into all cooperation" (Piaget, 1970, p. 114, as cited in Cole & Wertsch, 1996). In addition, they submit that Vygotsky has been wrongly accused of not emphasising the role of the mind and individual in learning. In their view, the main difference between Vygotsky and Piaget is that the latter did not include the role of culture in his theory. Liu and Matthews (2005) posit that

the polarisation between the two theorists along the individual and social to some extent emanates from the implicit dualism found in constructivist texts. They argue that Vygotsky's view of functional monism, which perceives all living factors to "exist in interdependency and form a dialectic organic whole", makes it possible to transcend "the boundaries set by dualism, and to see how man and world, mind and reality can become the source of growth and change for each other" (Liu & Matthews, 2005, p. 397).

To understand how learners develop knowledge of the world, it is imperative to transcend the person-world (human mind versus external world or nature-nurture) dualism (Jordi, 2011; Liu & Matthews, 2005; Marton & Booth, 1997/2013; Sameroff, 2010). Sameroff (2010, p. 9) argues that nature and nurture exist in a dialectical fashion where the two constructs "mutually constitute each other. There is a unity of opposites in that development will not occur without both, and there is an *interpenetration* of opposites in that one's nature changes one's nurture and conversely one's nurture changes one's nature". The simultaneous use of both cognitive constructivism and social constructivism synergistically harnesses their individual strengths while transcending nature-nurture dualism, and has been used to study cognitive development (Rogoff, 1990), learning as experience of the world or aspects of the world (Marton & Booth, 2013) and experiential and reflective learning (Moon, 2013). For these reasons, both cognitive constructivism and social constructivism are employed simultaneously to examine experiential learning and reflective learning in the mini-enterprise experience. The sections below discuss the tenets of these two theories.

3.4.1. Cognitive constructivism

According to Piagetian constructivism, humans inherit two basic tendencies, namely organisation tendencies and adaptation tendencies. Organisation involves the tendency to systematically arrange one's thinking processes into psychological structures. These structures, also known as schemes, are "basic blocks of thinking" and are "organised are systems of actions or thought that allow us to mentally represent or 'think about' the objects and events in our world" (Woolfolk, 2011, p. 46). They continuously evolve from simple structures to more sophisticated structures through accumulation of experience and coordination.

Adaptation, on the other hand, has more to do with the tendency of humans to adjust to their environment. It includes concepts of assimilation and accommodation. Applied to learning

contexts, learning occurs when learners link new ideas to an existing network of ideas or cognitive structure. This process of integrating new ideas into the existing network or schemes is called assimilation. It entails attempting to understand new concepts by fitting or matching them to what is already known. Woolfolk (2011) observes that this process is not always neat or perfect, as learners may distort new information to force it to gel with existing knowledge and understanding. Also, as the new ideas get integrated into the existing network of knowledge, the existing cognitive structure may be altered to align new information with the old one. This process of modification of mental maps is known as accommodation. Accommodation occurs when new data cannot be made to match established cognitive structures, and as a result new structures are developed (Woolfolk, 2011). The process of reflection – either through writing or robust debate with peers of equal status – may facilitate assimilation and even accommodation (Moon, 2006; Rogoff, 1990). It is also worth noting that the cognitive structures may be altered without the addition of new content, but may occur because as learners reflect, they gain insights and may begin to view matters differently.

Equilibrium is one of the important concepts of cognitive constructivism. The concepts of organisation, assimilation and accommodation can be deemed a sophisticated pursuit of balance. Meaningful learning, according to Piagetian constructivism, occurs when a state of equilibrium or balance has been achieved. Equilibrium is achieved when a particular scheme is applied to a given learning experience and it matches. However, if the scheme does not fit into existing structures, the state of disequilibrium occurs, and learners experience cognitive dissonance. The cognitive dissonance or discomfort motivates the learner to act to achieve equilibrium through assimilation and accommodation.

Piaget also developed a framework of four stages of cognitive development. First is the sensory motor stage (0–2 years), which is characterised by reliance on senses and motor skills to interact with the world. Second is the pre-operational stage (2–7 years), which involves transition into development of language and beginning to think in symbolic terms. Third is the concrete operational stage (7–11 years), which involves development of the ability to solve hands-on problems logically through reversible thinking, seriation, and classification. Last is the formal operational stage, ranging from 11 years old to adulthood. This stage covers the age group that is of interest in this study. The formal operational stage includes adolescents because this study focuses on learners who are at the secondary education level and above the age of 11 years. Piaget described learners in this stage as having the ability to engage in abstract thinking. For example, they can imagine and conceptualise things even without experiencing them. They can mentally

conceive hypothetical situations, and reason deductively and inductively. Deductive reasoning entails reasoning from general assumptions to specific implications. Inductive reasoning involves using specific observations to make generalisations about different matters. For example, learners of entrepreneurship can observe a rise in prices and attempt to devise general principle demands for supply of goods and services in the market. Learners in the formal operations stage can engage in organised and scientific thinking to extrapolate different possibilities in any given situation. A strong characteristic of this stage in youths of teenage years is adolescent egocentrism. That is, they are able to focus on, scrutinise and evaluate their own thoughts, beliefs and attitudes. According to Woolfolk (2011), because this age group is able to reason deductively, they have a proclivity to be critical of people who contract their principles. Also, they are very imaginative, and aspire to create the best possible outcomes from a myriad of possibilities to create ideal situations.

3.4.2. Social constructivism

Whereas Piagetian constructivism places much emphasis on the individual and their cognition, social constructivism brings in the important dimension of language, social interaction, and culture. Lev Vygotsky is the most known proponent of this view of constructivism. In this theory, language is perceived as a priority in the process of cognitive development. This is because it is through human language and dialogue that ideas are shared and developed. Whereas Piaget sees peers as important in the changing of perspectives (Rogoff, 1990), Vygotskian constructivism emphases the value of a more knowledgeable other, who may be a teacher or peers of equal status, for dialogue to effect intellectual development. In addition, social constructivism assumes that past knowledge and experience are essential as the foundation for construction of new ideas and understanding through conversation. According to Pritchard (2009, p. 24) the "building and exchange of thoughts and ideas which takes place in the course of a discussion, in any context at all, is likely for at least one of the participants, and often for both or all of them, to lead to a greater understanding of, or insight into, the topic of the conversation."

In classroom learning situations the more knowledgeable other, often the teacher, stimulates and facilitates dialogue among learners in groups or with individual learners, and also provides the necessary support for knowledge construction. This is undertaken through a process called scaffolding. It entails guiding and assisting learners by providing "clues, reminders, encouragement, breaking a problem into steps or anything else" (Woolfolk, 2011, p. 69) and empowers a learner to be more independent and confident with the content or skills taught. Closely related to the concept of scaffolding is the concept of assisted learning or guided participation. In this process the teacher

facilitates learning by first identifying learners' needs and providing measured (right amounts) of strategic help in the form of providing information, prompts, reminders and encouragement at the right time and a process of gradual release of support until it is no longer needed (Woolfolk, 2011). To expound further, teacher facilitators may engage in this cognitive apprenticeship through adapting the material of learning to learners' current levels of proficiency, demonstration, guiding learners through the steps of a complex problem, providing immediate feedback, and asking the right questions to focus their attention on relevant concepts and ideas.

The concept of the zone of proximal development (ZPD), also known as the 'magic middle', provides the sweet spot under which scaffolding and assisted learning are to be exploited and enacted. It is the phase between the learners' current proficiency levels, where they can solve problems unassisted, and the level where they could solve a reasonably complex problem with the assistance of a more knowledgeable other (i.e. teacher or more capable peers). According to Woolfolk (2011), in certain situations it may be more profitable to have learners who have just managed to solve a problem to assist their peers, because they are operating from the same ZPD, and both may gain from the process of sharing explanations, elaboration and questions. For this reason, dialogue or intersubjectivity through the use of language is encouraged.

Another important aspect of social constructivism is the view that higher cognitive structures are culturally mediated (Cole & Wertsch, 1996). This means that human learning is mediated by the use of tools from within their community and culture. This assumes that the basic fibre of every community consists of accumulation achievements of past generations which have been handed down through generations. As a result, cognitive development is accordingly understood as a function of the amalgamation of biological development and received cultural heritage as presently found in a community, shaping their interpersonal interactions and their interaction with the physical word (Cole & Wertsch, 1996). Vygotsky's research mostly focused on language as a tool through which learning is mediated. Notwithstanding, these tools could be expanded to include artifacts, music, symbols, and others. "Taking 'mediated action in context' as the unit of psychological analysis requires a relational interpretation of mind; objects and contexts arise together as part of a single bio-social-cultural process of development" (Cole & Wertsch, 1996, p. 253). It is worth noting, however, that the social constructivist view does not advocate for education to be satisfied with enculturisation while suppressing the learner's individuality. Instead, it must promote individual consciousness and awareness as a result of enculturalisation (Cole &

Wertsch, 1996; Liu & Matthews, 2005). This is neatly summarised by Liu and Matthews (2005, p. 392):

> The process of individual development could perhaps be summarized as 'the social –internalization through sign mediation – restructuring conceptual system – new understanding/consciousness'. In this sense, individual mastery and development must be based on history and culture; moreover, the individual should be enabled to stand above the social collective because of the ability of the mind to generate personal understandings

The concept of funds of knowledge, helps to unpack how the knowledge that families and the community have accumulated over time in various social, economic, religious, and other socio-cultural aspects of life, may be leveraged for teaching. Moll et al. (1992, as cited in Woolfolk, 2011) found that when teachers gave learners assignments that tapped into their funds of knowledge, learners became more involved with their work and teacher understanding of learners was enhanced. This implies that teachers of entrepreneurship may tap into knowledge possessed by families, entrepreneurs, and other business professionals within the community where the school is located to augment and enhance the classroom learning experience.

3.4.3. Essential elements of constructivism

Constructivism differs from traditional methods of instruction, in that it does not treat learners as *tabula rasa*, that is, blank slates to be filled with knowledge. On the contrary, it perceives them as active beings seeking meaning. They thus learn by forming mental models that they continuously adjust and refine until they make better sense of their experience. As these mental constructions may not reflect reality in the live world, learners have to test these conceptions against the understanding and experience of others. This includes engagement of other people, who could be their peers or teachers, to result in negotiated and co-constructed meaning. The main goals of engaging in constructivist pedagogies is to develop in learners "abilities to find and solve ill structured problems, critical thinking, inquiry, self-determination, and openness to multiple perspectives" (Woolfolk, 2011, p. 380). Woolfolk (2011) and Honebein (1996) provide useful conditions that form the bedrock of constructivist teaching and learning, which include: a complex learning environments and authentic learning activities based on the real-world; collaboration and social negotiation; learner ownership of learning; multiple views and representations of content; comprehension of the knowledge-building process; and reflexivity.

The use of constructivism (both cognitive and social) seems relevant for research in entrepreneurial learning, which is more process oriented, rather than a deterministic trait study focus. Constructivism differs from traditional methods which are content driven and focus on existing conventional practices within the field. It focuses on creating novel practices using a process-driven pedagogy. A process-driven pedagogy requires learners to be self-reliant and independent thinkers, who can push the frontiers of knowledge beyond the boundaries of convention in creating new knowledge rather than the mere acquisition thereof. The learning goals are expected to produce learners who are versatile, adaptable, and self-governing, to be able to thrive in an unpredictable entrepreneurial environment.

To achieve this entrepreneurial mindset, a constructivist approach to education is imperative as it not only alters what learners know but alters how they structure knowledge (Krueger, 2009). The prominent value of experience in knowledge and meaning creation in the constructivist approach aligns well with entrepreneurship education, as entrepreneurs are believed to learn from experience (Cope, 2005b; Minniti & Bygrave, 2001; Pittaway et al., 2015; Politis, 2005). Entrepreneurship education as a practical subject requires teaching methods that are experiential, hands-on classroom activities that allow 'learning by doing', which is analogous with the constructivist paradigm (Minniti & Bygrave, 2001; Mwasalwiba, 2010; Politis, 2005). The theory provides a means through which the process of entrepreneurial learning from entrepreneurial activities such as the MEP may be explored and understood or explained. The constructivist theory is broad because it encompasses issues of learning from experience, how meaning and knowledge are created individually and socially in a manner that focuses on the whole person, and transcends the separation of the learner and the external world.

The above points support the application and relevance of the constructivist theory for the study of how learners experience learning in the mini-enterprise experience. Furthermore, the essential factors of a constructivist pedagogy include authentic and real-world environments; social interaction and mediation; relevance of content and skills to learners; formative assessment; and teachers serving as guides and facilitators (Doolittle & Camp, 1999). In line with constructivist pedagogy the use of the mini-enterprise experience is characterised by a focus on the process of knowledge creation by the learners through interpretation of and reflection on their experiences. Teaching in these classrooms supports learning rather than mere transmission of knowledge. The goal is to encourage autonomy – independent thinking that organises reality to allow one to cope with one's personal experiences. The teacher plays a facilitative role whereas the learner actively

participates in producing or building new meaning. Classroom activities involve active learning through doing, thinking, and talking, all through interaction with a wide range of educational resources, sources of information, other learners, and the teacher. The MEP is authentic and based on experiences related to those faced by entrepreneurs in the real world, such as developing business plans, marketing and sales management, and solving problems related to suppliers and customers, among others.

3.5. Project-based learning

Project-based learning (PjBL) is defined as a theory and practice of using authentic work on projects that have limited time and scope, geared towards attaining predetermined performance objectives while simultaneously facilitating learning of participants jointly and severally (DeFillippi, 2001; DeFillippi & Milter, 2009). This teaching approach is grounded in the social constructivist theory of learning and "engages learners in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks" (National Business Educations Association [NBEA], 2013, p. 82). It also aligns with Dewey's philosophy of "learning by doing" and learning from experience, as he encouraged teachers to involve learners in problem-oriented projects in order to help them to acquire social and intellectual skills (Arends, 2012; Dewey, 1986). PjBL aims to help learners to develop mastery of content and skills, metacognition and self-regulated learning abilities, as well as to become independent critical thinkers (Bell, 2010; Blumenfeld et al., 1991). Cotton (1991) identifies the enterprise approach as a form of PjBL in which learners are given autonomy to direct their own learning, while equipping them with appropriate transferrable skills and ability that will be useful in their adult life.

PjBL incorporates learner-centred learning, collaborative and cooperative learning, inquiry, and PBL and active learning (Noordin et al., 2011). As an inquiry process, it is driven by open-ended, fuzzy, or ill-structured problems which require learners to research information on a topic to develop a tangible end product and not an abstract solution (Bell, 2010; Blumenfeld et al., 1991; Noordin et al., 2011). In line with this feature, learners in the MEP can generate different business ideas and conduct market research to determine the demand and feasibility of the business idea. Based on the findings, learners collaboratively work together to identify the problem, plan, and organise activities that result in design and development of a physical product within a limited time frame, which is then presented to an audience and may be accompanied by a written report (Arends, 2012; Bell, 2010; Blumenfeld et al., 1991). In the process of developing artifacts in response to the

driving problem, learners create their knowledge. Blumenfeld et al. (1991) posits that the artifacts are concrete manifestations of knowledge learners have constructed, and their concreteness allows for constructive criticism. The critiques make up the feedback that allows learners to reflect on their developing knowledge and revision. Blumenfeld et al. (1991, p. 376) argue that the artifacts should "be rich enough to promote both depth and breadth of knowledge in their creation as well as demonstrate learners' mastery of content". In addition, these projects may range from a few days, to weeks and even a semester long (NBEA, 2013). Furthermore, good PjBL problems or activities are interdisciplinary, requiring learners to bring together relevant knowledge from various disciplines or subjects and sources to solve the problem at hand (Arends, 2012). An entrepreneurship project may bring together knowledge and skills from Mathematics, Design and Technology, Home Economics, Art and others, depending on the product learners have chosen to make. This is yet another opportunity for showing the relationship and importance of various subjects in the real world. Learners get to see that knowledge application is fluid and useful in different situations, and therefore should not be held back in silos.

Finally, PjBL involves reflective learning. Barron et al. (2014) and Blumenfeld et al. (1991) observe that sometimes projects are carried out mechanically without appropriate reflection. The different experiences that learners go through as they work on their projects provide rich opportunities for reflective learning. These could be conflicts with peers, mistakes and errors, and problems that they are struggling to solve or that challenge their taken-for-granted assumptions. All these are opportunities to marry theory with practice and higher-order learning. Reflection can be done through debriefing in groups, discussions, reflective journals, and teacher follow-up questions on learning. In the absence of clear learning goals and reflection, repetition of past errors and mistakes is likely to happen, resulting in no meaningful learning.

The MEP, if well thought out and designed, can quite easily involve these features due to its broad scope and duration, from idea generation based on an identified problem, to business planning, conducting market research, making products to be sold, marketing, selling and record-keeping. Therefore, to examine the extent to which the mini-enterprise experience could wield serious potential to be educative, it is important to find out if these features are incorporated into their design and operation.

3.7. Conclusion of theoretical framework

Having discussed the different theories that inform this study, hermeneutic phenomenology is the major driving theory as it has greater implications for researching experience. This renders this study a phenomenological study. Dewey's theory of reflective thought and action aligns with phenomenology in many respects, and extends to explain how knowledge is developed through action and reflection in experience-based education. At a broader level, Dewey may close the gap of a lack of a philosophy of experience in entrepreneurship education (Hägg, 2017; Hägg & Kurczewska, 2021; Pepin, 2012). At a narrower level, and specific to this study, Dewey provides insights on how reflective learning in MEPs and related entrepreneurial activities for the development of entrepreneurial skills may be conceptualised. Dewey was the earliest of these theorists and built his theory of experiential education to challenge the discourse between traditional education and progressive education of his time. The key tenets of his theory are the social environment, knowledge, content organisation, teacher role, learner readiness, experience, and learner outcomes (Dewey, 1986). Theories of constructivism provide deeper insights into the cognitive and social aspects of learning, enlarging Dewey's contributions, while theories of situated learning and PjBL provide insight into the best way to systematically organise entrepreneurial activities for meaningful learning to occur. All these together help to both investigate and theorise how learners experience reflective learning in the MEPs. Based on these theories, in the next section I attempt to develop a conceptual framework for the entrepreneurial reflective learning process, which serves as a guide for this study.

3.8. Tentative conceptual model for entrepreneurial reflective learning process

Having brought together the philosophies and theories of learning from experience and reflection in the sections above, I attempt to develop a conceptual model of how reflective learning could possibly occur in entrepreneurial activities such as the mini-enterprise experience, and how it could be researched from a hermeneutic phenomenological perspective. Therefore, the conceptualisation is underpinned by Dewey's theory of reflective thinking and action, interpretive phenomenology, constructivist theories of learning (especially Piaget and Vygotsky), and literature and models of experiential and reflective learning. I also hasten to admit my indebtedness to the works of Hägg (2017), Hägg and Kurczewska (2016) and Hägg and Kurczewska (2021) on the clarity of thought of how Dewey's philosophy of experience could be applied to experiential entrepreneurial education. Although their focus is on higher education, I believe their insights could also applied to entrepreneurship education at the basic education level, and particularly to the current study. The

interest in reflective learning in this study is not about reflection for its own sake, but for purposes of developing entrepreneurial knowledge. To investigate it appropriately, the starting point is having the entrepreneurial learners who jointly and severally experience the MEP reflect on their experiences of operating the small enterprise to build their own entrepreneurial knowledge under the support, guidance and facilitation of their teachers.

3.8.1. The entrepreneurial learners

Reflective learning by its very nature is an abstract and subjective experience that is mostly covert and difficult to investigate in isolation. Therefore, to study reflective learning in the MEP it is reasonable to study learners of entrepreneurship who directly experienced the MEP as its primary actors and in whom reflection manifests. Pepin (2012) argues that the overarching goal of entrepreneurship education at basic level is to develop graduates who are enterprising. He criticises the lack of clarity and consensus among scholars about what "being enterprising" means, for several reasons. First, lists of character traits of entrepreneurs from past studies are not identical. Secondly, the studies only focus attention on positive attributes, at the expense of negative traits and attributes that entrepreneurs possess. Lastly, they are static in nature, therefore failing to provide a processual guide of how 'being enterprising' is developed from a learning perspective. Summarily, Pepin (2012) sees reflection as necessary in the development of enterprising learners at basic education level in enterprise education. Hägg and Kurczewska (2016) observe that contemporary entrepreneurship education rightfully espouses the ideals of learner-centredness, engagement in learning by doing, and teacher support of the learner, but lacks a deep understanding of reflection on experience, which could lead to the development of entrepreneurial competences and knowledge. A learner of entrepreneurship must be a reflective learner for him to become the reflective entrepreneur he is expected to become.

Interpretivist phenomenological philosophies cited above provide a glimpse of what it means to be an entrepreneurial learner, as well as insights into deciphering how the experience (both primary and secondary) manifest in one's consciousness. Engagement in and reflection on the entrepreneurial activity involves perceptual senses and the mind, and emotions and feelings (embodied experience) arising from the critical incidents are a launching pad for reflection (Jordi, 2011). The unity of mind and body is further enlarged by the embeddedness (thrown-ness and fallen-ness) of the learner into the social and educational context, complete with values, morals and its own ideals that shape who they become. It is in this context that they experience and try to

understand and interpret their own entrepreneurial experiences. The issue of authentic and unauthentic selfhood comes into play as learners try to grapple with the experience together amidst the confluence of pressures brought about by their educational contexts, and the tools and equipment they have to work with, which are either ready at hand or unready at hand. Learners together with their teachers are supposed to be designers through business planning and executors of their business plan; thus they are both designers and actors in the mini-enterprise experience, in line with Dewey's (1986) recommendation for learners to have an input in the design of their experience. During implementation, as learners collaboratively work in different aspects of the entrepreneurial activity, they are likely to experience certain aspects as figural and some receding into the background, not experiencing all aspects of the mini-enterprise all at once. This understanding means that there are implications for learning (and even not learning) where division of labour and assignment of tasks is involved in the MEP. For instance, if a learner is working in the sales department, only activities in that department stand out and provide learning opportunities, and they will not get exposure to other aspects of the business.

Encounters with the experience, especially critical incidents, evoke in learners emotions and feelings which reveal things that matter to them the most, and also provide opportunities for learning through reflection at intrapersonal and interpersonal levels. In that way, affectivity becomes a gateway to mental processes that attempt to make sense of experience, compare experience with existing stock of knowledge and extend knowledge structures in cases where new knowledge is developed (Biesta & Burbules, 2003; Prawat, 2000). Reflective learning that transforms experience through a transactive interplay between the actor and their environment occurs at the intrasubjective level and the intersubjective level (Biesta & Burbules, 2003). Therefore, learners develop entrepreneurial knowledge through extension or changes in their individual mental structures and social negotiation in a collaborative reflective process in the cycle of acting on the mini-enterprise, reflecting together in the attempt to solve problems, experimenting (acting) on the suggested solutions, and drawing lessons together when the problematic situation has been resolved.

3.8.2. The entrepreneurial activity (primary experience)

As an educational activity, a lot of thought must go into how the entrepreneurial activity or mini-enterprise experience is designed, so that it is able to give learners experiences that will result in meaningful learning or development of entrepreneurial knowledge and an entrepreneurial mindset.

It must be purposeful, educative, and not mis-educative. Drawing from Dewey (1986), a purposeful experience is one that is designed with ends in view. To do this, he advises that the teacher should work with learners to develop the overarching goals of an experience. This process should entail observation of present conditions; knowledge consisting of lessons and advice of what happened in the past when similar projects were undertaken under similar circumstances; and lastly judgement which combines observations and past experiences into a meaningful guide for a way forward. An experience is also purposeful or intelligent if the present experience maintains a continuous link with the future, where gained knowledge can be transferred or applied, that is, designed with the end in view (Hägg & Kurczewska, 2016; Pepin, 2012). Since it is difficult to design present activities that are exactly a replica of future experiences, the present experience must of necessity provide rich experiences that challenge learners to be adaptable, able to take the initiative, creative, innovative, risk tolerant, critical thinkers and problem solvers. This could be accomplished by designing and implementing the entrepreneurial activity in a way that resembles a real business as closely as possible (drawing from situated learning) by being realistic, hands-on or action oriented (involving learning by doing), involving risk, emotional exposure, cooperative and collaborative, iterative (continuous as opposed to one time project), interaction with the outside world and reflection on critical incidents (Arpiainen et al., 2013; Pittaway & Cope, 2007; Pittaway et al., 2011; Pittaway & Thorpe, 2012; Pittaway et al., 2015; Rae, 2005).

In addition, it must take the mould of PjBL in totality, where learners identify a business problem or opportunity, come up with a business solution to exploit the opportunity or problem profitably, and also submit a write-up of their whole experience, and plan and report of actual execution. The mini-enterprise experience has a wide range of parts that cannot be experienced at once, implying Satre's concept of figural (stand-out) versus background experiences. For example, learners may assume roles in different departments in the business and as such those experiences that they encounter in their assignment may be in the figural or foreground while those they do not work in remain in the background. It may be interesting to find out how balance is maintained to give learners a holistic experience and development of entrepreneurial knowledge in all the various aspects of the MEP. As much as hands-on involvement is at the heart of primary experience, action on its own does not generate learning – it must be coupled with critical and systematic reflection for meaningful learning to occur. Thus, the next section discusses reflective learning to facilitate such desired learning and development of entrepreneurial knowledge.

3.8.3. The entrepreneurial reflective learning process (secondary experience)

Thought must go into the design of the entrepreneurial activity (i.e. MEP), and it is categorically imperative that much thought also goes into the reflective process. The primary experience is of no consequential value without the reflective aspect of an entrepreneurial activity. According to Hägg and Kurczewska (2016) reflection is the internal experience through which action in the external experience is turned into entrepreneurial knowledge, through a transactive cognitive process between the two forms of experience. As past experiences are recaptured, relived, critically analysed and evaluated in the light of prior knowledge, insights are drawn and synthesised into knowledge that may be transferred to similar situations in the future. The point of departure of reflection is often emotional exposure, where the learner is taken aback by critical incidents or crisis events that call into question the conventional knowledge and practices. The fact that emotional exposure from critical incidents triggers emotions and feelings which eventually set the reflective process in motion, shows that reflection is not exclusively a cognitive process but a combination of mind and body in dealing with embodied experiences (Hägg & Kurczewska, 2016; Jordi, 2011).

A focused, directed, systematic and purposeful process is then launched to make sense of the situation with careful consideration of causes and identification of the best course of action based on the justifiable reasons, amidst competing ideas and a plan of execution to resolve the situation. While engaged in this process of reflective thinking, the learner may draw from the wealth of accumulated prior knowledge and past experiences, with the ultimate aim of developing solutions to the indeterminate situation. The careful weighting of possible courses of actions and their consequences before implementation separates intelligent action from haphazard trial and error (Biesta & Burbules, 2003). Entrepreneurial knowledge is developed when action and expected consequences happen as anticipated, solving the problematic situation. Although in recent years studies have lauded the value of reflection to transform experiences into higher-order learning and called for its incorporation into entrepreneurship education (Higgins et al., 2013; Hunter Lindqvist, 2017; Kassean et al., 2015; Rae & Carswell, 2001; Yeoh, 2017), its uptake in teaching and learning remains low and the field still struggles with how to teach reflection and how to incorporate it into action-oriented entrepreneurial activities (Hägg & Kurczewska, 2016). The current study builds knowledge to address this gap, especially at the secondary education level.

Individual and collaborative reflective process

The MEP is a collaborative and cooperative project. Therefore, learners' reflection should mirror the collaborative nature of the project. This means that reflection should involve both personal or individual and collective reflective processes. As a reflective community, entrepreneurial learners reflect together on the critical incidents or emotional exposure that arise from experience. Boud et al. (2013) demonstrate that even such a group reflection can be made systematically. From a constructivist perspective (both cognitive and social constructivism), knowledge creation through reflection in experiential settings occurs at both the individual and social level (Moon, 2006). Learners bring prior knowledge to a new experience as a base for developing new entrepreneurial knowledge through reflection (Moon, 2006, 2013). Dewey also held that there is a positive correlation between the amount of prior knowledge brought to bear in a problematic situation and the opportunities for an intelligent approach to problem solving at both personal and interpersonal level (Biesta & Burbules, 2003). This means that the more the wealth of experience that individual learners bring into a situation, the more they will possess advanced mental operations that place them at a greater advantage in solving problems they are faced with. The same applies in collaborative projects: the more learners share their experiences amongst each other, the more the amount of resources available at their disposal for intelligent collective problem solving.

The principles of cognitive constructivism (adaptation, assimilation, accommodation and equilibrium) and social constructivism's emphasis on cognitive apprenticeship with more knowledgeable others and scaffolding may offer insights into how reflective learning occurs both at individual and group level. From Piaget's point of view, when learners are faced with indeterminate or problematic situations, it is through the process of reflection that the critical incidents are transformed from a place of cognitive dissonance and disequilibrium (between prior knowledge and current experience) to assimilation and accommodation, thus extending learners' mental knowledge structures through incorporating new knowledge into existing knowledge cognitive structures (Biesta & Burbules, 2003; Deakins & Freel, 1998; Pritchard, 2009). It is worth noting that also from a constructivist perspective, social negotiation is implied where learners' intersubjective reflection among peers (in cognitive constructivism) and social negotiation with more knowledgeable others (either peers or teachers) could help unpack experiences to draw lessons from them using the lens of Vygotskian social constructivism (Moon, 2013; Rogoff, 1990)). When learners engage in collaborative learning spaces they work together through communication and coordination (reflective thinking and acting) to adjust and reconstruct their individual perspectives and ways of doing things to achieve a common goal, culminating in the creation of a common or

shared intersubjective world (Biesta & Burbules, 2003). In the quest to understand how reflection occurs in the mini-enterprise experience, the extent to which reflective learning occurs at both individual and collaborative level is examined in the current study.

Phases of reflection

As a systematic and rigorous process, reflection follows a cyclical process that consists of the following steps: (1) presence to experience, (2) description of experience, (3) analysis of experience, and (4) intelligent action (Rodgers, 2002). In addition, the process of reflection occurs in several phases. Although Dewey has his own phases of reflection, based on the Darwinian logic of inquiry, modern phases of reflection that ascribe to his principles seem more appropriate. The three phases of reflection include pre-action reflection, reflection in action, and post-action reflection (Pepin, 2012). Coulson and Harvey (2013) emphasise four phases, which only adds learning to reflect, as supposed to precede reflection for action, reflection in action and reflection on action, all bounded by teacher scaffolding and the learning environment.

Learning to reflect, although not an actual phase in the true sense, is important because it recognises that not every learner has the natural ability to reflect in a systematic manner to draw necessary lessons from the experience, but all can learn if taught (Bennett, 2006; Boud et al., 2013; Coulson & Harvey, 2013; Hägg & Kurczewska, 2016). In fact, research evidence shows that even in higher education learners of entrepreneurship have below-par reflective learning skills (Yeoh, 2017). At the secondary school level, the need may be even more pronounced, taking into consideration the low developmental maturity of learners at this level. In the current experience, understanding whether learners learnt to reflect or not prior to engaging in the mini-enterprise may offer answers to why reflection occurs in the way it does in the MEP.

Pre-action reflection or reflection for action serves as a guide for action. It entails initial planning of goals and objectives of the experience and all activities that are to be anticipated and undertaken in the mini-enterprise experience (Pepin, 2012). Regardless of how meticulous it is, pre-action reflection is not able to anticipate and capture all possible situations to be experienced within the experiential environment and context. Therefore, adjustments in the thick of action are necessary during implementation for purposes of continuity of experience, as what is planned may not tally with what is experienced, and even the overarching strategy may need to be fine-tuned.

This brings us to the second phase of reflection during implementation of the experiential activity, *reflection in action* or *reflexive conversation*. As learners engage in entrepreneurial activities, they encounter problems or a state of disequilibrium. Attempting to solve the problem sets the process of inquiry in motion, a key tenet in Dewey's conception of the process of learning. One gains knowledge and competency through inquiring into a problem by identifying the context of the problem, analysis, evaluation and making conclusions (Higgins et al., 2013; Pepin, 2012). This process engages a learner's critical or reflective thinking skills by bringing prior knowledge and experience to address the problem at hand, especially from related contexts. Once the problem is solved, the learner has gained knowledge that can be transferred to future related or similar situations. This process of reflection in action is recurrent and continues for the duration of the experiential or entrepreneurial activity, as different kinds of problems and challenges come to the fore, creating learning situations that require the learner to apply their existing stock of knowledge, question taken-for-granted assumptions and revise their understanding through experience and reflection. In this process learners must maintain a teleological focus while continuously adjusting their plan of action in the entrepreneurial project.

Unlike a real business, the entrepreneurial activity must at some point come to an end. When that time comes, learners engage in *post-action reflection* or *reflexive distance taking*. This process involves assessment and collation (synthesis) of learning that has been gained through the entrepreneurial experience in line with the targeted ends. This process of reflection allows for reflexive transfer of entrepreneurial knowledge to future contexts, especially since entrepreneurial learning is a process of becoming and lifelong learning.

3.8.4. A reciprocal interactive process

The nature of experience has already been stated as taking upon itself a transactional process or transactive interplay (Hägg, 2017) between the living being and the environment. According to the premises of transactional realism, knowledge construction is not an exclusive reserve of the mind but a construction that resides in the reciprocal interaction between the human agent and the environment (Biesta & Burbules, 2003). The transactional interaction between human organism and the environment exists in an inseparable and interdependent manner, such that they cannot be pulled apart without destroying them (Dewey, 1986; Gallagher, 2014). This is a repetitive and reciprocal process wherein the human agent acts on his immediate environment and the resulting changes on the environment, which also react back towards the actor, influencing a change in the

actor in some type of way in the pursuit of equilibrium between the learner and his environment (Biesta & Burbules, 2003; Gallagher, 2014). This means that when entrepreneurial learners are faced with a problematic situation in their projects and solve it by making changes in their enterprise (environment), they are simultaneously forced to make changes in their behaviours as well. As Gallagher (2014 p. 24) puts it, "[i]ndeed, any adjustment one makes to objects, artifacts, tools, practices, social relations or institutions, is equally an adjustment of oneself."

This is because Deweyan pragmatism assumes that the situation is a constituent of the organism-environment transaction, affecting not only the environment but the actor. Dewey believes that this reciprocal process between the human agent and the environment is always mediated by culture through the medium of communication. Culture in this context refers to "everything that is a product of human action and interaction" (Biesta & Burbules, 2003, p. 29). An in-depth reading culture could also be interpreted broadly to refer to educational contexts. One could draw from this understanding that experience as a transaction or a reciprocal process is the glue that holds together the entrepreneurial activity (primary experience) and reflective thinking and acting process (secondary experience), grounded on educational contexts. As learners of entrepreneurship act on the MEPs and the totality of its environment, they effect changes on it, and the entrepreneurial environment reacts to the consequences of their actions, influencing or shaping the learners in the process. The educational context is discussed separately below.

3.8.5. Foundation and mediation of educational contexts

The learning environment is recognised as playing a pivotal role in reflection, as the learner and reflective learning process are embedded in it (Coulson & Harvey, 2013; Hägg, 2017). Heideggerian phenomenology assumes that learners are thrown into a social environment and educational system with full-fledged morals, values and culture that shape who they become (Horrigan-Kelly et al., 2016). However, according to Hägg (2017) past studies have not fully examined the relationship of how the interactions among learners of entrepreneurship, systematic entrepreneurial learning process and educational context work together in concert to influence the development of entrepreneurial knowledge. As a result, he further submits that as much as the education environment implies a structure and system that supports entrepreneurial learning, it is important to examine how and why entrepreneurial knowledge is developed in the setting under investigation.

With specific regard to the mini-enterprise, the educational contexts may include the location of the school, stakeholders such as parents, auxiliary staff and teachers, the learner community, the business community, the curriculum developers, and the examination body. Drawing from Heideggerian phenomenology, the "fallenness" and "thrown-ness" of learners into their educational context may need to be examined, as this may have an influence on who they become from an entrepreneurial perspective. Deweyan pragmatism seems to support this idea, suggesting that experiences are theory-laden and culturally mediated by observations of past generations (Dewey, 1958; Miettinen, 2000). Experience, according to Dewey (1958, p. 37), "is already overlaid and saturated with the products of the reflection of past generations and bygone age. It is filled with interpretations, classifications, due to sophisticated thought, which have become incorporated into what seems to be fresh naive empirical material." This implies that the observations and interpretations learners make of their experiences are already influenced and shaped by local traditions, and even the traditions of the discipline and reflection could also play a pivotal role in helping learners to be conscious of and question or critique these prejudices handed down by culture that permeate their experiences and interpretations. Engagement with the business community in entrepreneurial activities has been alluded to be important in entrepreneurial learning, but has not been examined with respect to reflective learning in the MEPs in particular.

From a Deweyan and social constructivist perspective, teachers are expected to work with learners in designing the primary experience and to help learners resolve the tension between private knowledge and objective knowledge taught in class, by helping them to align the private knowledge developed from experience with objective knowledge (Dewey, 1986; Prawat, 2000) of the discipline of entrepreneurship. However, the role of teachers of entrepreneurship in teaching learners how to reflect and supporting or facilitating learner reflection in the mini-enterprise experience remains a black box, even though reflection is deemed important for learning. Other key players are the curriculum planners who develop the curriculum of entrepreneurship and expected learning outcomes and the examinations council who examine the end product. These must all sing from the same hymn book as it were, for the learning experience to be meaningful and yield desired outcomes on the part of the learners. It would be interesting to know how all these educational contexts influence learning in the mini-enterprise experience.

3.8.6. Entrepreneurial knowledge (entrepreneurial learning outcomes)

Entrepreneurial knowledge in the literature seems to be associated with entrepreneurial competencies, which include the development of knowledge, skills and positive attitudes towards entrepreneurship (Lackéus, 2015). According to Grewe and Brahm (2020) there is a paucity of research on how learners at the secondary education level develop entrepreneurial competencies from entrepreneurial education programmes. Notwithstanding, entrepreneurial competencies have been conceptualised differently in the entrepreneurship education literature. These include the psychological traits associated with entrepreneurship (Driessen & Zwart, 1999; Sánchez, 2013); the cognitive and non-cognitive skills approach (Lackéus, 2015; Moberg, 2014); the three-dimensional approach consisting of economic know-how, team skills and personal competencies (Grewe & Brahm, 2020); a management education and competency-based education multi-dimensional framework of four components, made up of cognitive competence, functional competence, personal competencies, and meta-competencies (Bird, 1995, 2019; Cheetham & Chivers, 1996, 1998; Le Deist & Winterton, 2005; Kyrö, 2006; Kyrö et al., 2011); and lastly, a model-based educational research consisting of declarative knowledge, procedural knowledge, conditional knowledge and contextual awareness (Hägg, 2017).

The cognitive and non-cognitive skills model seems to be the one applied to primary and secondary levels of education. Moberg (2014) found entrepreneurship education seems to foster non-cognitive skills while fostering cognitive skills on older learners at the secondary education level. Grewe and Brahm (2020) found that mini-companies positively impacted learners' economic or business knowledge. However, no positive impact was observed in non-cognitive and social skills such as creativity, decision-making, innovation, and self-awareness. Lackéus (2015) views these skills and competencies as a continuum ranging from cognitive skills to non-cognitive skills. Cognitive competencies are made up of knowledge (e.g. knowledge of facts, processes, and self) and different entrepreneurial skill sets necessary for the effective running of a business, while non-cognitive competencies consist of entrepreneurial attitudes such as self-efficacy, entrepreneurship desirability, ambiguity and risk tolerance, and perseverance. Therefore, it is plausible to conclude that entrepreneurship education must foster competencies within the continuum of cognitive and non-cognitive skills (personal characteristics and attributes) even though the findings do not generally agree.

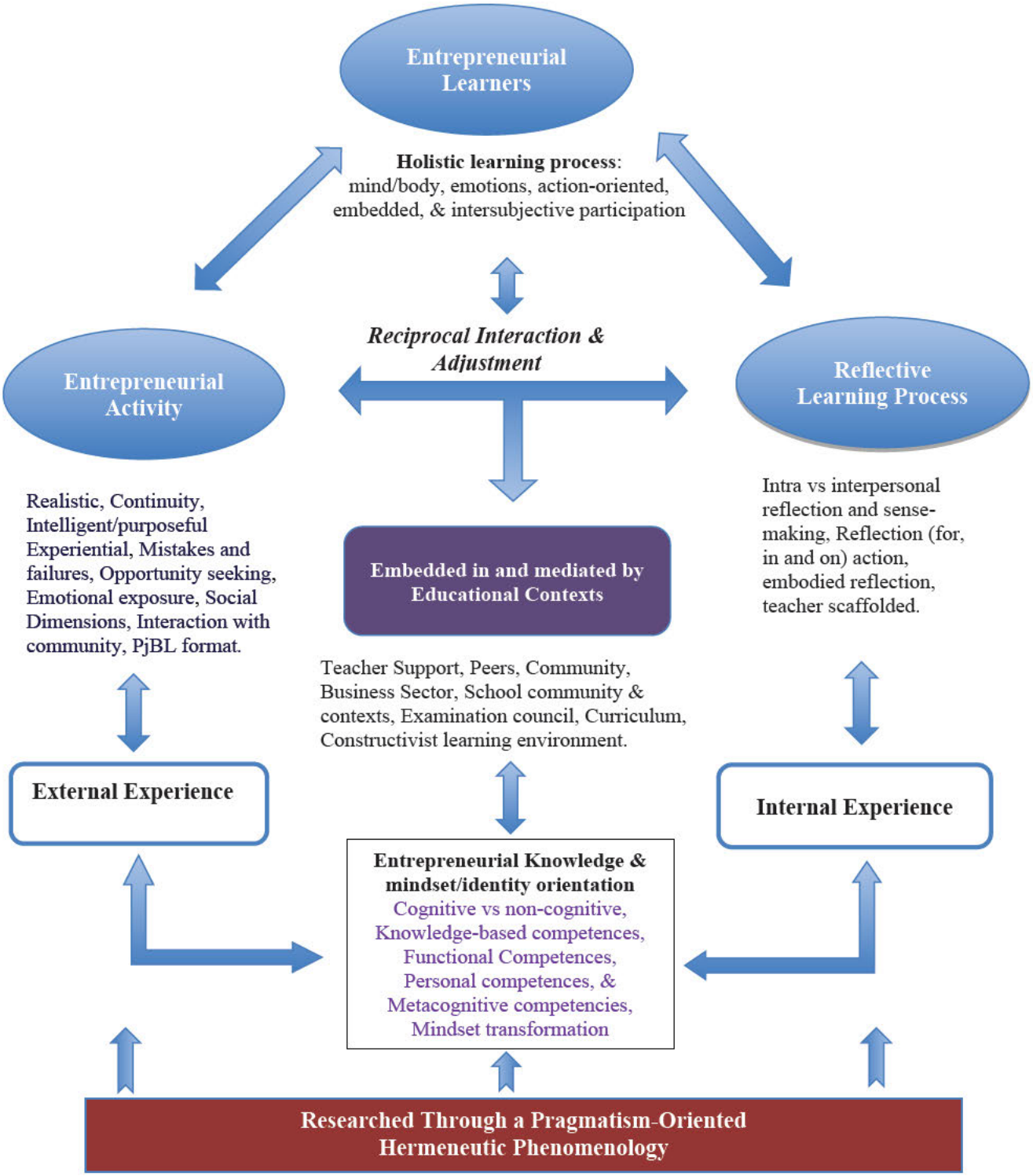


Figure 6: The entrepreneurial and reflective learning process model

The multidimensional model seems to provide a broad approach to the understanding of entrepreneurial knowledge. Cognitive competence or knowledge-based competences refers to

founding theories and concepts of entrepreneurship. It includes knowledge and understanding processes and business contexts where it can be applied and the reasoning behind such use. By extension, the entrepreneurial learner must possess relevant work-related knowledge and be able to utilise it effectively. Cognitive competence has been explained in the literature review to consist of knowledge in its broad conceptualisation (tacit knowledge, technical knowledge, procedural knowledge, and contextual knowledge) specific to the business and the industry sector it belongs to. Functional competences, on the other hand, describe the practical skills that a learner of entrepreneurship must be able to showcase. Examples of functional competences include presentation skills, communication, planning, organising and leadership.

Personal competencies refer to the enduring characteristics that an entrepreneur should have that enable them to render excellent performance, leading to profits and growth of a venture. Meta competencies are the higher-order thinking skills that help the entrepreneur to cope and even thrive under uncertainty and ambiguity. Here skills such as analytical and critical thinking, creative problem solving, and reflective judgement are implied. In fact, in hands-on and experience-based contexts, the learning process relies on factual knowledge and reflective thinking to turn experience into entrepreneurial knowledge (Hägg, 2017).

3.9. Implications for research

Having presented the theoretical and conceptual framework above, the question that remains is: What are its implications for research? Although Dewey's philosophical point of departure was pragmatism and concerned with the broader questions of education, his philosophy generally agrees with both cognitive and social constructivist theories of learning (Biesta & Burbules, 2003; Imbuya, 2020; Prawat, 2000). In addition, Deweyan experimental knowing, and its broader philosophy of pragmatism that underlines his theory of reflective thought and action, seems to fit hand in glove with phenomenology (Cope, 2005a; Hägg & Kurczewska, 2021). This is because phenomenology doubles as both a philosophy and methodology for studying the essential structures of experiences as they reveal themselves in human consciousness and awareness. It helps to get to the bottom of the experience itself and also how learners experience and make sense of the lived experience. Furthermore, Deweyan pragmatism and interpretivist phenomenology (especially Merleau-Ponty),

support embodied cognition, an important element for this study to research reflective and entrepreneurial learning from a holistic point of view rather than a purely and exclusively cognitive one.

Therefore, researching experiential and reflective learning in the MEPs based on the developed theoretical and conceptual framework implies a hermeneutic phenomenological study. Entrepreneurial phenomenological research is an alternative and appropriate shift from the positivist psychological and trait studies that have dominated entrepreneurship research, and has the added advantage of examining subjective experience better (Cope, 2005a; Seymour, 2006). Deweyan pragmatism is also neither positivistic nor prescriptive about methodology (Biesta & Burbules, 2003; Määttänen, 2015; Morgan, 2014), which makes it amenable to a qualitative research approach. However, deeper thought may be necessary on the question of ontology, especially when compared to hermeneutic phenomenology and constructivism that are relativist. Biesta and Burbules (2003) puts these fears to rest, submitting that Deweyan pragmatism is relativistic in the sense that it subscribes to "transactional realism" or "transactional constructivism". The notion of transactional realism is premised on Dewey's belief that knowledge is created through the transaction of the human organism and his or her environment through action. Reality is therefore assumed to be neither objectivist nor subjectivist (positions which are opposites, and each are representative of the mind-world dualism), but a product of the actors' directed action and the anticipated outcomes of the solution occurring, bringing an indeterminate situation to normalcy (Biesta & Burbules, 2003; Morgan, 2014). However, even though learners experience a transaction with the environment and past experiences unique to them individually, and create their own individual and idiosyncratic world from lessons and insights drawn from personal experiences, such knowledge and experiences become relevant when merged into established and commonly held knowledge forms and practices of their social set-up in a joined effort of reconstruction. Thus, even though he perceives reality as relativistic, his alternative to positivism and subjectivism is intersubjectivity (Biesta & Burbules, 2003).

Transactional realism could be relatable to situations where learners of entrepreneurship's currently established knowledge claims are challenged by uncertainty, ill-structured problems, novelty, and competition. Such situations could result in established knowledge claims and truths being challenged when unprecedented problems arise, requiring novel solutions, which eventually lead to the extension of mental structures and updating of entrepreneurial learners' existing stock of knowledge when they are solved through intelligent action. Hägg and Kurczewska (2021) argue

that entrepreneurship education needs a philosophy that uses a malleable, dynamic concept of truth that is continuously progressing and future-oriented. Such a perspective is also important for the development of knowledge, since it is constantly developing in the light of new evidence and insights based on action.

Furthermore, Hägg and Kurczewska (2021) suggest that by investigating learners' entrepreneurial actions (external world) and their reflections (internal world) on the entrepreneurial processes, it becomes possible to examine the interplay between the primary experience and secondary experience, together with the continuity of experiences, en route to understanding how entrepreneurial knowledge is developed. Applied to the current study, research methods and data generation instruments that generate data on the unfolding entrepreneurial process (primary experience) and interpretation of the learners' internal world through reflection (secondary experience) in the mini-enterprise experience as a collaborative project are employed through a hermeneutic phenomenological approach. Drawing from this theoretical and conceptual framework, the following research questions arise:

1. What are the learners' experiences of reflective practice in entrepreneurial learning through the mini-enterprise projects?
2. How do learners engage in reflection as they participate in the mini-enterprise project?
3. What are some of the factors that influence learners' reflection practices when engaged in the mini-enterprise project?
4. Why do learners reflect on their experiences the way they do in the mini-enterprise project?

3.10. Conclusion

In this chapter the theoretical framework based on the philosophical and theoretical foundation of hermeneutic phenomenology, constructivism, PjBL and Dewey's theory of reflective thought and action was developed. The appeal of these different theories is their potency to provide a broader framework for investigating action-oriented, experience-based learning and reflection. Albeit being different, as a collective they provide an opportunity to research entrepreneurial learning from a comprehensive perspective that looks at the learner as a whole person, reflective learning as a collaborative endeavour, incorporate the learners' situated context in learning, and take a non-reductionist approach that learns from other disciplines outside of education, that may enrich our understanding of reflective learning. Furthermore, a tentative conceptual model for the entrepreneurial reflective learning process was developed based on these theories and a review of literature, to provide a lens for the research design and methodology, analysis and interpretation of results and theorisation of the reflective process in project-based entrepreneurial learning activities. The next chapter discusses the research design and methodology employed in the study.

CHAPTER FOUR

RESEARCH APPROACH, DESIGN AND METHODOLOGY

4.1. Introduction

In Chapter Four I discuss the qualitative research approach and its rationale; the interpretive and pragmatic paradigm used in this study; the phenomenological case study as the chosen methodological design for the study; and the justification for using this methodology to examine how secondary school learners experience entrepreneurial learning and reflexive learning in the mini-enterprise experience. I also present matters relating to the sample size and how the study participants were selected, together with the data collection instruments and approaches to data analysis in line with the phenomenological case study approach, among others.

In many studies the concept of research seems to have different explanations. However, at its very core and most basic level, research entails a systematic process of investigating a topic or issue or phenomenon of interest following a set of logical, systematic, and scientific procedures to collect, analyse and interpret data for the purpose of increasing knowledge and understanding about the topic, issue, or phenomenon through dissemination of findings (Creswell, 2012; Kothari, 2004; Merriam & Tisdell, 2016). The purposes and objectives of research include increasing knowledge and insights about a less understood phenomenon or issue, providing accurate and in-depth descriptions about a subject to solve problems, improve professional practice and contribute to policy debates to ensure evidence-based policymaking and implementation (Creswell, 2012; Creswell & Poth, 2016; Kothari, 2004).

Analogously, this study employs a series of systematic steps to examine entrepreneurial and reflective learning among junior secondary school learners in Botswana to contribute to knowledge and understanding of how they experience learning in the MEPs. It also hopefully contributes to the practice of teaching entrepreneurship using related entrepreneurial programmes, and to policy debates on entrepreneurial education. To carry out the process of research I discuss key concepts such as research methodology, research approaches, research paradigms, research designs, research methods and strategies of data collection and analysis, and how they have been explored in the current study. In addition, to carry out this study I was guided by the research aim and purposes,

research objectives, questions and sub-questions described in Chapter One; the literature review in Chapter Two; and the underpinning theoretical framework described in Chapter Three.

4.2. Qualitative research approach

In this study I chose to use the qualitative research approach. Qualitative research has over the years been influenced by different philosophical stances, historical developments, and disciplines, thus making it difficult to have a simple definition (Merriam & Tisdell, 2016). As a result, it is not surprising to find terms such as interpretive, naturalistic approach and qualitative research used to describe it (Creswell & Poth, 2016; Denzin & Lincoln, 1994; Merriam & Tisdell, 2016). It is an umbrella term that encapsulates a variety of research methods that attempt to describe, decode, interpret and ascribe meaning to different phenomena (Creswell & Poth, 2016; Denzin & Lincoln, 1994; Merriam & Tisdell, 2016). This means it endeavours to build concepts that help improve the understanding of or interpret phenomena or solve problems from the perspective of meanings that members of society attach to them in their natural settings (Creswell & Poth, 2016; Denzin & Lincoln, 2011; Paley, 2016). Characteristically, in a qualitative inquiry data are collected in text or word-based form from a small sample size using textual analysis and thematically analysed to provide rich descriptions of the phenomenon (Merriam & Tisdell, 2016). Interpretation in qualitative inquiry attempts to find the broader meaning of findings and report them using "flexible, emerging structures and evaluative criteria and including the researchers' subjective reflexivity and bias" (Creswell, 2012, p. 16).

Overall, drawing from the above-mentioned explanations, the goal of qualitative research as applied to this study is encapsulated in the desire to build concepts that help improve the understanding of learners' experiences of learning entrepreneurship through the mini-enterprise experience within the school context, its natural setting. My main target was to find out how these learners interpret their experiences, create their worlds, and the meanings they make of their experiences of reflective learning (Merriam & Tisdell, 2016; Neergaard & Ulhøi, 2007) as they engage collaboratively in the MEPs.

4.3. Justification for use of qualitative research in this study

Neergaard and Ulhøi (2007, p. 5) argue that qualitative research is essential to move "beyond mere description at a generalizable level" that has characterised most quantitative studies that have dominated the entrepreneurship research space for a long time (Hlady-Rispal & Jouison-Laffitte, 2014). However, this does not mean qualitative research should be used just to continue the ideological warfare that has pitted qualitative and quantitative research against each other in entrepreneurship research. In fact, Neergaard and Ulhøi (2007) warn that the battlelines drawn between the two approaches are unproductive as both are accepted, and each adds value to entrepreneurship research in their own unique and respective ways. Therefore, they encourage a combination of respect for the traditional methods and open-minded tolerance for novel and innovative approaches in the mould of qualitative research.

At a much deeper level, the choice of a research approach should be determined by the research problem or topic and the research questions that drive the study, rather than unwavering fidelity to a specific methodology (Brannen, 2017). Research questions that ask *what* or *how* questions that are 'open-ended' as opposed to 'closed' result in the description of the phenomenon under investigation, and consequently lend themselves to the qualitative research approach (Kovacev, 2008; Smith et al., 2009). For example, the primary question of this study is 'How do learners experience reflective learning of entrepreneurship through participation in the mini-enterprise projects at junior secondary school level?', and this type of question cannot be investigated quantitatively. It is exploratory and not explanatory, reflecting a focus on process and meaning or understanding as opposed to causality, differences and outcomes of events as is the nature of positivist research (Smith et al., 2009). The same could be said of the sub-questions that unpack the main or primary research question, as they lean more towards explicating the essential structures or essences of reflective and entrepreneurial learning in the mini-enterprise experience. In addition, the use of the qualitative research approach and related research designs and methods in this study are necessitated by the gaps, blind spots and limitations of quantitative methodologies in investigating entrepreneurship education research problems. This study seeks to understand the essential structures and meaning of the experience of learning entrepreneurship through the MEPs with the goal of better understanding what learning is like for learners of entrepreneurship at junior secondary education level. The qualitative research approach is therefore more suited to explore the driving question of this study and the sub-questions that unpack it.

In addition, I chose qualitative inquiry for this study because it focuses on meaning and understanding as the goal of research (Merriam & Tisdell, 2016; Paley, 2016). That is, it pursues the overarching goal of attempting to understand how people make sense of their lived experiences, describing in a detailed fashion their meaning-making process and how they interpret those experiences in their lives (Van Manen, 2014; Van Manen et al., 2016). This entails dedicating effort to understanding research subjects from their own perspectives, in their uniqueness and interactions within a particular context or setting (Creswell & Poth, 2016; Denzin & Lincoln, 2011; Merriam & Tisdell, 2016). This also aligns with this study's research questions, aims and purpose, as outlined above.

Finally, the interest of this study is more in the rich descriptions of experiences and the meanings that learners of entrepreneurship make of their mini-enterprise experience. Rich and holistic descriptions mean that the researcher sets out to develop a comprehensive and complex picture of the phenomenon, people, and activities under investigation (Armstrong, 2010; Creswell & Poth, 2016). This is often achieved through "reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges" (Creswell & Poth, 2016, p.44) through use of different tools and techniques. This necessitates the use of a qualitative research approach, as this kind of data cannot be summarised numerically but provides an opportunity to look at the phenomenon from different perspectives, resulting in generating large amounts of data that give a detailed description of the phenomenon so that it is better understood. Adding to holistic account is the characteristic of multiple perspectives and meanings of study participants. Participants in the MEPs, as in the nature of qualitative inquiry, are expected to hold different views and perspectives and this must be reflected in the themes developed in the report of this research approach.

4.4. Research paradigm

4.4.1. Pragmatist philosophical stance

In this qualitative study I utilised the paradigmatic stance of pragmatism. A paradigm describes the underlying perspective or interpretive framework through which a research problem, issue or phenomenon may be viewed, as well as theoretical orientations about how research may be undertaken (Bloomberg & Volpe, 2012; Creswell & Poth, 2016). Whereas this study is phenomenological, studying learners' experiences in the MEP requires a philosophy of action and experience-based learning, as the project is founded on an action orientation and learning by doing.

It follows in the footprints of Kyrö et al. (2011) and Hägg and Kurczewska (2021), who have recommended and used pragmatism-oriented phenomenology to explore entrepreneurship education. Pragmatism therefore is a potent philosophy for understanding and interpreting human action and reflection as occurring in the experiential and PjBL that involve learning by doing to complement hermeneutic phenomenology, especially where it overly focuses on pre-reflective experiences (Hägg & Kurczewska, 2021; Magrì et al., 2021; Magrì & McQueen, 2022). Although pragmatism is often used as a paradigm for mixed-methods research, such use is often based mainly on its instrumental benefits, representing 'what works' from an epistemological and methodological perspective of the researcher and not necessarily the philosophy of pragmatism proper (Maarouf, 2019; Morgan, 2014). However, pragmatism is not necessarily a paradigm that is exclusively appropriate to mixed research methodology, but is amenable to any research approach, and therefore appropriate and usable for a qualitative study such as the current one (Biesta & Burbules, 2003; Määttänen, 2015; Morgan, 2014). The use of pragmatism in this study stems mostly from the philosophical perspective rather than instrumentality.

Pragmatism can be understood as a philosophy of meaning that is premised on the assumption that the meaning of an event can only be understood on the basis of past experience (Denzin, 2012). As a result, it focuses on the outcomes and sense-making of human actions or events in a given social setting. This understanding derives from Peirce's semiotics which hold that acting agents' relations to the world and to themselves are interpretive (Vessey, 2016). Semiotics has to do with the study of signs and symbols and their interpretation. Peirce (1932, p. 228, as cited in Vessey, 2016) defined a sign as "something which stands to somebody for something in some respect or capacity." This implies a triadic structure to a sign relationship, consisting of the object (what the sign represents or communicates), the sign (what is being interpreted), and the interpretant (the person to whom the interpretation is intended). In this way signs are intermediaries between the object and the mind of a person in the world. Furthermore, from this perspective knowledge is gained through a social process that involves investigation and convergence of interpretations from a community of interpreters/investigators (Vessey, 2016). It must be noted also that pragmatism is non-reductionist as it sees value in the use of contemporary scientific methods and findings from different disciplines (Baert, 2016; Biesta & Burbules, 2003). I lean towards Dewey's soft pragmatism philosophy, as it seems reasonably good for educational research because it is mostly focused on education as a discipline and also offers an alternative explanation of how knowledge is developed or acquired through a philosophy of action (Biesta & Burbules, 2003; Määttänen,

2015). For this reason, it is an ideal philosophy for researching entrepreneurial and reflective learning from a practical and action-oriented perspective (Hägg & Kurczewska, 2021).

Ontologically, pragmatism, like hermeneutic phenomenology, takes as its point of departure the non-dualism of human beings and their lived world, and the mind and the body (Biesta & Burbules, 2003). It perceives nature as a moving whole of integrating parts that involve indefinite adaptive and adjustive interaction between the individual and their environment, in an attempt to maintain a dynamic balance with the environment that is constantly in motion and changing. As a philosophy of action embedded in the life-world, it operates on the assumption that learning is inherently emotional, social and contextual (Morgan, 2014). This implies that experiences grounded in the life-world always possess embodied and affective components, wherein feelings serve as the umbilical cord connecting one's beliefs and actions. From this pragmatist perspective, emotions play an important role in learning by serving the dual function of being the sources and end products of human experiences (Kyrö, 2008; Morgan, 2014). Furthermore, although experiences can be individualistic, Dewey views experiences as social, involving human interactions of some sort.

Although pragmatism is a philosophy that arguably emphasises ontology (Määttänen, 2015), its epistemological views arise from this process world non-dualism, premised on the transactive interaction with the world through action. Therefore, presuming transactional realism whereby people are assumed to be already in contact with their world, an important goal of pragmatism is to offer an explanation of that point of contact where reality manifests itself as an outcome of human actions (Biesta & Burbules, 2003). Building on this understanding, pragmatism holds that knowledge is constructed through human actions or activities within the transactive interplay between the acting agent and the environment. From a pragmatist perspective, most human actions in common experiences are purely habitual until encountering problematic situations due to changes in the world that require conscious reflection and decision-making to return to equilibrium. Consequently, the constant changes in the worldly experiences repeatedly cause acting agents to engage in a process of enquiry and repeatedly create a dynamic equilibrium, spurring a process of specific changes in patterns of behaviour in the acting agents. Upon encountering problematic situations, acting agents reflect on their beliefs to select the appropriate course of actions, and reflect on their actions to establish new beliefs.

Thus, the object of knowledge from this philosophical point of view refers to new habits of action that enable the subject to know what to do in similar situations in the future (Kivinen &

Ristelä, 2003; Määttänen, 2015). For this reason, Deweyan pragmatism believes that deep, long-lasting and meaningful learning rarely comes from conscious studying, but it is ensconced in knowing how to do something (Kivinen & Ristelä, 2003). Building on the principle of 'learning by doing', learners are not assumed to be passive and their brains as empty vessels waiting to be filled with knowledge, but act on their environment and simultaneously experience the consequences of their own actions (Kivinen & Ristelä, 2003). Therefore, they have to gain control over their own actions and the consequences of their actions in each experience, to develop intelligent habits of action which become embodied or integrated into their biography, resulting in a more experienced learner (Jarvis, 2012; Kivinen & Ristelä, 2003).

4.4.2. Relevance of the pragmatist paradigm to the study

As already mentioned above, this study adopted a pragmatist paradigm to guide the research process. Although this may seem uncommon for a qualitative study, as by convention certain paradigms are associated with certain methods, "there is no deterministic link that forces the use of a particular paradigm with a particular set of methods" (Morgan, 2014, p. 1045). This means that pragmatism is not exclusively appropriate for mixed-methods approaches (as it is commonly used) but is amenable to any approach (Biesta & Burbules, 2003; Määttänen, 2015; Morgan, 2014). As a cardinal rule, the use of any methodology must, of necessity, be suitable for the nature of the phenomenon under study and the questions that can be asked and answered by its use in entrepreneurship research (Leitch et al., 2010). Kyrö (2008) emphasises the need for a paradigm that is rooted in the ontological and epistemological foundations of entrepreneurial learning as characterized by whole-person view of the learner, social interaction, action orientation, and embeddedness of learning in a complex and dynamically changing environment.

First and foremost, pragmatism and phenomenology have a dialectical relationship and have been feeding off each other for many years (Baert, 2016; Gallagher, 2022). Pragmatist philosophy complements phenomenology and links well with the purpose of this study, since it is useful for investigating lived experiences and providing rich and detailed descriptions of a phenomenon. This aligns well with the goal of the current study, which is to provide a rich and in-depth description and interpretation of learner entrepreneurs' subjective experiences in their engagement with MEPs. Secondly, the pragmatist paradigm is a suitable philosophy for researching entrepreneurship education because it is predicated on a process world ontology that appreciates

the fluid and constantly changing nature of entrepreneurship as practised in an unstable environment characterised by uncertainty, ambiguity, risk, loss and success (Hjorth et al., 2015; Selden & Fletcher, 2020). Pragmatism combined with phenomenology makes it possible to take into account the processual nature of entrepreneurship in a research approach that is "phenomena-driven, sensitive to the appearing and re-appearing of events woven with actions, material things, structures and values that cohere in patterns of directionality" (Hjorth et al., 2015, p. 600). This life-world ontology of pragmatism that accepts as a given the embodied, emotional, enactive, social and contextual nature of human experience is suitable for this study, because it is founded on a life-world ontology and examines the phenomenon under study in authentic and social contexts (Leitch et al., 2010).

As mentioned above, epistemologically, pragmatism assumes that people create knowledge through experience under certain contexts situated in the transactive interaction between the social actors and the environments (Biesta & Burbules, 2003). This view of knowledge development is relevant for researching entrepreneurial and reflective learning in the MEP, as it is pedagogical approach that is experience-based and action-oriented, involving intersubjective, active, adaptive and adjustive interaction with the learning environment. Another key tenet of this paradigm is the appreciation of the role of social interaction in the creation of meaning, something which has been neglected in many studies in entrepreneurship education, as they mostly assume an individualistic approach to learning (Higgins et al., 2013; Morgan, 2014). The mini-enterprise approach as a team project inherently makes use of the social aspects for the learning of entrepreneurship.

Instead of aligning with objectivism or subjectivism, pragmatism pitches its tent at the centre of this continuum (Biesta & Burbules, 2003; Maarouf, 2019), opting for the term intersubjectivity instead (Biesta & Burbules, 2003). Maarouf (2019), using the cycle of reality, argues that there is one reality but different acting or knowing agents may have multiple perceptions of this reality. He further argues that reality is context-dependent, and as contexts change so too do the formations of multiple realities from the multiple contexts. Based on the cycle of reality, acting agents perceive reality from different perceptions; these perceptions influence their actions, and the actions create new contexts which result in new realities. In a social setting, where people work collaboratively towards a shared goal, their individual perceptions, perspectives, and behaviours are merged, making a coordinated response realisable and transforming their individual worlds into a shared and co-created intersubjective world (Biesta & Burbules, 2003). Consequently, pragmatism can arguably be concluded to be relativistic ontologically and naturalistic

methodologically. A relativistic ontology implies that there are many diverse realities of understanding and interpreting what is being studied, whereas naturalist methodology has to do with data collection "through interviews, discourses, text messages and reflective sessions, with the researcher acting as a participant observer" (Kivunja & Kuyini, 2017, p. 33) in the setting where the phenomenon under study is examined.

Drawing from this, I attempted to bring forth the multiple perspectives of learners' intersubjective experiences by generating data using different complementary methods and strategies at different junior secondary schools, the natural sites where the MEPs take place. This is in line with the nature of qualitative research, which is generally conducted from an emic (insider) perspective) through direct involvement, collaboration and interaction with respondents (Terrell, 2015). Lastly, qualitative research requires a balanced axiology by fairly and accurately representing the views of the participants in line with expected ethical considerations for reporting research findings (Creswell, 2012; Kivunja & Kuyini, 2017). Hlady-Rispal and Jouison-Laffitte (2014) observe that the philosophical orientations (in terms of ontology and epistemology) of a researcher in entrepreneurship influence the qualitative methodological approaches, which in turn result in specific research designs befitting each study. Based on the philosophical orientations discussed here, the section below describes the research design driving this study.

4.5. Research design

4.5.1. Hermeneutic phenomenological case study design

This qualitative interpretivist study adopts a hermeneutic phenomenological case study research design. This is a merger of hermeneutic phenomenology and case study design, such mergers being allowable in research (Dibley et al., 2020; Merriam & Tisdell, 2016). Phenomenological case studies have been used successfully in various studies in both entrepreneurship and education (Crawford, 2016; Kovacev, 2008; Sumsion, 2002). Van Manen (2016) defines phenomenology as "the study of the lifeworld – the world as we immediately experience it pre-reflectively rather than as we conceptualize, categorize, or reflect on it" (p. 9). It is also defined as "the study of experience, particularly as it is lived and as it is structured through consciousness" (Henriksson & Friesen, 2012, p. 1). The authors explain that experience in this context should be understood to refer to something that participants undergo. From a phenomenological perspective, consciousness provides us with access to the world of experience as well as the means through which we relate to

the world (Van Manen, 2016). This implies that everything that people come to know is unwittingly presented and grasped by consciousness, and everything outside of consciousness falls outside the ambit of possible lived experience (Van Manen, 2014, 2016).

Hermeneutic phenomenology focuses more on studying subjective experience and its associated meanings from the perspective of individuals or groups (Friesen et al., 2012; Kafle, 2011). Van Manen (1997/2016) explains that its main objective is to obtain a deeper understanding of the essence or meaning of people's common lived experiences. Hermeneutic phenomenological researchers are in unison that their main concern is to go back to embodied, experiential meanings of an experience (Finlay, 2012). Consequently, hermeneutic phenomenology, drawing from its founding theorist Heidegger, studies lived meanings and tries to describe and interpret them to a greater depth and richness (Van Manen, 2016). Finlay (2012) argues that descriptions of participants' lived experiences should be viewed in the context of their life situations, while interpretation occurs as the researcher attempts to make sense of data through the lens of their subjective experiences, prior understandings, history, socio-cultural background and the product of co-creation by the researcher and participants. Hermeneutic phenomenology was appealing to this study because it allowed me to provide detailed and rich descriptions and personal meanings developed from the mini-enterprise experience by Business Studies learners who participated in the MEPs (Dibley et al., 2020; Peoples, 2021; Terrell, 2015). In addition, it not only gave me the opportunity to describe learners' experiences of learning in this context, but also to interpret them in the light of research-informed understanding and experience (Finlay, 2012; Van Manen, 2016). According to Crawford (2016), when a phenomenological approach is combined with the case study design, it enables understanding of complex human experiences and the essential meaning structures of the phenomenon being investigated.

Case study design entails the development of a detailed description and analysis of a bounded social phenomenon (single case) or multiple bounded phenomena (several cases), and this may include a school, a business organisation, a social unit, or a process (Bloomberg & Volpe, 2012). Two major distinctive features of case study that differentiates it from other qualitative research designs are the unit of analysis and system set within boundaries of time (Roestenburg et al., 2021). The nature of a case study with its focus on a single unit of analysis or case in a real-life context is what gives it its strategic value. At the heart of case study approach is a bounded system over time that provides a detailed description of settings, contextual conditions and participants that are important to the phenomenon that is being studied using in-depth data collection methods and

several data sources (Bloomberg & Volpe, 2012; Roestenburg et al., 2021). To produce a detailed description and analysis of the phenomenon, case studies are generally extensive, and employ multiple methods of data collection, such as interviews, focus groups, observation, surveys and critical incidents or reflective logs. In addition, case study methodology involves analysis of data for themes, patterns, and issues. Thematic analysis of data is mainly for purposes of providing rich descriptions of the case in order to understand its complexity rather than to generalise findings to outside of the study.

Examples of different types of case studies include descriptive case study, normative case study, and interpretive case study, to mention but a few (Roestenburg et al., 2021; Schwandt & Gates, 2018). This study employed a case study approach that is rooted in the hermeneutic strand (Thacher, 2006) – hence a hermeneutic phenomenological case study design. Hermeneutic phenomenological case study research aids in understanding participants' subjective lived experiences situated in the real-world contexts. It is centred on studying things at their most concrete level, especially "the meaningful ways in which they are experienced, made sense of and in everyday life" (Berglund, 2007, p. 75). The basic method of phenomenology entails assuming a certain attitude (phenomenological attitude) and paying particular attention to the concrete ways in which the phenomena are lived instead of how they are represented, conceptualised, or theorised and taken for granted (Vagle, 2018; Van Manen, 2014). Applied to entrepreneurship education, this means our interest is not in how the mini-enterprise experience is conceptualised, theorised, and expected to elicit entrepreneurial learning, but what learners are experiencing and the meanings they make of their experience at the most concrete level, to give us the originary essence of the experience. This concept of studying human experiences in their most natural settings and context in which they occur is captured in the phrase "returning things to themselves" (Berglund, 2007; Kakkori, 2009). Therefore, phenomenology seeks to describe things as they are experienced by an individual or the experiences derived from phenomena of interest, their essences and underlying reasons (Cope, 2005b). In this sense, hermeneutic phenomenology is both deeply descriptive and interpretive, striving to get to the essence and/or meaning structures of the experience (Vagle, 2018; Van Manen, 2014).

According to Roestenburg et al. (2021), hermeneutic case studies "aim[s] to understand the larger phenomenon through the analysis of a specific case and to, as a in qualitative research generally, follow an inductive approach focusing on the particular to understand the whole" (p. 304). Bringing this to the current study, it means that although the mini-enterprise experience is

common in Botswana junior secondary schools, a focus on a particular school can shed some light that helps us to understand learning by learners in these settings, albeit not necessarily aiming at generalisations. It involves thick, detailed descriptive and explanatory investigation into events in sophisticated situations as they happen (Roestenburg et al., 2021), thus making it appropriate for researching the MEPs in their natural setting of schools.

In this section I have discussed the nature of the hermeneutic phenomenological case study. I have attempted to, in a brief and concise manner, demonstrate that although hermeneutic phenomenology and case study design are different, they can be synergistically merged to draw from their strengths and undertake a study in entrepreneurship education that may result in the development of knowledge, models and theories on entrepreneurial learning. In the following section I provide a discussion of the why the hermeneutic phenomenological study approach that I have chosen to use in this study is appropriate. I provide its definition, theoretical underpinnings, and justification of its relevance to studying entrepreneurial learning in the mini-enterprise experience.

4.5.2. Appropriateness of hermeneutic phenomenological case study design

The hermeneutic phenomenological case study was chosen for this study because due to the COVID-19 pandemic schools were experiencing challenges with the practicality of running mini-enterprises in schools while ensuring that learners were protected from the spread of the virus. Consequently, this situation made it impossible to generate data during the pandemic from different focus groups at the schools I had initially intended to collect data from as they operated their enterprises. Immediately after the pandemic the situation was not helped by the decision of the Botswana Examinations Council to temporarily suspend the practical aspect of Business Studies (which is the MEP or Paper 3) examination for the year 2022, replacing it with an alternative written paper. As a result, I narrowed down my study to three schools that were willing to participate in the study and pursued it through the case study approach. Notwithstanding the suspension of the project, school-based entrepreneurship programmes remain popular globally and have been used a great deal in Botswana, so the hermeneutic case study promised to provide a slice of the reality of learners' experiences and to contribute knowledge to the growing discipline of entrepreneurship education.

As an interpretive research design, the hermeneutic phenomenological case study was appealing to this study primarily because it allowed focus on in-depth and thick descriptions of learners' experiences (Barrett & Walsham, 2004) and their meaning-making of personal and shared experiences (Dibley et al., 2020; Smith et al., 2009) of running the mini-enterprise business within the school context. Thacher (2006, p. 1632) posits that the aim of a hermeneutic case study is to "illuminate the subjective meaning that people's actions have from them", and this is relevant for exploring the research questions of this study, which focus on learners' experiences. As an experiential and action-oriented approach to learning, the elements of meaning- and sense-making through reflection on experience are presumed essential for learning from experience-based and situated contexts of the entrepreneurial activity (such as the MEPs), and therefore by extension in line with researching entrepreneurial and reflective learning in this context using the interpretive phenomenological case study design. Interpretive case studies have the added advantage of being good for researching questions that have to do with how and why the phenomenon reveals itself in a particular context and contemporary events wherein the researcher has no control over the behaviour of participants (Yin, 2009). As a result, it has the potential to provide explanations because they identify the perspectives and motives that influence people to do things in a particular way, in a sense explaining their behaviour (Schroenn Goebel, 2017; Thacher, 2006). This understanding is important to this study, particularly for the research questions that seek to understand how learners experience reflective and entrepreneurial learning and why they engage in reflection in the mini-enterprise experience in the way they do.

According to Hlady-Rispal and Jouison-Laffitte (2014), the ontological and epistemological philosophy invoked by the investigator informs the qualitative methodological approaches, which in turn influence the choice of a specific research design that fits the problem or phenomenon under investigation. For example, hermeneutic phenomenology rejects Cartesian dualism that gives the mind pre-eminence over the body (Dibley et al., 2020; Finlay, 2012; Smith et al., 2009). This is important to the current study because it takes a holistic approach to entrepreneurial learning. Such an approach includes the participants' lived experiences and embodied knowledge-making that draws from feelings, emotions, social relations and situated contexts in addition to intellect as an integral aspect of reflective learning (Jordi, 2011). The hermeneutic phenomenological case study aligns with the epistemological, ontological, and methodological orientations of the interpretivist paradigm employed in this study (Dibley et al., 2020). This is because it is predicated on an ontological frame that emphasises subjectivism and relativism, the perspective that while affirming the existence of reality as a separate apart of human experience, such reality of the world is always

meaningful to those who experience it (Berglund, 2007). Epistemologically knowledge is created through meaning and sense-making of experience, resulting in a personally unique reality (Dibley et al., 2020; Doolittle & Camp, 1999; Smith et al., 2009).

Researching entrepreneurship education using the hermeneutic case study approach, which is a qualitative research approach, is a departure from the plethora of studies in entrepreneurship that have a positivist leaning. Phenomenology has also been recommended as an appropriate approach for mediating between cognitive and discursive approaches in entrepreneurship, more especially since cognitive studies are mostly dominated by quantitative studies (Berglund, 2007, 2015). A similar trajectory of over-reliance on positivist approaches can also be observed in many psychological and personality trait studies, that have been the focus of entrepreneurship education at the secondary education level (Dinis et al., 2013; Elert et al., 2015; Oosterbeek et al., 2010; Peterman & Kennedy, 2003). As a human science, phenomenology is concerned with returning to "embodied, experiential meanings" and endeavours to unearth fresh, complex, rich descriptions of a phenomenon as it is concretely lived (Finlay, 2009; Smith et al., 2009). This makes it helpful to answer certain questions about subjective experiences in the MEPs, which would otherwise not be efficaciously addressed through other research methods, especially positivist or quantitatively grounded ones. In addition, the in-depth and rich description of the lived experiences may offer valuable nuances and criticisms to existing theories and also inform policy and practice (Berglund, 2015).

Furthermore, phenomenological research questions the way in which people experience the world, with the intent of understanding the world we live in as humanity (Van Manen, 2014, 2016). This perception naturally invokes the principle of intentionality and our inseparable connectedness from the world we live in. Entrepreneurship is "deeply rooted in the practice of everyday life", and as such learner entrepreneurs exist in a such a life-world where emotion, social feelings and human interactions are inextricably interwoven with their daily lived experiences (Higgins et al., 2013, p. 140). Berglund (2015) argues that phenomenological methods have great potential in researching entrepreneurial risk-taking and learning from failure, all of which involve issues that are deeply personal, emotional, and social in nature. Besides investigating and exploring experiences related to theoretical constructs such as risk and entrepreneurial opportunities, phenomenology can also be used to study experiences and strategies related to different situations in the entrepreneurial experience, such as setting up a new business or soliciting funding (Berglund, 2007). The mini-enterprise experience as an experiential phenomenon that simulates entrepreneurship in the real-

world potentially shares these attributes of lived experience, which can be investigated more meaningfully phenomenologically. As a study of lived experience, phenomenology is helpful for gaining an in-depth understanding of the nature and meaning of the mini-enterprise experience pre-reflectively and reflectively to learners.

Finally, interpretive case studies are multilayered, holistic, descriptive, explanatory and inductive, consisting of different interrelated parts that are joined by multiple interconnections that have a bearing on the case (Roestenburg et al., 2021; Rossman & Rallis, 2017). This means that the case can be understood by studying the interactions between the individual participants and interpersonal relationships (micro), and their social networks or school (meso) that link them to the whole community (the macro) (Roestenburg et al., 2021; Schwandt & Gates, 2018). Thus, interpretive case studies describe and explain the interrelationships between parts of the whole and larger structures and processes; related cases; the micro and the macro; and the present, the past and the future within a holistic framework of scientific knowledge (Roestenburg et al., 2021). This interconnectedness among the different parts brings together the theoretical and conceptual framework, existing knowledge, experience, and empirical evidence to develop typologies, models, and theories about the phenomena under investigation (Roestenburg et al., 2021), in this case reflective and entrepreneurial learning in the mini-enterprise experience.

4.5.3. Case study context and settings

It is the nature of qualitative research as a naturalist inquiry to be heavily influenced by the context or settings of participants or research sites (Creswell & Poth, 2016). This implies that the study is heavily influenced by the context or setting of participants or research sites, and researchers are consequently bound to situate "the study and findings as a whole within the social and cultural contexts" (Armstrong, 2010, p. 882). Due to the situatedness and undercurrent influence of the societal and cultural contexts or settings, the investigator is behoved to invest effort in trying to comprehend contextual factors and how they influence the experiences of participants in the research. According to Maxwell (2013, as cited in Creswell & Poth, 2016), understanding contexts helps the investigator to correctly interpret findings in the light of how events, experiences and meaning may have been strongly influenced by the unique circumstances in which they take place. As a naturalist inquiry, qualitative research involves collection of data in a natural setting, that is,

in the location where participants experience the phenomenon, problem or issue under investigation (Creswell & Poth, 2016; Denzin & Lincoln, 1994).

Drawing from this understanding, the setting of the study includes three junior secondary schools in Gaborone, the capital city of Botswana. Located in the South-eastern part of Botswana, Gaborone has a multi-culturally diverse population of over 200 000 people and many commercial activities that can support the MEPs and give learners exposure to the world of business. I chose three public junior secondary schools, School A, School B, and School C, because they offer Business Studies in their curriculum from Form 1 to Form 3, and include the use of MEPs as a vehicle for teaching entrepreneurship and as a part of practical continuous assessment. School A is located in a suburban area and among the best performing schools, while School B and School C are located closer to areas that house learners from mostly middle- to low-income families. Together these varied schools represent all types of learners from affluent or not so affluent backgrounds yet sharing the same experiences and willing to participate in the study. Since I could not collect data from learners operating mini-enterprises due to COVID-19 complications, the schools in Gaborone made it relatively easy to collect data from former Business Studies learners who had taken part in the MEP within the last five years at the schools represented in the study, and who reside in the city of Gaborone.

4.5.4. Selection of study participants

Initially I had chosen to make use of two cohorts of participants consisting of current Business Studies learners engaged in the MEP and their teachers who are supervising the project. The first cohort of participants was to be made up of five focus groups, each consisting of about 5–12 learners. Each focus group was to represent a mini-enterprise company of Form 3 (Grade 10) learners from at least one junior secondary school that presently and in the past has engaged learning in the running of MEPs. However, since COVID-19 made this option impracticable, this cohort was eliminated. Instead I substituted this cohort with former Business Studies learners who had participated in the MEP in the last five years. The change is qualified by the nature and process of qualitative research as involving an emergent and flexible design (Creswell & Poth, 2016; Merriam & Tisdell, 2016). This implies that the research plan that a researcher begins with is not fixated and uncompromisingly prescriptive, to be followed through without any changes. Quite to the contrary, aspects of the research process may be adjusted or changed when the investigator enters the field

for data generation and collection (Creswell & Poth, 2016). In this regard, the latter cohort consisted of 13 former Business Studies learners who had participated in the mini-enterprise experience in recent years, before the advent of COVID-19 in the same schools. Recruitment of former Business Studies learners entailed chain referrals; potential participants were informed about the aim of the study and that participation is voluntary. Those who agreed to participate were given consent forms to sign before doing so.

The second cohort consisted of Business Studies teachers who have experience in teaching and supervising learners in mini-enterprise companies. Although researching a relatively homogenous group of participants is advisable in phenomenology, especially focusing on those experiencing the phenomenon under investigation under certain circumstances (for instance, when the issue under investigation is less known), it may be useful to use a non-homogenous sample such as learners and teachers to get more than one perspective of the phenomenon (Smith et al., 2009). This is more helpful when researching a less researched phenomenon, such as reflective learning under the circumstances of COVID-19, where the participants could not be researched as they operated the enterprise. Therefore, teacher participants were selected because they have direct experience with the supervision of the MEP, which will help provide data on their first-hand experiences of observing learners as they worked on the MEP over the years. Their wealth of knowledge and insights from this experience of supervision and observation came in handy in triangulating data collected from former learners, and enriched our understanding of the mini-enterprise experience and reflection better than if only one homogenous sample of learners was selected.

The exclusion criteria entailed participants who were not willing to do interviews, especially through an online platform, to allow for observation of COVID-19 health regulations. To recruit participants I explained to teachers and learners what the study was about and the risks and benefits of participating in the study (Dibley et al., 2020). Participants who expressed willingness to participate were given consent and assent forms to be signed and returned within a week.

4.5.5. Sampling method

This hermeneutic study employed a purposive sampling technique for the two cohorts of research participants; for the former learners purposive sampling was coupled with snowball sampling, as

learners were no longer at junior secondary school and not easily accessible. Purposive sampling, which is also known as 'intentional sampling', was used because it involves selecting participants on purpose because they have had some experience in the phenomenon under examination and can potentially provide relevant data to answer the research questions (Dibley et al., 2020; Kafle, 2011; Terrell, 2015). According to Creswell (2012, p. 206) purposive sampling can apply to both research sites and individuals or groups, and the sample is selected on the basis that it is "information rich". Taking a cue from this, in this study I used purposive sampling for both the site and the participants. The schools were selected because they engaged their learners in the MEP experience and participants had experience of participating in MEPs at these schools. Their 'immersion' in the mini-enterprise experience qualified them to be 'information rich' and able to give valid and credible data. To recruit former Business Studies learners who attended the schools used in this study, the snowball or chain referral sampling strategy was used to find learners with past experience in the running of MEPs, as they had since graduated from junior secondary education level. Referrals were obtained from their former teachers and former classmates. Although chain referral sampling can be criticised for resulting in a sample that is very similar, this is not a big problem for hermeneutic research, since what is of paramount importance is immersion in the experience rather than producing generalisable findings (Dibley et al., 2020). In fact, Smith et al. (2009) recommend the use of a homogeneous sample for hermeneutic research unless circumstances dictate otherwise.

4.5.6. Sample size

The sample size of a hermeneutic phenomenological case study, as with other qualitative methodologies, does not need to be representative of the population; qualitative studies by their nature do not pursue generalisability of findings (Dibley et al., 2020). It is also worth noting that hermeneutic phenomenological research is not very prescriptive regarding sample size. To determine the appropriate sample size for this study, I used Dibley et al.'s (2020) criteria. These criteria involved taking the following into account: the purpose of the study, which is aimed at gaining understanding of the complex meaning-making in the mini-enterprise experience; the nature of the hermeneutic phenomenological case study, in that focus was on learners and teachers within the three selected schools with experience that made them able to provide comprehensive data about the interrelated parts of the MEP (Dibley et al., 2020); use of a small size to generate in-depth and rich data to develop a detailed description and complex interpretation of reflective

learning in the mini-enterprise experience; and the use a smaller sample size due to pursuing an advanced or interpretive method of analysis in this study. Smith et al. (2009, p. 51) argue that the determining factor for sample size should be the researcher's level of "commitment to the use of case study level of analysis and reporting; the richness of the individual cases and the organisational constraints."

Whereas Smith et al. (2009) recommend three to six participants, Alase (2017) recommends a sample size ranging from a minimum of two to 25 participants. Where focus groups are used, a maximum of five per focus group makes it easier for the researcher to adhere to principles of ideography (Githaiga, 2014; Love et al., 2020). This recommendation is based on the fact that focus groups of around 13 members are hard to manage (Githaiga, 2014); smaller groups allow participants more depth in their deliberations (Love et al., 2020). It is also easier to make notes on group dynamics and interactions that facilitate extrapolation of ideographic accounts during data analysis. Therefore, based on these submissions, this study adopted to use 7 participants for the cohort teachers and 13 former Business Studies learners. As mentioned in the section above, the focus groups were dropped and replaced with former learners due to COVID-19-related challenges. Also, the interviews could no longer be face-to-face; they had to be done through online platforms, using Zoom Application to observe the COVID-19 regulations of social distances and also to protect the respondents. Initially, I had intended to collect the data as students operate their projects, and also engage them in reflective writing through an instrument that was developed. Unfortunately, this could not be done because the projects were suspended during the pandemic. Even the written reflections that form the final chapter of the portfolio where learners engage in reflective writing could not be availed since a totally different examination paper was introduced to replace the traditional portfolio.

4.6. Positionality and reflexivity

In this section, due to my engagement as a primary or human instrument who operates from an insider perspective in close collaboration with participants, as well as being responsible for development and administering of data generation instruments (Armstrong, 2010; Bloomberg & Volpe, 2012; Creswell & Poth, 2016; Denzin & Lincoln, 1994; Kothari, 2004; Lincoln et al., 2018; Neergaard & Ulhøi, 2007), I reflect on my positionality. Lincoln and Guba (2000) define reflexivity as the process where the researcher as the human instrument critically reflects on the self. Therefore,

in this process, I carefully examine the multiple identities that define the essence of who I am as a researcher as I engaged with the participants in the field.

Reflexivity consists of the researcher's positional reflexivity and textual reflexivity (Armstrong, 2010). Positional reflexivity demands that the researcher reflects on and tacitly states their background (i.e. past and current experiences, such as work, cultural and other life experiences) and how their personal attributes and privileged position (e.g. power, race, ethnicity, gender, and other salient entangled characteristics) may inform their interaction with participants, interpretation of information, as well as what they will gain from doing the research (Armstrong, 2010; Creswell & Poth, 2016). Regarding positionality, I am a former junior secondary school Business Studies teacher and a Business Education lecturer at the University of Botswana. These experiences have positioned me to have somewhat of an appreciation of the secondary school system in Botswana and the general operation of the mini-enterprise experience. It has made interacting with participants at both junior secondary school and the university easier. However, issues of imbalance of power and bias had the potential to arise as I engaged with participants. To maintain a proper balance of power, I assured participants that I was interested in them and their responses and that there was no right or wrong answer. This was to ensure that participants felt comfortable freely sharing their perspectives during the interviews (Smith et al., 2009).

Textual reflexivity entails self-introspection and critique of the technical language used by a researcher as a professional to represent their interpretations of the social world (Armstrong, 2010; Creswell & Poth, 2016). As a researcher I used common, non-technical, and non-directive language. I also avoided presuming participants' responses, and influencing or leading participants to provide answers that I wanted. In phenomenological research bracketing is one of the means of engaging in textual reflexivity. It stems from recognising the predicament of doing phenomenological inquiry, in that the research often has a wealth of common sense pre-understandings, assumptions and scientific knowledge from the literature that predispose how the phenomenon will be interpreted before getting to the roots of the research questions regarding the phenomenon (Van Manen, 2016). Therefore, Van Manen (2016) recommends that the researcher's "understandings, beliefs, biases, assumptions, presuppositions, and theories" be made explicit and temporarily held at bay to prevent them from unduly influencing interpretations. It must be made clear that what is bracketed is not the interpretations, but the researcher's biases and presuppositions in the data interpretation process (Vagle, 2018).

My position, however, is that drawing from Heidegger and Merleau-Ponty's perspective, hermeneutic phenomenological methodology rejects bracketing and reduction, but rather emphasises interpretation through the hermeneutic circle, involving a dialectical process of questioning prior understanding and comparing the parts and the whole to get to the bottom meaning of the lived experience (Finlay, 2012; McConnell-Henry et al., 2009; Peoples, 2021; Smith et al., 2009). In this view, the investigator and participants are presumed to always engage in meaning-making through interpretations drawing from a hermeneutic circle of interpretations of past, present, and future experiences to develop understanding. Therefore, I used a journal of field notes to reflect on and write down (make explicit) my pre-understandings, presuppositions and prejudices which were potential biases about the mini-enterprise approach as a pedagogical approach, and managed them as the interviews continued through a continuous reflective process (Dibley et al., 2020). This helped fortify the rigour of the study by ensuring that the voices of participants were prioritised and that preconceived ideas and interpretations did not overshadow new and unexpected findings. I took deliberate steps to transcribe data captured from participants verbatim to ensure a faithful representation of the ideas captured. Using the hermeneutic circle, data was analysed for themes, meticulously comparing the parts and whole of transcripts to ensure that interpretations were true reflections of participants' responses (Dibley et al., 2020; Smith et al., 2009).

4.7. Data generation methods and instruments

To ensure that I generate valid, rigorous, trustworthy, and dependable data, I took a cue from Yin's (2009) criteria for data collection and analysis in case study research methodology. Yin (2009) suggests four guiding principles for developing collection instruments and implementing effective and rigorous data collection processes. These criteria include: (1) the citation of specific, sufficient, and relevant academic publications; (2) actual artefacts and explanation of the data generation and collection process followed; (3) demonstration of faithfully observing the procedures as demanded by the protocol; and (4) a close alignment between research questions and the content of the data generation process. Fidelity to these criteria enables readers to navigate the case study in a manner that is easier to follow, and also providing citations on the methodology ensures that the data generation and analysis process is evidence-based (Crawford, 2016; Yin, 2009), hence strengthening the rigour, trustworthiness and confirmability of the study.

4.7.1. Data generation instruments

Individual phenomenological interviews: To generate data I used semi-structured to non-structured interviews for the teachers' cohort and former Business Studies learners' cohort, in line with the phenomenological interview (Berglund, 2007; Dibley et al., 2020; Moules et al., 2015; Peoples, 2021). The individual interviews for both learner respondents and teacher respondents were chosen due to their potential to stimulate a dialogue that would allow the respondents to freely open up about their experiences and also bring out new information that may not have been expected by the researcher (Berglund, 2007; Cope, 2005a; Thompson et al., 1989). The semi-structured aspect had the benefit of allowing me to ask more specific and pointed questions that spoke directly to the research questions, and allowed participants to be free "to discuss other information that may end up being relevant to the study" (Peoples, 2021, p. 52), consequently creating a balance in the interview process and data generated.

***Table 1**: Study design and data generation process*

STAGES	RESEARCH QUESTION	DATA SOURCE	INSTRUMENTS
Stage 1	Stakeholder engagement and orientation	School head, teachers, learners	Gatekeeper letters (from Ministry of Basic Education, regional office) and cons`ent forms.
Data generation reflection in the duration of production period			
Stage 2	1. What are the learners' experiences of reflective practices in entrepreneurial learning through the mini-enterprise projects?	Former learners, and teachers	Individual learner interviews
	2. How do learners engage in such practices?	Former learners, , and teachers	Teacher interviews and individual learner interviews
	3. What role do teachers play regarding learners' reflection of their learning in the mini-enterprise projects?	Former learners and teachers	Teacher interviews, individual learner interviews.
	4. Why does reflective practice in entrepreneurial learning happen this way in the mini-enterprise experience?	Former learners and teachers	Teacher and learner interviews.

This study was conducted in the era of the COVID-19 pandemic, an airborne and highly infectious disease. With that in mind, the data generation methods and strategies were also intended to ensure safety or less risk for both the participants and the researcher. Owing to this predicament, the interviews were conducted and recorded using the Zoom app. The researcher also took notes during the interview process to capture participants' responses and emotions and other salient observations that could help interpret and understand the data meaningfully.

4.7.2. Pilot study

A pilot study was conducted, using the guiding interview questions on a purposive sample of two former Business Studies learners and one Business Studies teacher to test and refine the schedule as necessary before undertaking the full research study (Dibley et al., 2020). This process allowed for assessment of the interview questions for validity and to check if the language of the items was accessible to participants so that they would be in a position to give relevant answers. In addition, the pilot also helped to determine whether questions were framed properly in line with the hermeneutic phenomenological interview, which uses conversational and reflective questions that can elicit the narration of a story or experience as opposed to focusing on participants giving explanations of opinions (Dibley et al., 2020; Peoples, 2021). The pilot process showed that the interview instruments were good enough overall to generate sufficient data to answer the research questions of the study, except for a few questions that needed to be rephrased for better clarity.

4.7.3. Data generation procedures

After conducting the pilot study and refining the interview questions as needed, I engaged in the process of recruiting participants using chain referrals where applicable. The participants were given consent forms to read and sign. The researcher explained to them their rights and expectations when they accepted the responsibility of participating in the study. The signed consent and assent form were expected to be returned in a week. Data generation through data generation instruments could commence after collection of the consent and assent forms from participants.

It is worth noting that because data was preliminarily analysed as it was collected, before engaging in in-depth analysis, I kept a journal where I recorded my pre-understandings and biases about the mini-enterprise experience, so that I am transparent about them and revise them as I analyse the data (Peoples, 2021). The journal facilitated keeping track of the revisions in my thinking about reflective and entrepreneurial learning as the data was analysed.

I started first by conducting individual interviews with former Business Studies learners, followed by interviews with the teachers. During the interviews I was careful to follow guidelines for hermeneutic phenomenology and phenomenological interviewing in general (Dibley et al., 2020; Moules et al., 2015; Moustakas, 1994; Peoples, 2021). To ensure that participants responded to questions appropriately, at the beginning of the interview I briefed them on the goal of the interview and requested them to narrate their experience as if they were describing it to someone who does not know anything about the mini-enterprise experience, focusing on peculiar events or incidents that stood out to them as impactful (Moustakas, 1994; Peoples, 2021). I also asked semi-structured to open-ended questions that evoke reflection of the mini-enterprise experience, where meaning is expected to emerge rather than asking about personal views or feelings, while also avoiding leading questions (Dibley et al., 2020; Peoples, 2021).

The interview schedule served more as a guide for a conversational and interactive engagement between the researcher and participants, rather than as an instrument that had to be followed religiously (Dibley et al., 2020; Moustakas, 1994). Therefore, in some instances some of the questions were slightly "varied, altered or not used at all" (Moustakas, 1994, p. 114) during the process of an interview. I also practised active listening so that I could refer the interviewee back to something of importance they had previously mentioned or prompt and probe them for deeper meaning if need be (Dibley et al., 2020; Peoples, 2021). Dibley et al. (2020, p. 100) note that it is methodologically appropriate in hermeneutic phenomenological interview to "bring something into the subsequent interview that participants in previous interviews have addressed." That is, the investigator is at liberty to ask the current interviewee to relate something that might be meaningful from the data generated from other previously interviewed participants to their own experience (Dibley et al., 2020). Since hermeneutic phenomenology emphasises co-constitution instead of member checking to confirm the data, I used the clarifying and follow-up paraphrasing technique, albeit being cautious not to lead participants, to verify participants' ideas during the interview sessions (Dibley et al., 2020; Moules et al., 2015). It is important that a phenomenological interview takes a natural, conversational flow, so I used prompts and incomplete sentences to help the interviewees to focus on pertinent issues and create a comfortable atmosphere that made it easy for them to express themselves fully.

Data was generated until I was satisfied that depth, richness, comprehensiveness, and completeness had been reached and was sufficient to answer the research questions satisfactorily

in consistency with hermeneutic philosophy (Dibley et al., 2020; Ironside, 2003). Although the term data saturation is commonly used in qualitative research, including by some in hermeneutic phenomenological studies, Dibley et al. (2020) argue that data saturation is impossible to achieve in hermeneutic phenomenological research. Their justification for this assertion is that: (1) research subjects may not have experienced everything possible to experience relevant to the study; (2) participants may voluntarily reserve to themselves aspects of the experience; and (3) lastly, rather than focusing on absoluteness and definitive description of the experience for everyone, hermeneutic research focuses on things of interest about the phenomenon, which when grouped together contribute to the whole, that gives a more comprehensive and complete picture of an experience that far exceeds its parts in richness. It is in this spirit that follow-up interviews could be conducted, if need be, to fill gaps in the data and clear misunderstandings where deemed necessary (Peoples, 2021).

4.8. Data analysis

After the process of data generation was completed, I undertook the process of engaging in in-depth analysis of the data. Data was analysed qualitatively to develop themes that would result in interpretations, as is the nature of hermeneutic research (Moules et al., 2015). The data analysis process employed in this study was divided into two main focus areas: the individual interviews for former learners and for teachers of Business Studies. It is worth noting that the broader process of analysis followed similar steps as all the data involved individual interviews. Hermeneutic research is not prescriptive on the approach to analysing data, even though different phenomenological methodologies may have guidelines on how they approach data analysis (Kafle, 2011). What is recommended in the analytic process is rather the demonstration of "commitment to an abiding concern, oriented stance towards the question, investigating the experience as it is lived, describing the phenomenon through writing and rewriting, and consideration of parts and whole" (Kafle, 2011, p. 191). In this study I used the broader structure of Creswell and Poth's (2016) data analysis spiral and infused it with ideas from hermeneutic research literature so that it is more aligned with the interpretive phenomenological case study approach.

4.8.1. Data analysis for individual learner and teacher interviews

This section enunciates the steps I followed in the process of data analysis for both the former learners of Business Studies who were interviewed individually and teachers of Business Studies

in various junior secondary schools in Gaborone. I analysed the data from the former learners first then proceeded to analyse the data collected from the teachers' interviews.

Step 1: Preparing and reading transcripts (immersion into the data)

In this first step, I immersed myself into the data by first listening to the audio recordings of the interviews and transcribing verbatim the data generated (Dibley et al., 2020; Love et al., 2020) that was produced through the Zoom interviews. I used the help of a transcribing software, Otter.ai, where I downloaded the audio recordings from my Zoom account and uploaded them into the transcribing software. This software was not perfect, so I downloaded the transcripts of each respondent, and listened to the audio while simultaneously correcting mistakes in the software application-generated transcription. In this process I edited the transcripts to clean them, to remove spelling mistakes and note areas where the voice was inaudible. Some participants used code switching, mixing Setswana and English, so I also translated the parts that were in Setswana to English for language uniformity and easy analysis. The date, time and participant identifier were recorded on the first page and followed by a word-for-word transcription process. In this process, speech filters, mood, pauses, laughter and others were noted with the aid of punctuation marks (Dibley et al., 2020). Each teacher was assigned a random psuedonymwhile for learners a random code name consisting of three letters to maintain their anonymity.

Step 2: Reading and coding emergent ideas

After completing the transcription process, I read each transcript at least twice to familiarise myself with the data and identified or noted significant lived experiences and relationships that have phenomenological relevance to participants (Love et al., 2020). I then transferred the transcripts to a multiple-column spreadsheet. In the first column I put the verbatim transcript, in the second column I noted emerging ideas, and I made some comments in the third or last column to help me in the exploratory examination of the participant's semantic content and use of language or style of responses, in order to understand the ways in which the participant thinks about, understands and talks about reflection in the MEP (Dibley et al., 2020; Smith et al., 2009). Statements that stood out as important and/or memorable were underlined or highlighted, and simple explanations were noted in the adjacent column to the right.

In this process my main goal was to come up with notes and comments that describe things that matter most to the participant as they were involved in the mini-enterprise experience, and the meanings they attach to those objects (e.g. relationships, critical incidents or emotional events,

processes, values, etc.). The notes and comments were then classified into three main categories or types. These were: descriptive comments that are concerned with the content of what participants shared regarding the mini-enterprise experience, that is, "using assumptions, acronyms, figures of speech, and emotional responses to pick significant lived experiences and relationships" (Love et al., 2020 p. 5); linguistic comments focusing on the subject's use of language (e.g. pause, laughter, tone, speech filters, degree of articulation, etc.); and lastly conceptual comments which deal with the researcher's engagement with the transcripts by questioning what a participant means at a more interpretive level (Beck, 2023; Love et al., 2020; Smith et al., 2009).

Step 3: Developing interpretive summaries of emergent themes

During this stage I analysed the exploratory comments made in the previous step to determine emergent themes. This process involved trying to cut down the volume of detail resulting from transcripts of participants' interviews and the researcher's comments, while concurrently maintaining the complexity of the data by creating a conceptual map of the interrelationships, connections and patterns between the exploratory comments (Smith et al., 2009). This involved working solely with the exploratory notes with a focus on specific chunks of the transcripts, not the whole. This process involved fragmentation of the narrative to reorganise the data (Beck, 2023), which resulted in an interpretive summary of themes or what is important and requiring careful consideration for each interview (Beck, 2023; Dibley et al., 2020). I employed the hermeneutic circle, wherein the parts of a transcript were interpreted in relation to the whole and the whole interpreted in relation to the parts in a back-and-forth process, searching for similarities or dissonances and that which stood out as thought-provoking and unexpected within an interview or across several interviews, with a possibility of leading to new understanding (Dibley et al., 2020; Moules et al., 2015). I also went back to reread the theories (Heidegger and Merleau-Ponty) together with the literature invoked in the study to enrich insights and make sense of what the data could mean. Whereas it is important to see if data resonates with my fore structures and prejudices, I tried my best to ensure that the iterative process reflected the participants' experiences of the MEP experience, to stay true to the tenets of hermeneutic phenomenology and the participants' responses or voices.

Step 4: Developing and assessing interpretations

At this stage the set of emergent themes generated in the previous step for each transcript were organised according to the sequence they present themselves in. The themes were organised into "larger units of abstraction" to facilitate drawing meaning from the data (Creswell & Poth,

2016). Moules et al. (2015) warn that thematic reductionism as the ultimate goal of analysis is antithetical to the tenets of hermeneutics, and should be resisted. As a result, I took themes that emerged not as an end in themselves but as a tool to facilitate interpretation. This process of developing meaning, understanding, and interpretation was done in a non-linear and iterative fashion that involved immersion in and dwelling on the data, while my thoughts or mind oscillated between one part of the data to the other, while simultaneously making connections through and between the participants' voices (Moules et al., 2015). Furthermore, interpretations were based on expert insights and hunches of the researcher, or in the light of the literature reviewed (Creswell & Poth, 2016) or a "fusion of horizons" where the horizons of the researcher and research subjects' understanding were connected to develop a sustainable interpretation of shared meaning (Dibley et al., 2020). This process aligns with Dibley et al.'s (2020) metaphor of "bubbling up" or a pot of stew slowly simmering on the stove to describe the hermeneutic stance that the researcher assumes by repetitive reading and meditatively reflecting on the research material, allowing novel ideas and insights to be generated and questions to arise to allow concealed or taken-for-granted findings to be revealed.

While engaging with the data, as the researcher I tried to be open to alternative understandings that could potentially challenge my interpretations in using the lens of data, literature and the theoretical framework (Creswell & Poth, 2016). Dibley et al. (2020) further submit that the process of interpretation involves deconstruction of data to develop new meaning. Deconstruction in this context entails questioning conventional assumptions and beliefs rather than taking them as incontrovertible truths. In the interpretive process, Grbich (2013, as cited in Creswell & Poth, 2016) advises researchers to ask themselves questions that lead to unearthing information that is unexpected, surprising, and conceptually interesting to participants, as well as dominant interpretations and dissonant perspectives. Reflecting on the embodiment of the mini-enterprise experience and the institutional curriculum guiding it and teachers' practices in supervising the MEP and facilitating reflection allowed me to take a critical look at current practices, and unearthed disconcerting findings about the MEP, especially how the prevailing circumstances impede reflective learning and learning in general.

In addition to pondering and asking questions of meaning, analysis and interpretation connects the researcher with the stories of lived experiences, and the data should also be read along the interpretive prism of the underpinning philosophy or theoretical framework to unearth hidden meaning and understanding of the significant aspects (Creswell & Poth, 2016; Dibley et al., 2020)

of the mini-enterprise experience. At the end of the analysis, I wrote a presentation and discussion of findings (in Chapters Five, Six, and Seven respectively) that provide interpretations for the audience to easily recognise common meanings, understandings and conclusions supported by verbatim quotes representing the participants' voices. These excerpts from the data lend rigour and credence to the authenticity of the interpretations made about participants' experiences of the MEPs, consequently making the findings more comprehensible and plausible to the research audience (Dibley et al., 2020; Moules et al., 2015). This allows readers to decide for themselves the extent to which novel meanings are applicable and transferable.

4.8.2. Tying it together: Looking for patterns across data sets

This stage entailed engaging in a creative process of converging data from across all the key sources used in the study (that is, individual teacher interviews and interviews with former Business Studies learners). In this process I collated the themes which were most potent and analysed how each theme in one narrative or transcript helps in shedding some light on a different narrative. In some cases this required renaming or reconfiguring some of the themes (Beck, 2023) to reduce redundancy or unnecessary duplication. In addition, Beck (2023, p. 96) points out that this is a more theoretical stage of analysis, where the researcher starts to "explain that themes or superordinate themes are specific to individual narratives but also represent higher-order concepts" which are shared across the data sources. This process of analysis also involved going back to the theoretical frame and the literature to develop an understanding and interpretations of the data. The analysed and interpreted data or findings were aligned with the research questions of the current study. Lastly, the findings were then represented through verbatim quotations representing participants' voices, tables and graphically in a visual map of connections of themes and how they fit together.

4.9. Data management and disposal

As a researcher, I bear the responsibility for developing and maintaining a filing system for the study, especially emanating from the data generation process. These documents include transcriptions of interviews for both learners and teachers and related field notes. The electronic resources (including digital audio files and documents) were saved in a laptop and Microsoft OneDrive, which were used for capturing, and storing data, protected with an encrypted password. For back-up purposes, the electronic captured data was also saved in an external hard drive which is secured with a password. The data will be kept for a period of five years before disposal by

shredding and deletion in accordance with UKZN Research Policy V - Research Ethics C0/062906/07.

4.10. Ethical considerations

Axiology is one of the major components of research in any research paradigm and speaks to the researcher's beliefs about issues of ethics and moral values (Terrell, 2015). Creswell and Poth (2016) have identified the following three areas that guide ethical research: respect for persons (involving issues of privacy and consent); concern for welfare (protecting participants and minimising possible risks of harm); and justice through fair treatment and inclusivity. In line with the expected high ethical standards and moral values, the researcher sought ethical clearance to conduct the study in line with the university's expectations of research on human subjects. Before undertaking the study, I also requested permission from the Ministry of Education and Skills Development in Botswana at the regional office that oversees Basic Education Schools in the South-eastern region to which schools in Gaborone belong. I also obtained consent from the schools concerned to undertake research in their premises and with members of their school community.

Drawing on the principles of respect for participants and justice, at the beginning of the study when recruiting participants I explained the purpose of the study to them, including both possible risks and benefits that could result from taking part in the study. I also pointed out to them that participation is voluntary and that they are allowed to quit at any time without risk of punishment if they are not comfortable at any point in the study (Kafle, 2011). Participants were included in the study on the basis of having relevant experience of involvement in the mini-enterprise experience, willingness to share their experiences, and non-discriminating inclusion criteria (Dibley et al., 2020). Following this I gave the teachers and former Business Studies learners' informed consent forms to read overnight and sign (Creswell & Poth, 2016; Kafle, 2011). Informed assent forms were also developed and ready for distribution to participants who potentially could be minors. In addition, informed consent and permission were prepared to be given to parents or guardians of participants falling into this category, to allow learners under their care to participate in the study.

In the data generation phase I explained potential disruptions that might come with participating in the study. For example, I explained frankly and truthfully to participants upfront that participating in an interview requires time, and this might add a burden or some inconvenience

to their busy schedules. During interviews I avoided asking leading questions and gave assurance of maintaining their anonymity and keeping sensitive information confidential (Creswell & Poth, 2016). This study was undertaken during the COVID-19 pandemic era, and therefore, in line with the principle of concern for the welfare of participants, COVID-19 protocols and protective measures were observed to protect subjects from infection and spread of the virus. To do this, interviews were conducted via the Zoom app to minimise face-to-face interaction. Where it was impracticable to use the Zoom platform, like in the case where one of the former learners lost their phone, we had a face-to-face meeting with face masks on, sanitised our hands and practised social distancing in sitting for the interview session. The same was done when consent forms were exchanged. Furthermore, observing a balanced axiology, I have to the best of my ability ensured that the findings of this study are reported in such a way that they fairly and accurately represent the ideas of the participants. Triangulation, use of the hermeneutic circle, reflexivity through journaling and co-constitution were employed to enhance a balanced axiology, authenticity, and trustworthiness of reported findings (Creswell, 2012; Dibley et al., 2020; Moules et al., 2015; Peoples, 2021).

4.11. Credibility and trustworthiness

The terms credibility and trustworthiness are chosen for this study to represent concepts of validity and reliability. This is because the terms validity, reliability and bias bear undertones of positivist or quantitative research (Cypress, 2017; Dibley et al., 2020; Morse, 2015). Hlady-Rispal and Jouison-Laffitte (2014, p. 608) argue that on the premise that the main ontological assumption of constructivism "is that only the (subjective) experience is knowable", terms such as bias, reliability and validity are discouraged in interpretivist research, since they connote the existence of objective and external reality. Hlady-Rispal and Jouison-Laffitte (2014) also contend that "bias" describes the sense of distortion caused by influences resulting from interaction between the investigator and participants. This can only occur where the existence of objective social reality is assumed possible. Although these terms are used in qualitative research by other scholars, their use is discouraged to free qualitative research from the hegemonic grip and standards of positivism (Cypress, 2017; Golafshani, 2003; Leitch et al., 2010) or is a sign of insufficient training (Hlady-Rispal & Jouison-Laffitte, 2014). The former seems plausible, especially for entrepreneurship research where there has been low adoption and regard for qualitative research because it is mistakenly perceived as lacking rigour compared to quantitative research (Hlady-Rispal & Jouison-Laffitte, 2014; Leitch et al., 2010).

Good interpretivist research must demonstrate a high quality that allows its findings to pass tests of rigour, robustness, trustworthiness, dependability, transferability, and confirmability (Golafshani, 2003; Hayashi et al., 2019). Trustworthiness in qualitative research is at the centre of issues that determine the validity and reliability of a study (Golafshani, 2003; Hayashi et al., 2019; Seale, 1999). Cypress (2017) and Dibley et al. (2020) use the term rigour to represent the concepts of validity and reliability in post-positivist research, consisting of trustworthiness, credibility, dependability, confirmability and transferability of a study and its findings. Trustworthiness and transparency form part of all of the stages of a study; therefore a processual approach becomes recommendable for a qualitative study (Hayashi et al., 2019). With specific reference to this study, quality and confirmability were assured by strict adherence to a processual approach that aligns well with the hermeneutic phenomenological case study research methodology. Credibility and trustworthiness of the study were ensured by the use of triangulation, using different data sources (that is, interviews with teachers and former Business Studies learners who have experience in participating in the MEPs). Whereas triangulation provides a dense and comprehensive description of the phenomenon, it also makes it possible to compare and crosscheck data, thus ensuring consistency from the different data sources employed (Hayashi et al., 2019). Notwithstanding, in a constructivist research design investigators focus more on participants' experiences. Consequently, triangulation respects and accepts participants' multiple views for it to demonstrate the existence of multiple realities (Patton, 2002, as cited in Hlady-Rispal & Jouison-Laffitte, 2014). The use of a small purposive sample ensures that this study provides a holistic and detailed description of the mini-enterprise experience, thus providing consumers of the research findings with context which could allow transferability and confirmability to related situations.

Whereas in general qualitative research uses member checks to ensure that participants' ideas and stories are captured accurately during interviews, as a way to demonstrate credibility, confirmability and issues of bias, quite to the contrary hermeneutic research shies away from this, rather opting for reflexivity and co-constitution instead (Dibley et al., 2020; McConnell-Henry et al., 2009; Moules et al., 2015). Dibley et al. (2020) argue that member checking undermines the hermeneutic philosophical fundamental assumption of the interconnectedness between the participants, knowledge, and the world. Secondly, they reason that this research approach does not seek to demonstrate objective truth, but rather pursues the unveiling of "an understanding, given and created uniquely at the moment in time" (p. 146) as participants engage among themselves. In agreement, Moules et al. (2015) argue that the goal of an interpretive study is not faithful and full

descriptions of participants' intact stories, but to listen to gather data that will provide new perspectives and extend our horizons with respect to understanding the phenomenon. For this reason, the resulting interpretations do not need participants' verification or authentication.

With this understanding, in lieu of member checking I used reflexivity and co-constitution during interviews and data analysis. Reflexivity was practised throughout data generation and analysis through meditatively evaluating and documenting my pre-understandings and prejudices in a journal to help enhance confirmability (Moules et al., 2015; Peoples, 2021). In addition, an audit trail and documentation of field notes helps to enhance confirmability. Co-constitution is the inextricable connectedness between an individual and the world, with each being "constructed by and constructing the other", and also the inseparable bond of interpretation between the participants and the researcher (Dibley et al., 2020, p.145). With regard to this study, co-constitution during the interview process entailed asking the interviewees confirmatory questions about a part of their story. Furthermore, during analysis co-constitution manifested itself in the fusion of horizons where interpretation included the participants' voice (verbatim quotations) to create new meaning and understanding that is a product of the researchers' pre-understanding, the literature and participants' stories knitted together (Dibley et al., 2020). This co-constitution established research rigour and minimised the risk of my pre-understanding overshadowing and casting aspersions of negative bias on the findings of this study. Notwithstanding, I would go back to participants to do follow-up interviews to clarify data that was questionable or ask more questions that emanated from new insights developed during data analysis (Moules et al., 2015; Peoples, 2021) regarding participants' experiences with the MEP.

4.12. Limitations of the study

Qualitative studies do not aim for generalisability of findings through use of samples that are representative of the population under study; rather, they focus on a rich and detailed description of findings. The current study is not an exception in this regard, and the small chosen sample of a few former junior secondary school learners and teachers in Botswana will most likely hamper the generalisability of findings. Regardless, using a validation process of triangulation and in-depth, rich and wholistic descriptions which are contextual, and following a deliberate processual phenomenological approach allows for transferability and replicability to similar contexts (Hayashi et al., 2019).

This study focused on individuals' lived experiences and, like any other phenomenological study, as observed by Berglund (2007, p. 88), it may be criticised for "reifying the primacy of individuals in entrepreneurship". Invoking Heidegger, the study looks broadly into the context within which the phenomenon is experienced beyond individual consciousness. It is without doubt and denial nonetheless that the study favours individual accounts, but it is equally worth appreciating that individuals' interpretations are not robbed of their contexts.

The focus on schools in the city limits the findings to be interpreted and applied to similar settings. It may not be generalisable to more rural locations, as the experiences of learners and teachers may be different and are generally less resourced. The study is also limited in the sense that it focuses on lived experiences in the duration of the mini-enterprise experience. It does not give much attention to what happens after the experience in terms of long-term impact, which is the purview of longitudinal studies. Lastly, the study limits itself to the MEPs as operated in Botswana, excluding other entrepreneurship education programmes which may use mini-companies such as clubs. The modalities and structure of the programmes may vary from the MEPs in the Junior Certificate syllabi, thus requiring caution in the use of findings beyond this primary research focus.

Generating data from experiences that had taken place a few years ago was not easy and presents a limitation and the need for caution in the use of the findings of this study. In some instances, learners struggled to recall how things were done. However, although experiences are not identical, the closure of gaps and clarity was made possible by triangulating learners' responses with teachers' responses. Also, brought together, gaps and clarity were closed by other learners' responses. Ordinarily, under phenomenology, respondents are usually those who experienced the phenomenon first-hand. This slight tweak of including teachers as respondents, who have worked with learners over many years and observed their overall experiences, their learning, and their challenges as supervisors who are expected to mediate learning in the MEP, helped create a holistic picture of learners' experiences. Teachers' answers in many instances corroborated the learners' experiences, thus strengthening the dependability of learners' responses even though a period had elapsed since the experience. This presents an opportunity for doing a follow-up study while the MEP is still ongoing or immediately after it has been completed.

Lastly, this study relies mostly on the self-reports or the spoken word generated through interviews. Written sources of reflection would have enhanced the trustworthiness and

dependability of the findings. Unfortunately, the written reports that make up Chapter Four are an exclusive resource of the Botswana Examinations Board and not accessible to the public. As a result, they could not be analysed. However, this limitation did not deal the study a lethal blow, as the overall learners' responses seem to align with those of the teachers. Follow-up studies could engage reflective writing as learners are engaged in the running of the mini-enterprise. These reflective logs could be analysed together with learners' narratives.

4.13. Study timelines

This study was conducted in line with the timelines and milestones presented in the table below.

	DELIVERABLES	DATES/TIMEFRAME ESTIMATES
Proposal development	▪ Write-up and defence ▪ Corrections and final submission of proposal	▪ 03-2019–10-08-2019 ▪ November 2019
Ethical clearance	▪ Application and issuance of ethical approval	▪ Nov. 2019 – April. 2020
Review of literature	▪ In-depth review and writing of literature review chapter	▪ Feb. 2020 – Jul. 2020 ▪ Recurrent process
Study research methodology	▪ Developing and writing up of research methodology and design chapter ▪ Revision of methodology to align with COVID-19 challenges	▪ Aug. 2020 – Dec. 2020 ▪ Feb. 2021 – May. 2021
Theoretical and conceptual framework	▪ Development of study's theoretical and conceptual framework	▪ Recurrent process ▪ Sept. 2022
Data generation, capturing and analysis	▪ Engagement with stakeholders and orientation on use of reflective logs ▪ Data generation: Learner reflections and interviews for focus groups and teachers ▪ Data preparation and analysis	▪ Feb. 2021 – Jul. 2021 ▪ May 2022 – Oct. 2022 ▪ Oct. 2022 – Dec. 2022
Compilation of dissertation	▪ Presentation and description of findings – Part I (Chapter Five) ▪ Presentation and description of findings – Part II (Chapter Six) ▪ Evaluation (Chapter Seven) ▪ Theorisation (Chapter Eight) ▪ Revising final draft of dissertation	▪ Feb. 2023 – March. 2023 ▪ April 2023 – May 2023 ▪ June 2023 – July 2023 ▪ August 2023 – Sept. 2023 ▪ Sept. – Oct. 2023
Dissemination	▪ Writing and publication of a peer-reviewed journal article with supervisors ▪ Conference attendance and presentation	▪ Sept. 2023 ▪ Oct. 2023
Examination	▪ Intention to submit	▪ Feb. 2024

Table 2: *Study work plan*

4.14. Conclusion

This chapter looked at the qualitative research approach and its rationale; the social constructivist interpretive framework or research paradigm used in the study; and the hermeneutic phenomenological case study design, and justification for its use as a methodology to examine how secondary school learners experience entrepreneurial learning and reflexive learning in the mini-enterprise experience. It also presents the role of the current researcher in the study, the sample size and how the study participants were selected, together with the data collection instruments, approaches to data analysis in line with the hermeneutic phenomenological case study methodology, ethical considerations, and limitations of the study. The next chapter discusses the findings of the study after data generation and analysis.

CHAPTER FIVE

LEARNERS' EXPERIENCES OF REFLECTION

5.1. Introduction

This chapter focuses on the presentation of findings of learners' experiences of reflective learning in the MEP. As noted in Chapter One and Chapter Four, to understand how learners experience reflective learning of entrepreneurship through participation in the MEPs at junior secondary school level, this study is guided by the following research questions:

Main question: How do learners experience reflective learning in the mini-enterprise project?

Sub-questions:

1. What are the learners' experiences of reflection in entrepreneurial learning through the mini-enterprise projects?

2. How do learners engage in reflection learning in the mini-enterprise project?

3. Why does reflection in entrepreneurial learning happen in the way it occurs in the mini-enterprise experience?

This chapter will focus squarely on the first research question, by describing learners' experiences of reflective learning in the MEP. The reflective experiences from the findings are categorised into three main areas relating to the MEP: pre-start up reflection; mini-enterprise operation stage reflective experiences; and post-operation reflection.

5.2. Description of the mini-enterprise experience

Before presenting the findings on learners' experiences of reflection, I find it prudent to give a brief description of the MEP, as it will provide a broader context, or referential totality in Heidegger's parlance, for a clearer appreciation of learners' experience of reflection. In the section below I identify the mini-enterprise as a pedagogical approach, as an assessment instrument, and lastly the main components of MEP, consisting of the development of a portfolio or a business plan, and execution of the business plan.

5.2.1. Mini-enterprise as practical to approach learning entrepreneurship

The mini-enterprise experience is a PjBL pedagogical strategy that falls within the ambit of experience-based learning. As an experiential learning approach, it is an inherently practical, hands-on, and action-oriented and learner-centred approach to teaching and assessing entrepreneurship in the Business Studies curriculum. What is first noted about the MEP is its practical orientation:

> **Teacher Boniso:** The mini-enterprise project is a hands-on module for learners to learn business skills and practice them.
>
> **Teacher Clayton:** Okay, the mini-enterprise project is whereby learners come and have an experience practically on how the business world works. So, they face those challenges of customers, competitors, etc. ... It is all about the practical experience of business.
>
> **Teacher Miller:** Basically, the mini-enterprise entails giving a clearer picture of how to run, [and] how to establish a business or mini-enterprise … up to the end. [It entails] … all the logistics that are encountered, the challenges businesses go through. Basically, we are just giving learners a clearer picture of what they should expect if they want to be involved in starting their own businesses.

As noted by the first respondent, the MEP could be described as a module where learners of entrepreneurship are given the opportunity to learn business skills and put such knowledge into practice. Respondents use terms such as "hands-on", "practice", "practical experience", and "practically" to portray the experiential and action-orientated nature of this approach to teaching and learning entrepreneurship. The third respondent brings greater clarity about the practicality and hands-on nature of the project by highlighting the concepts of venture set up and operation that the project requires learners to engage in. Furthermore, the findings point to deeper immersion into the experience, it seems, through exposing learners to the different logistical processes and challenges such as handling customers and dealing with competition or any other life-world experience that may arise from the experience mirroring the business world. This experience is deliberate as its intended ends are made plain. It is learning-centred as opposed to teaching-centred, as learners are expected to learn or acquire entrepreneurial knowledge and skills experientially. It aims to develop an entrepreneurial mindset through exposing learners to the processes and challenges they may anticipate and experience when setting up their own ventures.

All learners who participated in the mini-enterprise experience and were interviewed in the study affirm and corroborate these findings about the practical nature of the MEP. They also show that it is embedded in the real world through interaction with the school community and the business community in a very rich and practical way:

> **KWS:** It was a school project ... we were selling beef burgers. We came up with that idea because normally at school they sold fresh chips and Russians. So, we wanted something new that learners are not used to, and not only learners in the school community.

> **MKS:** Well, we got divided into groups of six. [...] Then we just came up with the business idea of selling pies around tea break and lunchtime in schools since the school tuck shop wasn't offering them. And then we just decided that okay, fine, since the school is not sponsoring us, we're just going to come up with an amount that we're going to contribute. And we're going to write a letter to Pie City, the one at BBS, so that they can always deliver the pies in school, because they have a delivery service ... So, we just agreed on that. Then we contributed BWP30 each, so that we can start with pies. Firstly, we bought two boxes, then after the two boxes, we just kept on increasing the number of boxes for pies.

The practical nature of the project is confirmed by the first learner's voice, who confirms that they set up an enterprise where they sold real products, beef burgers and pies. Selling being a verb is an action word that describes actual doing. Burgers are an actual product, which must be prepared by learners through frying the beef patty, cutting up the veggies and the bun to create a full product before selling to an actual customer base, who were learners and teachers. Also notable is the learner's understanding of the market in terms of competition and target customers. They appreciated the need to differentiate themselves from competition by providing a product that is not offered on the market, while also having the potential to appeal to their target customers. The second learner respondent expands on these ideas, pointing out that it was a collaborative project. She corroborates the notion of having business ideas, but showing that they were learner-generated, as they "came up with the business idea". Furthermore, just like many start-ups are funded by their owners if they cannot secure external funding, learners contributed towards start-up capital. They also engage with, negotiate, and make agreements with potential suppliers about matters such as prices and delivery services, and finally execute the business idea through selling their product or service. Therefore, the MEP is a practical, learner-directed approach to learning entrepreneurship that immerses learners in the experience of setting up and operating a real mini company that is fully embedded in the real world and involves an interaction with the customer base in the school

community and the business world, to thrive by taking advantage of opportunities while simultaneously working against the market-constraining factors such as competition and dealing with suppliers to learn entrepreneurial skills and attitudes.

5.2.2. The mini-enterprise project as an assessment tool

Beyond being a pedagogical approach, the findings reveal that as it is implemented in the Botswana junior secondary education system, the MEP is an assessment instrument driven by the Botswana Examination Council (BEC). For this reason, it "is known as Paper 3" of the Junior Certificate Business Studies examinations. This means that the BEC determines how the project is implemented, including the requirement for it to "operate for usually a minimum of six weeks" (Teacher Moore). Another teacher confirms this, further adding that it is "not in the syllabus" per se: "[The Department of] Curriculum has developed the syllabus … that we are supposed to teach [but] the mini-enterprise is something that is implemented by BEC, which was not implemented by curriculum" (Teacher Miller). This is quite a revelation. It means that if the BEC ceases to use it as an assessment instrument, Business Studies teachers do not feel any obligation to engage learners in it, especially in the way it has always been done, if not neglecting it totally. They would just "teach the topics from the syllabus, the way they will demand us, without running out the mini-enterprise" (Teacher Miller). This is evidenced by many schools no longer implementing it when the BEC suspended it and substituted it with a written paper in 2022. Having explained the mini-enterprise as both a pedagogical tool and a form of performance-based assessment in the Business Studies curriculum from the findings, in the next section I describe its composition.

5.2.3. Mini-enterprise as a combination of portfolio development and its implementation

The findings reveal that the mini-enterprise experience is a project-based experience that entails first the development of a portfolio or business plan, then implementation of the business plan by way of operating the mini-enterprise, followed by a report on their experiences. As a PjBL approach, the mini-enterprise portfolio consists of four main components or chapters. Figure 7 below represents the structure of the portfolio and the process of implementing the MEP, as derived from the findings, which follow immediately after it.

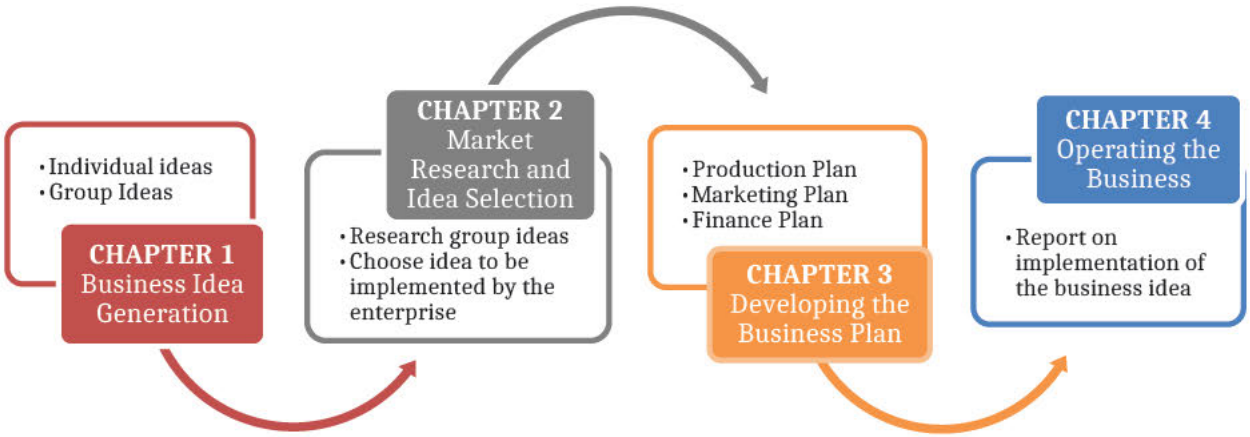


Figure 7: Structure of the ME portfolio and flow of implementation

5.2.3.1. Developing the business idea

This is the first chapter of the business plan, where each team of learners generates, brainstorms, selects and develops a business idea in the business plan. Generally, learners come up with ideas individually and then contribute the ideas to the team. From the whole selection of ideas, learners are expected to evaluate three main ideas that they would conduct market research on. The process of idea generation and development is described below from the interview extracts:

> **Teacher Clayton:** First of all, each and every learner should come up with a business idea. And from that business idea, individually, they should do SWOT analysis for the individual business ideas, and even the questionnaire for their business ideas. Then, after that, they come as a group to get a business idea from each learner. Out of all those business ideas, they choose three products. And they divide themselves into three groups, where they're going to do market research on those three products.

> **Teacher Boniso:** … learners … can generate a business idea, maybe from their hobby, maybe from a gap that they identified in the market, maybe their ability to modify an existing or desire to modify an existing product. Now the learners will put down their business idea to develop it.

> **Teacher Moore**: Chapter 1 is basically the idea ... by conceptualising the business idea. Then, I don't know, maybe should I say a watered-down feasibility study. Yeah, but basically, it is the idea, thrash it out, and then end up having a refined idea.

The responses above show that Chapter 1 of the portfolio, generally called the business plan, involves learners generating and developing business ideas. The business ideas are generated from various sources, such as identifying a gap in their school community, their hobbies, and modifying existing business ideas. Each learner comes up with an individual business idea and describes the business idea in detail. After the description, they do SWOT analysis of the individual business ideas, "…where now they analyse strengths, weaknesses, opportunities and threats that may be realised" (Teacher Boniso). This analysis is also captured in this chapter. The last section of this chapter involves learners then contributing their individual business ideas to the group. From all the brainstormed or generated ideas, the group selects the best three ideas, on which they will conduct "… a watered-down feasibility study…" where they "… thrash it out, and then end up having a refined idea" (Teacher Moore), that they will execute as a business.

Most learners' responses give credence to these findings, by reporting that they came up with their own ideas. Only a few reported that they were given their ideas by their teacher. For example, one learner reported that "… other children were given the chance to sell pies and other stuff. As for us, we were told that we should sell hunger busts with hot chocolate." Being "given a chance" should not be understood as being original learner ideas, because when probed further the learner confirmed that they were ideas assigned by the teacher to different groups.

5.2.3.2. Market research

Having brainstormed business ideas individually and selected their three group ideas that will represent the business, learners take a step further to refine the ideas and settle for the best possible idea under prevailing circumstances. The market research is the process that helps them to arrive at the final idea to be implemented. The interview extracts below show how this process unfolds:

> **SGS:** We had plenty of questionnaires, distributed around 100 and then, well, 90% of them came. … We gave out to people who we considered potential customers … the school management and some learners. We analysed the results, and … [w]e ended up choosing hotdogs and French fries [leaving out the shoe polishing business and making ice pops ideas].

> **PSS:** We made questionnaires, and distributed them to different people in the school, not just learners, [but] teachers and also the support staff. Yes, and we took that information we analysed, and came to a decision on what we are going to be selling. We had other products, like Cool Time,

and Nik Naks.... We came to the decision to sell pies because most people showed us that they would love to buy them from us.

The excerpts above reveal that learners conducted market research for their best three ideas. Basically, learners develop questionnaires and collect data on each of the three main ideas. The questionnaires are distributed to their main target customers in the school, mainly teachers, learners, and support staff members. The data is then analysed, and learners use the findings to arrive at the best idea to implement out of the three. These findings are corroborated by teachers. For example, one teacher confirmed that learners usually administer a questionnaire for their three main ideas "[t]hen out of the questionnaire, they do the analysis. They present the data in tables, in graphs, in histograms, pie charts and whatever they can" (Teacher Clayton).

Most learners further show that based on the data analysis findings, and review of situations in their individual businesses, they then select a business idea out of the three. Below are examples of some of the issues they are taking into consideration to come to the final business idea:

JMS: So, we looked at the hours we wanted to give to the project, […] product availability (supply side), market demand, and competition from other classes. That is why we ended up selling hotdogs.

OSS: We didn't only look at the needs of the learners, but we also considered our financial ability as a group which was going to sell. We calculated production costs, which is, cost of producing these fresh chips and the profit we are going to gain from this …

Both extracts of learner respondents cited above highlight that business ideas selection for different teams resulted from observing or studying the market in terms of customer demand and competition, and also taking stock of matters internal to the business to arrive at their final idea. The selection process can be categorised into two classifications of data: the internal factors in the enterprise and external factors which are generally in the business world where the mini-enterprise is situated. The internal factors that went into learners' evaluation include things such as availability of time, availability of machines and equipment, the amount of start-up capital needed and financial ability of members, production costs, and return on investment or profit. The factors external to the business that learners evaluated or took into consideration included things such as competition, customer demand, availability of suppliers and comparison of supplier prices. Competition included the number of businesses that sold the same product, and the prices they are selling at, while

customer demand looked at the tastes and preferences of customers and how much they are willing to pay for the product.

> **Teacher Clayton:** So … from the data analysis, they do a report of the three products. Showing which one out of the three products they will select, looking at the factors such as prices, competitors, and availability of customers.

The extract above confirms findings from learners' responses and extends them further to indicate that learners then prepare a market research report that compares the three different ideas and shows which is most viable based on the weight of evidence. In this report, this is where they "… analyse the results, interpret them and present using different ways of data presentation" (Teacher Boniso), such as pie charts, bar graphs and tables, thus demonstrating why their chosen idea is the best through comparative analysis. In this way learners learn the process of business idea generation through practical engagement in a different process (learning by doing).

5.2.3.3. Business plan extracts

Having completed the conceptualisation and development of the business idea plus market research on the feasibility and viability, learners embark on the third phase, the business planning phase of the portfolio, which compprises three business plan extracts:

> **Teacher Boniso:** Learners develop a business plan and show how they are going to: market the product, the marketing plan; how the production process of the product or the service [will be undertaken]; and then how finances are going to be sourced and handled in the business, that's Chapter 3.

As shown in the interview excerpts above, Chapter 3 consists of three extracts of the business plan, which are the marketing plan, finance plan and production plan. In this part of the portfolio learners are expected to demonstrate in a detailed fashion "how they are going to market the product [in] the marketing plan; how the production process of the product or the service" will take place in the production plan extract; "and lastly "how finances are going to be sourced and handled in the business" (Teacher Boniso) in the finance plan extract.

In each extract, learners first introduce the business by stating its name, objectives, members of the business and their roles, plus an organisational structure. This is summarised in the extract bellow:

> **Teacher Sunday:** What happens is that they have to give … the addresses, the locations where they give all the details of the business, then they give us the main objectives of the business.

After providing this preliminary information, they state the activities of the department of each extract respectively, the projections and ethical considerations. For example, in the production plan extract learners would "make a list of the items that they will need, the raw materials that they will need, they make estimations of the output per week" for the duration of the project which is usually six weeks, and also discuss ethical issues by stipulating the "measures to put in place to protect the environment, with reference to production" (Teacher Victoria). In the marketing plan extract, they may discuss issues such as pricing, marketing, and promotion strategies that they will employ. Finally, the finance plan extract would consist of determination of the start-up capital, and preparation of sales and profit forecasts. It is important to note that all of these first three chapters are written in the "future tense", because they communicate the entrepreneurial learners' intentions (Teacher Victoria). After completion of the write-up of the three chapters, the learners can start operating their mini company in small groups.

5.2.3.4. Report on operating the business

After executing their business idea through implementation of the business plan, learners are expected to produce a report of their experience during the operation of the business. According to the findings, this report has the characteristics of being "written in the past tense" as opposed to the future tense in the preceding chapters (Teacher Victoria and Teacher Moore), since it details what learners would have done during the production and trading period of the enterprise:

> **Teacher Moore:** The documents are determined by the position the learner held. […] It's not long, most of the schools submit just one document. And then there is a small write up, half a page long. 'I was doing this this this ...'

Teacher Victoria: Each learner will write the position that they were in, the department that they worked under, the roles and responsibilities they carried out, and then prepare proof of the record-keeping where they show the skill of record-keeping.

Teacher Miller: They were writing a very short report of the daily activities that they carried out. What challenges they encountered, and what records they used, as a way to show that, 'this is what I have done'.

Most respondents revealed that at completion of the trading period, "learners report on how they operated the business" (Teacher Boniso). The report is not just general, it is very specific to the department the writer served in, and describing all the activities they carried out in that department. They are also required to provide evidence of their engagement in the enterprise. This evidence could be a document produced during production, such as evidence of record-keeping in the specific department the learner served in and the position they held. An example here could be a record of daily or weekly sales if one was in the marketing department, or a statement of financial position for someone in the finance department, or a record of daily/weekly production output for someone in the production department. Also notable is that the learners are also required to state the challenges that they faced, but "they don't write how they solved the challenge" (Teacher Miller). Pressed on whether the report was evaluative, another teacher responded: "No, it is basically reporting that, I was the finance manager. I received the money from the marketing department after the sale. I recorded, prepared statements …" (Teacher Moore). Most teachers agreed with this assertion, indicating that this chapter is just descriptive and not evaluative by requirement. However, some learners take the opportunity of using the report as a form of reflective writing on their experience, by not just noting the roles and responsibilities they shouldered in the enterprise, and evidence of such engagement, but also the challenges they faced and how they resolved them.

5.2.4. Conclusion

According to the evidence of findings provided in this section, the MEP is both a pedagogical approach and a form of an authentic or performance-based assessment used to assess and evaluate learners' knowledge and skills of entrepreneurship within the Junior Certificate Business Studies curriculum. As a pedagogical approach it is grounded in PjBL epitomised by hands-on and action-oriented learning and practice of business skills. In other words, it is an action-oriented project that seeks to develop entrepreneurial knowledge through hands-on, experiential immersion into the

experience of planning and executing the business plan. The development of the portfolio is itself a hands-on and practical process equipping learners with business planning skills, followed by implementation of the business plan, where the knowledge, skills and attitudes of business in general, and entrepreneurship in particular, are further developed through practical application. With this introductory foundation providing an overview of the MEP as whole, I now present the findings on learners' experiences about reflection in the mini-enterprise experience. The findings reveal that learners' experiences of reflection span all phases of the MEP: prior to start-up, during operation, and post-operation.

5.3. Learners' experiences of reflection prior to start-up

The findings reveal that learners engage in some form of pre-action reflection prior to the setting up or operation of their mini-enterprise, especially at the stage of developing the business idea. Most respondents stated that they engage in a process of evaluating the business ideas for feasibility, looking at different factors before commencing their enterprises. Learners seem to engage in this pre-start-up reflective process by making use of information from market research findings, which generally consist of factors outside the enterprise, and information gathered internally about circumstances within the enterprise and school.

Reflecting on external factors: The external factors refer to situations outside the learners' immediate sphere of control where the enterprise is situated, that learners use to decide on a product to sell. It encompasses information about their target market, competition, and suppliers. Most of this can be easily determined by market research, and most respondents reported conducting market research with many of these variables included:

> **JMS:** … we decided on selling hotdogs because of product [raw materials] availability, market demand and competition from other classes.

Costs of production and machinery: Notwithstanding doing market research, after analysis, learners show that they also considered the general cost of machinery and equipment as well as costs of production. On the matter of equipment, one had this to say:

> **SGS:** At first, before we discussed a couple of plans … but then we ended up choosing the hotdogs and French fries idea because to make ice pops we are going to need heavy machinery and a lot of electricity. So, it was going to cost more.

This excerpt shows that reflecting on the cost of equipment, machinery, and variable costs such as electricity had the power to sway decisions on the idea to implement. This was necessary to prevent a situation where the entrepreneurs are found unready at hand, and therefore fail to supply their target customers when production starts. Due to lack of the right machinery, tools and equipment or overly unbearable production costs, the failure would occur even if the product was liked by customers:

> **SGS:** [We made] calculations on the costs of just buying the needed [raw] materials for the fat cakes, patties and other stuff. And then after calculating the expenses, we then had to check who would buy [potential customers]. How many people would buy within the school area? And then also check whether its going to be profitable.

> **OMS:** We calculated production costs to find out how much it is going to cost us, [that is,] the cost of producing these fresh chips and the profit … that we are going to gain from this, what is it?

> **MKS:** If anything, we would need something that is going to profit us again at the end of the day.

The above statements show how learners expertly applied feedback from market research findings to inform their planning for start-up. They calculated the costs of production, that is, the unit cost, and possibly the mark-up, and the profit they would likely make *vis-à-vis* ascertaining their affordability, by looking at who is going to buy their product as well as the number of potential customers.

Product affordability has to do with pricing that potential customers are willing and able to pay. A product is unaffordable if it is outside the price range that target customers can afford. Most learners seriously reflected on this, and it was one of the key things that determined whether their business was viable:

> **MKS:** … we decided that: 'Okay, fine, guys, what is it that we can sell to the learners', you know, something that can be so very much affordable, because we know that it's not like all of us here at school are being given money by our parents from home to come to school.

> **BLS:** Um, we intended to sell doughnuts, but our learners were not really willing to buy them, […] they opted for champions because they were affordable.

PSS: … one of the challenges that we faced when we were … doing this project of selling pies was that we were selling something which is expensive, which is maybe out of budget for the learners, because they didn't really support us.

The extracts show that reflecting on affordability of the product to the target customer is one of the most important things learners consider before settling on a product. In fact, reflecting on affordability must go hand in hand with the market research. Consideration must be given to this issue, so that participants are given product choices they can afford in the questionnaire. While some made a deliberate and conscious decision upfront to think about this, as in the case of the first cited respondent (MKS), others were guided by findings from the market research they conducted. This means they used the information gained to discard what they previously thought would be a good idea (BLS), showing how serious affordability of product for potential customers is. The last respondent (PSS) decries selling a product that was out of learners' reach in terms of pricing, and consequently they did not enjoy much support. In fact, their experience was so stressful that they always had a lot of stock at the end of the day (which was bad, as it was a perishable product) and were forced to sell it on credit to learners who, worse still, struggled to pay the debts. Surprisingly, PSS reports that they "came to the decision of selling pies because most people showed us that they would love to buy them from us". This perhaps suggests that careful reflective thought must go into the process of deciding on whether the product is affordable, including quantities that would optimise profits and avoid frustration.

Suppliers' availability: Some of the learners did not just conduct market research but also tried to identify and go the extra mile by engaging with industry or potential suppliers to come to their decisions. They needed to think ahead and make plans about how and where they would get supplies from:

JMS: The main items we had to acquire were hot dog buns and we had to acquire hot dog sausages. So, we could put in a daily order at Senn Foods and a daily order at Spar in BBS So, we actually talked to the suppliers, and they agreed to meet us halfway, and that actually was a step in the right direction for us.

MKS: And we're going to write a letter to Pie City, the one at BBS, so that they can always deliver the pies in school … because they have the delivery save as well, just sign up for it.

Whereas it was important for entrepreneurial learners to think of potential suppliers in their planning, some thought of it and decided to go a step further, contacting suppliers and making agreements upfront that would result in the least disruption to their schooling. Furthermore, learners in the extracts above show that reflective thought needs to be followed up by action for it to be useful. This is made clear by the process of engaging suppliers and seeing to it that they are able to provide what is needed in the enterprise, and the terms and conditions that may be expected, such as delivery services, and ability to deliver on time daily or consistently.

Reflecting on internal factors: Learners reflected on different internal factors to make a decision on the product or service to trade. This included production costs, availability of resources such as equipment and machines, availability of suppliers, competition, and preparation demands in terms of time and effort. This is demonstrable in the transcripts extracts below:

> **OMS:** We […] considered our financial ability as a group which was going to sell.
>
> **MKS:** And then we were like, but we need pies. So how much are we contributing? The school is not sponsoring.

Having conducted market research, respondents considered their financial ability as a group. This was important because they had to raise the start-up capital themselves. They had to ask themselves how much they are contributing and whether it is reasonable for the majority of their members, since they depend on their parents, and also taking into consideration that their school was not sponsoring them. The start-up capital figure could not have been arrived at arbitrarily. This is demonstrated by the fact that learners reported that:

> **OMS:** We calculated production costs to find out how much it is going to cost us, [that is,] the cost of producing these fresh chips and the profit … that we are going to gain from this, what is it?
>
> **MKS:** If anything, we would need something that is going to make profit for us again at the end of the day.

Knowing how much it costs them to produce their products means that they are able to determine the profit margin for each product, especially having calculated the unit cost for making each product. Also, by determining the demand for the product, they can easily determine how

much each could contribute, and pricing. Although learners do not communicate how they arrived at these figures, there is evidence that the set selling price, and profit forecasts (as they are required in the portfolio) also determined the contribution to be made towards start-up capital for each team member.

Another internal factor that learner respondents considered when choosing a product to sell is the amount of work that it would demand. This is an important factor to look at, since the project is done during school hours while continuing with the normal activities. So, it was wise that some learners decided to look "… at the hustle would have to go through in preparing and selling" their product and "… the hours we wanted to give to the project". This means they determined beforehand the time and effort required and had to let go of ideas that did not seem feasible and viable considering these constraints. This is important because the mini-enterprise runs during school hours at break times. Factoring in the time and effort demands at the planning stage helps learners make wise decisions about the feasibility of the business idea, taking into account the time available to them and other competing responsibilities. Although issues of effort may be internal, the time factor has an element of external influence since learners operate within the confines of the time that their schools allow them. Unfortunately, not many respondents reported taking these two factors into consideration, bearing in mind the demands of the MEP, and faced many challenges as a result.

5.3.1. Reflecting using SWOT analysis

An interesting observation is that in the development of business ideas, that is Chapter 1 of the portfolio, learners are required to brainstorm business ideas individually. After coming up with these individual business ideas, they then come together in their assigned groups to come up with at least three group business ideas, and eventually do market research on those group ideas. For the individual business idea learners are expected to conduct a SWOT analysis to determine the feasibility and viability of their ideas. SWOT analysis is an acronym and evaluative model that assesses the strengths, weaknesses, strengths, opportunities, and threats of a business idea. The extracts from teacher interviews help explain this process:

Teacher Boniso: This first chapter has three sections that is the part where the learner explains the business idea, the product or the service that they come up with. And then the second part of it is the SWOT analysis, where now they analyse strengths, weaknesses, opportunities, and threats that may be realised.

Teacher Clayton: … the first thing, each and every learner should come up with a business idea. And from that business idea, individually, they should do SWOT analysis for the individual business ideas, and even the questionnaire for their business ideas.

Teacher Victoria: Chapter 1 is the business idea, where they [learners] come up with a business idea. They identify a problem, the cause of the problem, the effects, how does that problem affect people in a particular community, and then the solution, then write down how the solution is going to be of benefit to those people. Even the SWOT analysis is done in Chapter 1. SWOT analysis is done on the individual idea but as for the group, they just make a list of the products that they wish to sell.

This requirement to use SWOT analysis to evaluate an idea they are not required to implement seems somewhat absurd. However, a few of the learners claimed that they use SWOT analysis to evaluate their business idea:

PTS: I think our SWOT analysis, let me say strengths, weaknesses, opportunities, and threats over the business helped us to plan ahead well in time to deal with the weaknesses … and the threats that our business might face.

On the question of whether SWOT analysis findings were referred to during the running of the business as a process of continual reflection, and a follow-up action ensuring SWOT analysis translates into actual practices, the participants responded as follows:

PTS: Yes sir ... the main weaknesses, were the problems that we encountered throughout the project. Most of them we had already jotted them down. But some, I think we never saw them coming.

From the above information it can be concluded that SWOT analysis as a pre-action or pre-start-up reflection tool can help learners to anticipate potential challenges that may arise during the operation of the enterprise. This preparedness may contribute to the success of the mini-enterprise. However, a caveat is noted from these findings, that the SWOT analysis may not identify all the

possible challenges that may arise. This means that learners need to continuously engage in reflection, identifying new problems as they arise and find solutions to them. Overall, it can be concluded that some entrepreneurial learners are able to apply knowledge or the concept of SWOT analysis beyond what will be examined or is expected by curriculum planners. They are able to see its value in the evaluation of business ideas and the success of their enterprise as a whole.

The extent to which learners engage in this pre-start-up reflection seems to have an immense impact on the success or failure of the enterprise during the operational stage. Learners that reported not doing a thorough job at this seemed to struggle more during implementation. This neglect leads to learners having to struggle to make sales, risking the collapse of the business or change of business ideas mid-way through the operational stage. The experience of PSS about the lack of careful consideration of affordability and the resultant troubles it caused for learners is telling:

> **PSS:** … one of the challenges that we faced when doing this project of selling pies was that we were selling something which is expensive, which is maybe out of budget for these learners, because they didn't really support us. But other classes which were selling cheap stuff like Nik Naks, or ice pops, things that cost BWP1.00 and not BWP12.00 like pie, they sold their stock. It was hard, because as I said before, we have to make sure that pies get sold, all of them before the end of day. So, it was really hard to make it, even if I can say that I don't want to sell anything on credit today. If that is the case and people don't really buy, I just have to sell them on credit. It was really hard to make sure that the process didn't occur again. For most of us, people just decided to take our pies and not pay up … And it was just so devastating … it wasn't a nice feeling, honestly speaking. I remember I even had to pay my own because the pies that I sold; people didn't pay.
>
> **Teacher Boniso:** I've seen some [teams and their mini-enterprises] collapsing. I've seen some encouraging themselves, regrouping and sometimes they decide to diversify ... to say, 'No, this product or this service is not working, let's think about another one' ... and then regroup and start afresh**.**

From the excerpt above, the possible devastating effects of not thinking carefully about the affordability of the product for the target market resulted in devastating consequences to both the entrepreneurial learners and their enterprise. It burdened learners emotionally as their perishable product all had to be sold or sold on credit to avoid a loss. Even then, selling on credit did not absolve the entrepreneurial learners of responsibility, as they had to absorb the financial risk of their customers failing to pay – notwithstanding the fact that they are also financially constrained

like their peers as unemployed learners. As the teacher response quoted above shows, some learners are forced to go back to the drawing board to rethink their business ideas when things do not work out. This probably communicates the impact of poor pre-start-up reflection or proper evaluation of business ideas before starting the business, which includes frustration and even collapse of the business. It also speaks to the need to apply continuous reflective judgement post-start-up to check if the business is on course and evaluate whether what is needed is perseverance or a total change of direction. The next section therefore presents findings on reflection during the implementation phase of the MEP.

5.4. Reflective learning during the operation of the mini-enterprise project

5.4.1. Meetings as forums for collaborative reflection and problem solving

Reflection does not seem to be a requirement in the MEP as it is currently run. However, it seems that most entrepreneurial learners are forced by circumstances to intuitively engage in reflection, even though some are not aware of it. Some learner respondents may not have the vocabulary for reflection, and even deny engaging in it, but probing deep one soon realises that they do engage in reflection in their own way intuitively. During data analysis the theme of 'meetings are the common platform for engaging in collaborative reflection' by learners to achieve the different ends or goals in their enterprises emerged. This section discusses this emerging theme of meetings as a platform for reflection, focusing on the sub-themes of frequency of meetings, the purpose of the meetings, and finally the structure and nature of meetings in relation to reflective practice.

5.4.1.1. The frequency of reflective meetings

As noted above, meetings were found to be a common platform for collective reflection. The sub-theme of frequency of meetings for different participants engaged in the MEP, and related findings are represented in the table below.

Table 3: *Frequency of meetings*

Frequency of meetings	**Exemplar statements**
Daily meetings	**JMS:** So, we usually had daily meetings … **PTS:** Yeah, throughout our project we would come together as a class every afternoon in order to see the business performance and the records of what was happening. **SGS:** And at the end of business day, we regathered that the whole nine of us …
Few meetings a week	**AMS:** We had made meet-ups like maybe every, every after two days, three times a week. **PSS:** … project was for six weeks. So, each week we had a meeting.
Irregular and teacher-forced	**BLS:** The only time we ever would sit for a meeting was during the lesson when our teacher would ask us how the business was doing. **MKS:** ... we never sat down and reflected on the failures or the achievements because honestly, [...] some people […] just wanted to get done with the project. They wanted to get marks. […] we called a meeting some other time.

5.4.1.1.1. *Daily meetings*

The results as shown in the extracts or exemplar statement in Table 3 above revealed that most learners held their meetings on a daily basis, usually at the end of their business day, in the afternoon. This is indicated by phrases used by respondents such as “daily”, “every afternoon”, “at the end of business day”, and having to look at what they did “during the day”, which are representative of regular and everyday frequency at the end of the business day. Although most of these meetings involved reflection of some sort, for some it was a meeting that did not involve reflective thinking but just basically members surrendering funds made from sales on that day, and deciding how much of it would be banked and how much would be used to restock.

5.4.1.1.2. *Few meetings a week*

In addition to holding meetings daily, the findings revealed that for some learners the frequency of meetings held ranged from one meeting to three meetings a week. For PSS’s team, having one meeting per week implies that their team held meetings only once a week for the duration of six weeks. In contrast, others show that their meetings were more frequent, but fewer than those who met daily. PSS explained that the main reason as to why their team had fewer

meetings per week was that they "didn't have time". The issue of time and other impediments to meaningful reflection are discussed in more detail in Chapter Seven.

5.4.1.1.3. *Irregular and teacher-driven meetings and reflection*

The findings further reveal that other learners seemed not to follow a particular approach to meetings. For some, meetings only happened in the classroom when the teacher enquired about the performance of the business, or when there was a pressing issue that learners felt needed to be resolved (as shown in the last row of Table 3). The explanation for this irregular meeting/s happening only at the instruction of the teacher seems to emanate from learners not being "invested in the whole general meeting and discussing … how the business was doing [but] we only cared about pushing the product" (BLS). Fortunately for them, these meetings were helpful, even though the learners were not initially interested in conducting them. For example, they helped them to "come up with more informed decisions like where to find cheaper suppliers …" (BLS). Their experience was more or less similar to that of MKS's group that was seemingly disinterested in holding meetings for reflection until there was a pressing issue to be discussed or problems to be solved. She reports that their reason for not calling regular meetings was that "they just wanted to get done with the project. They wanted to get marks…." (MKS). The problem with this mindset is that problems can persist and never be identified, or are not identified until someone calls a meeting, which is what happened in their enterprise. They were facing a problem of theft of their product, but the problem was only solved as a "by the way" issue – yet it had the potential to collapse their business.

> **Teacher Victoria:** We have never held meetings unless it was an extraordinary meeting when unexpected events happened, or when there was maybe an issue that seems to be very serious. That's when we would call them as teachers. …. I don't remember the year, but there's this special group that we had, they would call a meeting in front of us, they will discuss issues at their meeting in our presence, but we would not be a part of the meeting, and they would resolve issues on their own.

The response by the teacher above adds credence to learners' submissions on why some teams have irregular meetings. What it reveals is that some teachers call for a meeting when there is a serious event that they have observed and are convinced it requires an extraordinary meeting in order to be addressed. What she also points out is that on other occasions some learners may call meetings when faced with such incidents and solve the problems by themselves. Sadly, findings reveal that sometimes there are negative attitudes towards meetings which could serve as a platform

for reflection, and these negative attitudes seem to be shared across different teams or respondents. Below are two examples of such views:

> **PSS:** As children, as just learners, as teenagers, we were just excited about selling pies and making profits, but we didn't really reflect back.

> **KWS:** I was just interested in selling. … we just sold and made the profits and that's it!

Both these learner respondents confirm that they were more into pushing sales than engaging in reflection. Worse for PSS, their team "held weekly meetings even though they [the meetings] were mostly characterised by fights" and struggled to solve problems they experienced in their enterprise. Both respondents show that the negative attitude towards meetings, and by extension reflection, was not an isolated occurrence, especially for respondents that had fewer meetings per week. Perhaps what is more telling is how PSS describes the learners' state of mind at the time. The words he uses, such as, "as children, as just learners, as teenagers" seem to highlight and bring into question the maturity of adolescents. They seem to suggest that it is this lack of maturity that made them more excited about selling and making profit than looking back at their experiences to reflect and learn from them. Adding to this immaturity, there also seems to be blind excitement about selling that is oblivious of potential challenges of the project:

> **AMS:** We were really excited to do it practically [the mini-enterprise project], not knowing that it's kind of challenging than doing the theory in the class or being taught. So finally we had to do it practically. Make it [the project] alive. Yeah, we were really excited.

In the short extract above, the repeated reference to excitement demonstrates that learners seem to be thrilled to be running the enterprise. This is corroborated by the teacher. They seem oblivious of the potential challenges that come with running the enterprise, and as such reflection is not initially anticipated. The situation is even far worse by the fact that it is not an expectation or requirement for learners doing the MEP.

Some learners were reported to be not only disinterested in holding meetings, but also not interested in doing the project. This is illustrated by MKS noted above, where she reported that they "never sat down and reflected on the failures or the achievements because … some other people were just doing it because they just wanted to get done with the project". She notes that some

members of her team were “not really passionate about the whole concept of selling” but just wanted “to get done with the project” and “to get marks” (MKS). As shall be shown later, learners with this approach to the MEP seem to have more unresolved challenges during the running of their enterprise, negatively affecting its performance.

> **Teacher Victoria:** They are not [interested in reflection], I think they are just excited that they are selling. That's it! Because even when they start Form One, they will be asking questions, ‘When are we starting to sell?’. So, they don't know what they're doing. They are just doing it for fun … I think they're learning, but unaware.

The teacher’s response also confirms that some learners are just enamoured with selling rather than learning through engaging in reflection. She argues that the excitement could be emanating from the thrill of selling, as the learners don’t know what they are doing. The teacher brings in the idea that regardless of the focus on just selling, learners are learning unconsciously. Another teacher seemed to agree with this notion, arguing that “they don't know that they are doing that [reflecting and learning]. It just happens because they are humans. […] They will only realise maybe four or five years from now.” At that time, they will recall that, “Oh, this once happened at junior school and this how we went about it” (Teacher Moore). PSS seems to confirm this notion of unconscious learning. He reported that even though they were not so much into reflection and drawing lessons from the experience, when he did a similar project in Development Studies at senior secondary school he recalled that in the MEP they “were selling something which is expensive, and out of budget for these learners, because they didn't really support us”. Drawing from the past experiences they sold “Cool Times, something which was cheap” and affordable to learners rather than being carried away with an expensive product. Therefore, it is plausible to conclude that even though learners may be more excited about selling than engaging in reflective meetings and drawing lessons from their experiences, they may still learn unconsciously from the experience.

In summary, the findings show that there are issues of attitude and motivation involved in the frequency of collaborative reflective meetings. Learners lacking motivation or having a negative attitude towards reflection may be interested in just “pushing the product” through sales or just working to “get done with the project” to get grades, and don’t seem interested in holding reflective meetings to discuss or evaluate the performance of their enterprise or their experiences. The findings also seem to suggest that even though learners may be more excited about selling than

having meetings and reflecting on their experiences, they may find themselves learning unconsciously, especially from the challenges they faced during operating the enterprise.

5.4.1.2 The purpose of meetings

Further to the sub-theme on the frequency of meetings, the sub-theme on the purpose of meetings also emerged as a result of probing and analysing the activities that learners engaged in pertaining to critical reflection. Table 4 below provides the findings on what learners did during their meetings.

Table 4: *Purposes of meetings held during the mini-enterprise project*

Purpose of meetings	**Statements**
Finances and other operational decisions	**JMF:** So usually, the purpose of the daily meetings was not just to collect the money from all the parties involved. **OMS:** After school, we had to like to look at what we did during the day, especially in terms of money. And where the money is going to. Is it going to be kept? Or is it going to buy stock that day?
Provision of updates	**BLS:** … during our lessons we would be given time by our teacher to discuss among ourselves how the business is doing, would get with the updates of the financial position we are at. **SGS:** We … had something like a board meeting. Yeah. The financial department told us that this is the amount of profit we made. And the marketing department […] told us that, yeah, 60% of the customers that we found did come. And we found out other ways of like, other ways of attracting them into the business. We did more flyers, but this time, we didn't just post them in the admin office. We also put them at the door of every classroom so that anyone everyone can see.
Evaluating performance and solving emerging problems	**BLS:** We used live data of what was happening on the ground. [...] It showed that the business did not perform well. Because they made predictions [that] were high and then the turnout was low. We had a team discussion about what to do regarding the low outcomes we were receiving. So, we decided to go with loss leaders whereby we made sales, promotional sales. And also, we decided to bring in another product. **PTS:** So, the decisions were taken ... at various sittings that we used to have in the afternoon. We would come together as a collective and let out ideas of how we can resolve these problems. I remember one time we had a problem where many of our doughnuts were not bought that day. And uh ... so as a class we decided to take them with us and maybe sell them to our families or our neighbours so that they don't expire in the storeroom
Peer evaluations	**SGS:** … if someone from the marketing department found a problem in the production department, he would say, 'this and this happened … like maybe the stove was not that clean.' Something like that. So, they were like, they were telling us, they were like judging us, but not really judging. Just so we can correct ourselves within the department. And we are also correcting each other when mistakes [were made].

The findings as revealed in the table above show four main categories of activities that learners engaged in during their meeting, or that were reasons why meetings were called in the first place: submission and collection of revenue made from sales; debriefs or provision of updates on important matters affecting the enterprise; evaluating the performance and devising solutions to emerging problems; and peer evaluations, where learners assess their one another and give each other feedback on performance in their assigned roles and responsibilities. These are discussed individually below.

5.4.1.2.1. *Submission, collection of funds and operational decisions*

The findings reveal that learners held their meetings to deal with different issues that can be classified into two broad categories: ordinary operational issues and emerging critical incidents. The first has to do with issues that are basically operational, pertaining to the effective running of the business. This is exemplified by the quoted respondents' voices which show that meetings were convened for the purpose of dealing with non-problematic situations, such as submitting and recording of funds made from sales during the business day. Further to that, they (meetings) provided a platform for discussing and deciding what the money would be used for, whether savings or replenishing stock. Some of these activities could be described as mundane matters that require no deep reflection to matters that involve a very low-level quality of reflection, unless there is a major change in the sales, requiring some serious revision of the restocking volumes. Some would go a step further to have other departments provide an update to the whole team about what is happening in their departments. This thought is developed in the section that follows.

5.4.1.2.2. *Debriefs or providing updates*

In addition to meeting to collect money and decide how it would be used, meetings were shown to serve as a forum where learners update each other on what is happening in their enterprise. In this case, the meeting serves the purpose of a debriefing exercise. In both the extracts above, meetings also provided a platform for learners to appreciate "how the business is doing" (BLS) through sharing updates with one another on what is happening in the business. In this debriefing forum, different departments shared with the whole team what is happening in the business. This is important because the business exists as a partnership and stakeholders need to be kept abreast of performance. They have a vested interest in knowing if the business is making profits or losses; hence it is important to "know the amount of profit made" (SGS). BLS further reports that in addition to the fact that the "sales personnel had to make a report of all the sales they made …" they would "… compile sales records … and also would help out with the balancing of books". Of course, in the process of helping with financial statements there is the opportunity to compare what they are making against their projections. If things are not moving in the right direction, they would

think of and implement corrective measures, as a product of reflection. This idea is developed in the next section.

The other way in which the debriefing can have an element of reflection is illustrated in the narrative about the marketing department. Their reports do not just share the sales made, they show that they pay attention to the number of customers who came, worried about the lower turnout, and share the things they did to increase product awareness or promotional strategies, "the other ways of attracting them to the business" that are different from the first ones. Posting flyers in more areas increases visibility of the enterprise; this seems suggestive of reflection in action, having taken place to devise new strategies at departmental level without the whole team coming together.

5.4.1.2.3. *Evaluating performance of the business*

The findings further revealed that meetings serve the purpose of evaluating the performance of the mini-enterprise and solving problems that are emerging. These meetings extend beyond mere updates but are more evaluative, since they may involve the perusal of records of the business to appreciate its performance (PTS); or more specifically, to "discuss product performance in the market" and "to discuss if … team members had experienced a problem throughout the day" (JMS). Across most of the interviews, reflection in the mini-enterprise meetings seem to be serving this purpose, resulting in addressing problems such as theft (MKS), credit sales and defaulting clients (PSS), low sales and profits (BLS), uncooperative team members, and so on. That means they identify problem areas and find solutions to the problems. BLS and PTS, quoted above, help us to appreciate how learners used the information they got from records. Learners attempt to take an evidence-based approach to assess performance using raw data as opposed to making assumptions. They compared the data from the records or financial updates received to what they had initially planned, and realised that things were not going in the right direction. It was a problematic situation that needed attention.

The meetings called for evaluation of the performance of the mini-enterprise seem to be more driven by problem solving. For example, BLS notes that they had to discuss "what to do" or devise a "way forward" to address the low sales they were making. This is followed by the changes they implemented. PTS describes an elaborate process worthy of attention. The discussion is a participatory sense-making process where they understand and deliberate on the implications or meaning of the problem they are faced with. Having correctly identified the problem, they then

expeditiously, through collective sharing of ideas, suggest possible solutions and make decisions on the actions to be taken as corrective measures to restore equilibrium in the mini-enterprise. As a case in point, PTS notes that the meaning of their specific situation would be that if appropriate action is not taken, their product (doughnuts) would go bad, and therefore a specific decision was taken to prevent this by taking the remaining products home to sell to family and neighbours. Evidence from teacher interviews confirms these findings:

> **Teacher Clayton:** … we even teach them meetings on how you conduct meetings in businesses. For example, in the marketing department, they should have a meeting and evaluate their sales where they talk about those challenges and come up with solutions on how to deal with that from their meetings.

The extract above confirms that learners are taught how to conduct meetings, and the meetings could serve the purpose of evaluating the performance of the business. In this process learners discuss the challenges they are facing and ways to ameliorate them. Therefore, it is plausible to conclude that meetings also served an evaluative and problem-solving purpose that facilitated collective sense-making in diagnosing the problems; identifying the possible consequences; brainstorming possible solutions to the problems; and making decisions about the actions to be taken to address the problems faced by learners in their respective mini-enterprises. Besides solving apparent problems, respondents reported "talking about how to help grow the business" (SGS) – that is, they came up with growth strategies. For example, many teams reported adding supplementary products to augment their main business idea after observing developing trends in their schools.

5.4.1.2.4. *Peer evaluations*

Another interesting purpose of meetings emerging from the findings is the observation that learners use meetings to evaluate one another's performance and give each other feedback on areas they think are not being done satisfactorily. JMS notes that without question, "Little hiccups hit along the way" that necessitate calling meetings to discuss "how best to improve our experience as product providers and as a collective".

Reflection as peer evaluation and learning from mistakes: The idea of having departments evaluate each other is an interesting one, and a depiction of learners experiencing reflection as peer evaluation and learning from mistakes. "Judging" implies looking at what is happening in the

enterprise and ascribing a value judgement as to whether what is observed meets expected or set quality standards or falls short of them. If it meets or exceeds the standards, then it is praiseworthy, needing to be encouraged. To the contrary, if what is observed falls short of meeting expectations, it has to be pointed out for corrective action to be taken. The respondent called it "judging" "but not really judging", implying that it was friendly feedback. The result of learners correcting themselves means that it is a learning opportunity, improving the quality of experience for the learners as they develop good entrepreneurial habits in maintaining a good-quality product or service. If customers are happy and retained as a result of the quality of the service, then it has the potential to positively impact profits. The ability to be teachable, take on constructive criticism without being offended, and learn from mistakes may also be developed through this process.

Reflection as a mirror of learners' values and principles: Interestingly, the example of an unhygienic production environment given above falls under ethical considerations in the production department. Among other ethical considerations in the "production department … when you produce the environment should be clean" (Teacher Clayton). Learners are expected to come up with and implement the ethical considerations in their mini-enterprise as required in the finance plan extract, the marketing plan extract, and the production plan extract of the business plan. It is possibly in the light of this that SGS reported that "as the production department, we made sure that the area that we are going to be making food for the customers is always clean at all times". JMS submitted that: "we had a responsibility to our community, our customers, as well as to ourselves. Our product needs to depict that we as an as an organisation, we are well prepared, and we operate under certain principles". These principles were demonstrated by maintaining good hygiene through serving "customers on serviettes, paper plates, [and] … offer refuse bags for them [customers] to throw them in". They would "also move around school picking up .... the school wouldn't be dirty or unhygienic because of our product". Based on this, it is plausible to conclude that learners' experiences of reflection included reflecting on issues relating to the principles and values they espoused, and aligning with what is taught and expected in the portfolio. Among other things, their reflective meetings serve the purpose of learners holding each other accountable to the values and principles of the enterprise.

5.4.1.2.5. *Structure and nature of meetings*

Another emerging sub-theme that helps elucidate learners' experiences of reflection in the MEP refers to the structure and nature of meetings. The way learners run their meetings provides

an opportunity to further understand how they engage in reflection as a collective. In my observations, some learners could not articulate the process of running meetings. However, all learner respondents described their business as having an organisational structure with a general manager and managers of different departments and their assistants. For most teams, the meetings were called and chaired by the general manager while a secretary took down the minutes;

> **PSS**: … there was somebody who was responsible for taking the minutes, the secretary, and the general manager was the one who was always chairing the meeting.

> **SGS:** When we held meetings, everyone was allowed to talk. Everyone was allowed to share ideas, and then we would analyse them.

In addition, in most of the meetings, "everyone was everyone was allowed to talk" and "share ideas" (SGS) in turns, implying that the meetings were mostly democratic. However, a little variation was observed with this respondent when they invited a neutral party who was not a member of the business to be their chairperson during a meeting:

> **SGS**: Okay, for the meetings, because we were learners, we kindly asked another learner who was doing Business Studies, but from a different class, we asked him to come in, you know, actually acted as board chairman. Like, so that there wouldn't be [a] rift between the three managers.

The justification for this procedure is to help ensure there are no rifts among the members of the enterprise, most likely since the incomer was a neutral party. This is quite interesting, because many respondents experienced conflicts of some sort. For some, the conflicts abated with time (MKS and JMS):

> **JMS:** When we started off there were a few hiccups, but along the road we found our rhythm and we are moving as intended.

> **MKS:** We had to sit ourselves down and say, 'Okay, guys, this thing requires teamwork, you can't always be right or wrong in a team case, you are with other people here. And moreover we are in this because you want to achieve one goal, which is making profit.'

The excerpts above show that some teams managed to resolve their conflicts and work together in unison. MKS reveals that the harmony did not come about by chance, but through

deliberate effort. They had to sit down and talk issues out among themselves. In agreement, JMS further submits that he "had to brush up on my conflict resolution skills; … time management skills; [and] … team building skills." Without these skills it would be difficult for conflicts to be resolved amicably. He also notes problems such as tardiness "where one is late by 5 minutes, one 10 minutes, one 7 minutes, one 8 minutes, and another 12 minutes, we will never start on time and the agenda will never be addressed", that could potentially lead to frustration and conflicts for those who are punctual. This would not only take one person committing to making adjustments, but the team as a whole, and personally taking responsibility; hence it was important for learners to talk issues out and move forward in unison as a team. The adjustments made by team members involve changing and discarding dysfunctional behaviours, a sign of growth and learning.

Others struggled as their "weekly meetings" were "mostly fights" (PSS) resulting from problems such as "people who don't want to do anything, [having] to pay up to forego our profits … [and for] selling people on credit they don't even know, and now they're refusing to pay" (PSS). OMS reported that there "… was more of complaining in the business than solving" during their meetings, and the conflicts were resulting from members who were perceived as not cooperating by "not doing what they were not supposed to do in the business" (OMS), for example, making excuses when it was their turn to purchase stock. The complaining was a way of pointing out problems "to promote cooperation in everything and [address] unhealthy relationships in the business". Others had conflicts only when it was time to share the profits or "the money at the end" because "the money not balancing and may be shortages some instances. …" (TMS). From all this, it is clear that different teams had conflicts during different times, such as when it was time to share the profits, while for others conflicts constantly characterised their meetings with every critical incident. Issues of non-cooperation and fights over sharing of profits at the end seemed to be the leading cause of conflicts within the MEP.

Although some of the issues were genuine, having the potential to cause tensions among team members, conflict situations seemed to be exacerbated by a lack of respect for one another and immaturity. This is confirmed by TMS, who submitted this as the reason, arguing that "sometimes when dealing with your age mates, it's really hard for them for others to comply." MKS seems to corroborate the case for immaturity as she recalls that on occasion they would have "arguments" and "people would end up with Jim over there, [...] holding grudges" when they were supposed to talk about matters "concerning the business" as a team.

Although different teams experienced conflicts during their meetings, some respondents, albeit in the minority, reported having good working relationships. For example, SGS does not report ever experiencing conflict, even though they would openly and freely "tell each other that we are not doing well", judging each other and taking corrective action in areas where they made mistakes:

> **SGS:** The group work that we had was good. I think no one stepped over anyone's toes, we were organised, and everyone worked well to achieve the goal of making sure that each and every one ends up profiting out of this small enterprise. Everyone was motivated to sell the hunger busts because it's something that a lot of children liked to buy. So, we made sure there was good division of labour, and everyone came on their turn ... there was no hostility among us.

There are several things that come up that give hints as to why this group worked together peacefully and reported no conflicts during their meetings: they were organised, everyone had a specific assigned role, and they took responsibility for their work. In addition, they had a clear goal of ensuring that they all benefitted from the enterprise. The potential to gain seems to have been an incentive for them. Adding to that, the good demand for their product was also positive motivation for them. On paper, all of the teams had a division of labour with everyone belonging to a department, and for many there was a goal and incentive to make profits, but they still had problems. Perhaps what made the most difference was the emotional intelligence and maturity of the groups that had less conflict. The emotional intelligence helped them to respond positively to negative feedback when they made mistakes. Their maturity allowed them to take responsibility for their assigned roles. The same is noticeable for groups where over time the dynamics evolved from forming, storming and norming, to where there was a tendency to take individual accountability for learning, growth and a change in behaviour plus a willingness to make compromises for the greater good of the mini-enterprise. Another thing that seemed to make a difference for teams that made improvements seemed to be good leadership by the general manager, a sense of direction, and the ability to rally everyone towards a common goal. For example, JMS above noted how he had to develop and refine his conflict management, time management and team building skills. As a leader, he had to make sure that "no one got to offload their responsibility on others, no one got a free ride," meaning everyone had to play their part and be involved. Besides taking the responsibility of calling a meeting to have the hard talk on the need the team to pull together, MKS reports that she

… figured out for you to be running this whole enterprise thing, you should be patient. You know, patient with the sales, if at all, you are working with the group, and you have to be patient with them. And also, you should have those relationship skills, you know 'cause, you'd be interacting with many people, and you have to be as free as possible with them. (MKS)

This shows that as a leader, she had to rise to the occasion and lead. She realised she needed to be patient and not expect quick results in terms of sales, and also be patient with her team. Patience means that mistakes will happen but need to be responded to with level-headedness rather than being blown out of proportion. Relationship skills and the ability to relate well to others was important for her to lead well and be free with everyone. She had to develop a thick skin so that "even though they might judge what you're doing. You just have to shut out the noise and just focus" on where she wants to take the enterprise and achieve their goals.

5.5. Reflective writing in the mini-enterprise report and its shortcomings

5.5.1. The mini-enterprise report as a description of learners' experience

In the broader emerging theme of reflective writing in the mini-enterprise report and its shortcomings, there is an emerging sub-theme of reflection in the mini-enterprise report as merely a description of learners' experiences. The mini-enterprise report, which is also Chapter 4 of the portfolio, titled 'Operating the Business', encapsulates learners' reflections on their experiences, albeit written in report form. It is written at the end of the production and trading period. Forty per cent of the learner respondents reported engaging in reflective writing after completion of the production and trading process. This view is also supported by teachers' responses, as shown below:

JMS: Okay, so the form of reflective writing, I would say, would have been our project report.
Teacher Boniso: … there is that opportunity for them to reflect in Chapter 4.

The excerpts above from both a learner and a teacher show that indeed Chapter 4 gives learners the opportunity to engage in reflection at the end of the project. The level or quality of reflection that is required and exhibited by learners in the chapter is discussed below:

RGS: In the report we had to include the details of who you worked with, what you did and how much you sold, in preparation of submitting the portfolio for grading at BEC [Botswana Examinations Council].

OMS: And we were supposed to compile all of the records … more like giving your business aims, as well as the records, and what actually happened.

From the learners' perspective, the report on the operation of the mini-enterprise at the end of the production and trading period was viewed as a "form of reflective writing" (JMS), and they were "supposed to write it as individuals" (PSS). In it they stated who they worked with and the roles and responsibilities they shouldered in the project, including how the business performed in terms of sales and revenues. OMS adds that the report included documentation or compilation of records and a description of what happened in the enterprise during operation. This corroborates the submission above relating to a description of one's roles and responsibilities, or the activities they undertook while the records provide tacit evidence of such involvement in the enterprise. Teacher respondents corroborate this descriptive aspect of the mini-enterprise report and further elucidate it in the following ways:

Teacher Victoria: Each learner will write the position that they were in, the department that they worked under, the roles that they carried, and then they'll also prepare proof of the record keeping ..., and they show the skill of record keeping.

Teacher Miller: They were writing a very short report of the daily activities that they carried out. What challenges they encountered, and what records they used, as a way to show that, 'this is what I have done'.

Teacher Moore: The documents are determined by the position the learner held. […] It's not long, most of the schools submit just one document. Yeah. And then their small write-up, half a page. 'I was doing this, this, this ...'

Most teacher respondents revealed that at the completion of the trading period, "learners report on how they operated the business" (Teacher Boniso). From the interview excerpts above, the report is not just general, but very specific to the department the writer served in, describing all the activities (roles and responsibilities) they carried out in that department. They are also required to provide evidence of their engagement in the enterprise. This evidence could be a document

produced during production, such as evidence of record-keeping in the specific department the learner served in. An example here could be a record of daily or weekly sales if one was in the marketing department, or a statement of financial position for someone in the finance department, or a record of daily/weekly production output for someone in the production department.

5.5.2. Confusion on the depth of reflection in the report

There seems to be a consensus among both learners and teachers who participated in the study that the report is descriptive in nature, delineating learners' experiences and activities they embarked on during the running of their enterprise. However, there is a need to probe the extent to which the report requires learners to move from mere description to evaluation of their experiences. The question is, to what extent does it engender deep reflection that extend beyond mere reporting of what happened?

> **Investigator:** In the mini-enterprise project, is there a requirement to reflect in a more deliberate and systematic way for learners?
>
> **Teacher Boniso:** Not much, but Chapter 4 gives learners the opportunity to reflect on what they did. It's not enough....

Also notable is that the learners are required to state the challenges that they faced, but "they don't write how they solved the challenge" (Teacher Miller). Pressed on whether the report was evaluative, another teacher responded, "No, it is basically reporting that, I was the finance manager. I received the money from the marketing department after the sale. I recorded, prepared statements …" (Teacher Moore). Most teachers agreed with this assertion, indicating that this chapter is just descriptive and not evaluative by requirement.

However, some of the learners reported that it was when they were writing the report that they engaged in reflection. For example, RGS reports that it was at the time they were writing the report that they "realised that we could have increased the output" (RGS). PSS also shares that having missed opportunities to come up with proper solutions to protect their enterprise from defaulting and unfaithful debtors, they only thought about the solutions when they were "… doing the reflection part of the course," which was when they were writing the report. As shown below, he also adds that in the report they recorded their experiences and what they could have done or what they would do next time when faced with similar problems:

> **PSS:** Honestly, speaking, it was just something that we thought of when it was only late. So, we just wrote to it under the challenges that we faced … in the portfolio. So it was under the challenges that we are supposed to write about them, the challenges that we faced. So, we wrote about the challenges. And after that, we were required to write about the solutions to those problems next time you run a business.

Other learner respondents seem to corroborate the above statement:

> **JMS:** Project reporting entailed what we went through as an enterprise, from the hustles we experienced to how products performed, to the … challenges experienced [and] the opportunities we encountered along the way.

> **OMS:** We were supposed to, to give the positive as well as the negative [experiences or] challenges we faced, as well as what we gained from the business. And that was it, the challenges and what they led to.

The reference by respondents to writing about what they "went through as an enterprise" and the hustles, performance of the products, challenges and positives or opportunities are suggestive of engagement in reflection. This is evidence that their understanding was that the report should be both descriptive and evaluative of their experiences of the enterprise. Whereas stating the challenges experienced may be argued to be descriptive, weighing the experiences according to whether they were positive or negative entails some form of evaluation. Explaining "how the products performed", and thinking of solutions to challenges faced that could have been implemented, or that could be implemented if learners were to undertake a similar project in the future, and distilling lessons ("what we gained") learned from experiences, are all evidence of evaluative reflection exercises that rank higher than mere description of what happened in the enterprise. This seems against the understanding of the majority of teachers about what is expected of learners when writing the report. The question could then be, what were the original intentions of the designers of the MEP regarding reflection in the report? Did they intend it to be merely descriptive or more critical, and what are the implications of each intent in terms of engendering deeper entrepreneurial and reflective learning? This brings us to the next major point – that the MEP was conceived and designed by the BEC and serves as an authentic assessment instrument or examination paper.

5.5.3. Deep reflection an oversight by the developers of the mini-enterprise project

Learners reported that the portfolio and more specifically the report about the operation of the business was to be submitted to the BEC for grading. In the light of this understanding, I explore what this implies for the project as a whole, and more specifically for reflective learning in the mini-enterprise project:

> **RGS:** In the report we had to include the details of who you worked with, what you did and how much you sold, in preparation of submitting the portfolio for grading at BEC [Botswana Examinations Council].

> **OMS:** And at the end of the year, it [the report] was going to be submitted to the Botswana Examinations Council.

The respondents above note that the report was to be submitted together with the whole of the portfolio to the BEC for grading. Far beyond being a pedagogical approach, the findings reveal that as it is implemented in the Botswana junior secondary education system, the MEP is also an assessment instrument driven by the BEC. For this reason, it "is known as Paper 3" of the Junior Certificate Business Studies examinations. This means that the BEC determines how the project is implemented, starting from the development of business ideas (Chapter 1), market research (Chapter 2), business plan extracts (Chapter 3), the requirement to "operate for usually a minimum of six weeks" (Teacher Moore), and the report on operation of the mini-enterprise (Chapter 4) of the portfolio. Another teacher confirms this, further adding that it is "not in the syllabus" per se: "[The Department of] Curriculum [Development and Evaluation] has developed the syllabus … that we are supposed to teach [but] the mini-enterprise is something that is implemented by BEC, which was not implemented by curriculum [i.e., the Department of Curriculum Development and Evaluation]" (Teacher Miller). This is quite a revelation and means that if the BEC ceases to use it as an assessment instrument, Business Studies teachers do not feel any obligation to engage learners in it, especially in the way it has always been done, if not neglecting it totally. They would just "teach the topics from the syllabus, the way they will demand us, without running out the mini-enterprise" (Teacher Miller), especially taking into consideration the stress and pressure it puts both teachers and learners through. This is evidenced by many schools no longer implementing it when the BEC suspended it and substituted it with a written paper in 2022:

> **Teacher Victoria:** It's not enough. I think it would be best if learners write down the challenges, and then come up with ideas on how they can make improvements and some recommendations on

things to do. I think it's always best to look back at where you failed and how you can correct that, because it will show the skills that you had to solve those problems that you encountered.

With respect to reflection, based on the teachers' feedback above, it seems there is an oversight on the part of BEC regarding reflection in Chapter 4 of the mini-enterprise project. The report is more descriptive rather than requiring critical reflection. By virtue of the guidelines on Chapter 4 being a form of descriptive reflection, as noted from teachers' responses, and not providing pointers that require the report to include reflection on the challenges faced, the solutions developed and implemented, as well as take-away lessons from such experiences, they omit an important element that could benefit learners in terms of entrepreneurial learning in the MEP as an entrepreneurial activity. This omission makes it difficult for teachers as implementers of the curriculum to expect learners to engage in critical reflection on their experiences of operating the business, when assessment does not clearly and overtly spell it out as a requirement or an assessment outcome. It is not enough that it is merely descriptive – it should at the very least be more evaluative and critical of learners' experiences, problems encountered, solutions developed, and lessons learned.

5.6. Learners' experiences with teachers' support of reflection

5.6.1. Experiencing teachers' supervisory role in portfolio development

Learners' experiences in the MEP are tied to and dependent on the Business Studies teachers' supportive role as teachers, facilitators, and mentor-coaches during the project. Teachers play an invaluable role in the MEP to make learners' experiences with the entrepreneurial activity more meaningful. First, they play an important role in teaching learners entrepreneurship content before they can commence the setting up of the mini company. By the time learners start the project, from business planning and eventually operation, they would have covered all the entrepreneurship content that serves as background knowledge for both the development of the business plan and its implementation:

OMS: They [teachers] played a role in terms of teaching, because that was in the business project, right. But when it came to the practical part, we're supposed to do it ourselves, do what we're taught already.

AMS: … we tried by all means to apply what we really were taught. […] Since we learned the theory at first, and then we covered the practical, so everything that we learned, we made sure we did it step by step to make sure we really maximise.

From the excerpts above, it can be seen that teachers taught content or theory that laid the foundation for the practical aspect of that entrepreneurship subject matter. As a result, when working on the portfolio and eventually selling, learners were applying what they were taught in a more learner-directed and learner-centred way. JMS corroborates the assertion above, adding that "we implement what we learn in class because by the time of us, actually starting our enterprise, we had already done everything that needed to be done [in the operation of] a small enterprise." In this sense, teachers play a key role in preparing learners, equipping them for successful business planning and implementation:

> **Teacher Boniso:** And mostly we teach first ... You'd find that in some schools, you agree as teachers to run the project first, so that it's easier when now we do the theory. But in instances where you do the theory first, it still helps learners in that when they are doing the practicum, they have somewhere to refer to when they're doing their project.

> **Teacher Sunday:** We … taught the topics before they start practising. Let's take an example, like good customer service, if they experienced such an incident, whereby the customer comes to them to complain, then they are able to apply those steps as to how to handle the customer complaint.

Teachers quoted above confirm learners' submissions that one of the major roles of teachers is to teach entrepreneurship content before learners start working on their project. This, they argue, has the benefit of equipping learners so that they are ready to handle the challenges they may encounter when operating the business. However, Teacher Boniso points out that there could be variations, depending on the schools, where the project may precede teaching. This arrangement is argued to have the benefit of making the theory more relatable for learners and easier to understand, based on the experience they already possess. Adding to the teaching aspect, when learners start developing and writing up the business plan, teachers supervise the business plan write-up process and guide learners appropriately, from the business idea generation and selection chapter, to the market research chapter, business plan extract chapter and operation chapter. Learners' experiences with their teachers' supervisory role are noted below:

> **RGS**: She was helping us with … our market research [report] and with the write-up as a whole by making comments for corrections in the portfolios.

PTS: Our teachers also played a huge role, guiding us through the project, showing us how we should run the business, how we should keep our records, and how financial statements are made. How uh everything about the business should be done.

BLS: I would say she gave us ideas on what to write on our reports.... she was sure that we used the right words. Like basically our reports were a proof ... 'cause times whereby she should take them, go mark them and make recommendations on where to fix it … make corrections.

The excerpts of the learners' responses above show that their teachers guided and supervised them in development of the business plan by reading learners' work. This involved coaching or guiding learners through the whole portfolio write-up process, assessing it and making recommendations for improvement so that learners are better prepared to run their enterprises. Teacher Moore corroborates this, reporting that he supervises all aspects of the portfolio. For example, during market research, learners must prepare questions and submit them for feedback:

Teacher Moore: I have to see if the questions are right first. We can now go and research or go and fix here and there ... yeah. So basically, that's what you do every step of the way.

This supervision extends even to the report that comes at the end of the production or implementation phase of the project. The report itself is reflective, as learners are required to write about the roles and responsibilities they shouldered in the enterprise and provide evidence of such engagement. Furthermore, they also reflect on the challenges they faced and how they dealt with them. So teachers help learners to capture their experiences correctly (for example, ensuring they "used the right words") in line with the requirements of the curriculum planners and examiners by instructing, marking, and making recommendations for corrections.

5.6.2. Experiencing teachers' supervisory role in the operation of the enterprise

After the development of the business plan, learners experience teachers' supervisory role in the implementation phase of the business plan. Teachers are chief sponsors and liaison between the learners and main stakeholders in the schools (school management) and outside the school (business community) where necessary. One learner saw "the main purpose of the teacher aside from reflection, aside from the side of reflection was that he was really just there to facilitate us. He was just there to ensure that we were all there learning. That was his responsibility" (JMS). Drawing from this response, Business Studies teachers facilitate the operation of the mini-enterprise and

ensure that learning is taking place as learners work on the MEP. In this learner's perspective reflection is the lesser purpose, an aspect in the larger whole encapsulated in the grand purpose of facilitating learning. Building on the idea of "facilitating us", the findings show that teachers engaged in a variety of activities that learners experienced during the running of their enterprise. Examples of these are presented below;

> **RGS:** She was helping us with getting supplies, she also played a role of making sure that we have change … She also supervised the production and selling of hunger busts.

> **KWS:** The teacher ... she was the one who is responsible for the money. That is, after selling we gave her the money and she noted down … how much... [it was].

For most respondents, it seems their teachers' supervisory and facilitatory role was focused more on the ordinary day-to-day activities of the mini-enterprises, such as helping with the purchase of supplies, supervising production, and ensuring learners have change to facilitate transactions of buying and selling. These are not by any means trivial activities that teachers engage in, as they bring in a wealth of knowledge and experience to ensure that learners' experiences result in deep learning while running the enterprises more effectively and efficiently as novices:

> **Teacher Boniso:** My role as a teacher will be to guide the learners, to facilitate in terms of helping the learners manage the resources, source transport for them, if they need to go and buy a stock ... being there ... even for helping learners with the storage, if there is need to store if they are selling a product .... Also, even in terms of accountability, record-keeping, and assist whenever there will be need to chip in as a teacher to assist. And also solicit support from management so that a learner can be able to freely go around school selling, without being intimidated, as you know, school rules do not allow learners to sell.

The teachers also played an important role in helping learners deal with the challenges that they faced. They helped learners find solutions and also went the extra mile to be a part of solutions. For example:

> **BLS:** … there was a time when we were short of stock money [so she] offered to give us a helping hand by lending us some money for us to restock. Okay. And then from that day after when she became the keeper of the money, okay. Like she started saving it for us after that.

In the above example the teacher invested personal resources to make sure that the business does not collapse and also handled the funds to prevent whatever had caused a shortage in funds. In a similar vein, TMS reports that when they had financial-related conflicts at the end of their MEP, they engaged their teacher to solve the problem and broker peace:

> **TMS:** We, we called our, our teacher to try be a mediator in the whole situation. As I don't remember how, or what conclusion was brought. But there was, we did call a teacher to come and assist with the situation. The problem was just, I think it was miscalculation, not that any money was stolen or anything.

> **Teacher Boniso:** Also, [my duty is to] to help them in human resource management, because even though there'll be managers, learners themselves, but they still need an adult voice to help them manage each other.

The role that arises here is that of a mediator or arbitrator to help learners find the root cause of their problems while also finding solutions. The teacher's voice quoted above confirms that teachers have a role in helping learners to work together peacefully and cooperatively. Perhaps the need for an adult voice is demonstrated in the next quotation, where the teacher was called in on this particular situation as an authority figure, to help reconcile contradictions between the financial records and cash in hand, thus helping them to solve their problems amicably:

> **TMS:** But you know, sometimes when dealing with your age mates, it's really hard for some to comply. So, when introducing a teacher, that's when we were able to control the situation. Also, at that stage in our lives, we were not mentally mature to deal with such situations...

The role of an authority who can bring level-headedness to situations that could turn volatile if not well managed is key here. This is made even more necessary because learners as age mates may not respect each other enough to solve issues amicably, due to issues of maturity associated with the developmental stage of adolescence. Having presented the findings of learners' experiences on engagement in their daily experiences in the MEP, I now engage more deeply with the reflective learning or practice. That is, the role of teachers in facilitating reflective learning in their interaction with learners in their attempt to cope with episodic disjunctural situations that required reflective thinking and acting.

5.6.3. Experiences with teacher support in learners' reflection

5.6.3.1. Different ways of supporting learner reflection

The role of teacher with respect to supporting learner reflection is revealed when learners are faced with problematic situations that may require reflection in order to address them. The findings show that teachers seem to approach these situations in ways that are at diametrically polar extremes to each other. At one extreme is what I would term *hovering teachers,* and at the other, *distant teachers.* The hovering teachers watch learners too closely and do not give them enough room to engage in reflection on their own. They seem to struggle between maintaining a fair balance between the reasonable support of allowing proper learner-directed reflection and taking over the whole process, choking reflection in the process. In contrast, the distant teachers are aloof, seemingly cutting themselves off from the reflective process and not giving learners any support on reflection. With the aid of respondents' voices, these approaches are presented in more detail below.

5.6.3.2. The phenomenon of hovering teachers

The hovering teacher is always hovering too close to learners and their experiences and ready to give solutions to their problems without giving them opportunity to reflect and come up with their own solutions. They do not allow opportunity to scaffold reflection through probing and prompting learners' reflective thought process. They are too quick to provide solutions to the learners:

> **SGS:** Like we didn't come up with our own solutions, we asked him for solutions. […] I can say that the solutions that some of us had in mind, we didn't just say them out, we wanted to use our teacher's solutions first. And then because we were analysing information, we looked at our teachers' solutions together with ours, and then we took [the one] which was best, which most of the times we took his ideas.

The narrative above shows that the biggest problem of teachers hijacking reflection by providing learners with their solution is that even when they have their own solutions, they just want to hear from the teacher and take his or her solutions. It creates a dependency syndrome rather than entrepreneurial attitudes of independence, autonomy, risk-taking and learning from own mistakes. In addition, the result is that learners risk becoming more reliant on their teachers' solutions rather than developing confidence in themselves and their critical thinking and problem-

solving skills. Power dynamics also seem to come into play, in that even when they deliberate and brainstorm solutions, the learners hold the belief that the teacher's solution is better. One can only wonder what would happen if learners rejected the teacher's solution and stuck to their own. How would they face this authority figure, especially within the context of the African culture, where elders are deemed almost infallible? At the heart of this approach to supporting and facilitating learner reflection, the results show that there is a gap on the part of teachers regarding how to facilitate and scaffold learner reflection in the MEP and possibly other experiential learning approaches to learning:

> **BLS:** Um, she would listen to what we have to say. And like I've said before, she would make recommendations. ... like give us advice on what she thought would be best for a company.

> **SGS:** Our teacher was always there at all times during ... the running of the business, during business hours. He saw everything but he didn't say anything. So, when it came to problem solving and stuff, he was our advisor. So, every time when we had a meeting, he would, he would wait for us to propose … something we observed that we think might have affected the business in a negative way. He waited … he didn't feed us problems, he waited for us to know what our problem [was], to acknowledge what our problems were. And then he would say, 'I've also seen that, and this is how I think the problem should be solved.'

The excerpts above show that the learners see and experience the teachers' role as that of an advisor when dealing with problematic situations. For BLS the teacher listened to learners' deliberations before making recommendations. Having listened, like a medical practitioner, it seems the intention was listening to come to the right diagnosis. She would then prescribe what she thought is the best solution. This experience seems similar to that of other learners, as shown by the extract that follows it. The teacher observed what transpired during operation time and patiently waited for learners to have a reflective meeting. Even during the meeting, the teacher is patient to see if the learners noted something that was problematic in the business. This waiting is commendable, since it shows how much learners are paying attention and able to identify potential problematic situations by themselves. Having made such a discovery, it becomes a teachable moment, especially if learners could brainstorm solutions and choose the best that makes the most business sense. However, while one would hope that the teacher, having exercised such immense patience, would give learners opportunities to engage more deeply with the problematic situation, she took over what could have been a moment of epiphany and learning led by the learners, by

quickly making recommendations as to what she thinks is the best course of action. This approach is corroborated by findings from the teacher interviews. The following narrative of an event that a teacher helped solve with learners is a good example:

> **Teacher Miller:** So, at some point, those who were supposed to clean after production didn't turn up. So now those who were producing did the cleaning. Then after cleaning, they said, 'Sir, we are going to call them so that we reprimand them for not doing their work.' And when those ones were approached, they refused. And these ones who cleaned made some conclusions, which these ones did not like, saying, 'No, at the end of the trading period, we're not going to receive equal profits.' That was an issue now, because it was involved in money. I had to say, 'No, no, no, no, rather than saying they are not going to receive equal profits, why can't we say, now we will start receiving wages? These wages, we don't receive these wages on the work day but at the end of the trading period. So rather, on that day, we will register that they have not worked. So, they are not entitled to any wages. So, their wages will be less than your wage, because now you've worked.'

From the narration above, there was a clear case of absconding from duty and non-cooperation by some learners. When they were approached, they remained non-cooperative, and their peers took what they thought was the best course of action. However, the teacher feels their decision is not appropriate. His emphatic 'No, no, no, no' shows that he disagreed with the conclusion the learners arrived at. However, instead of leading the learners through a process of brainstorming alternative solutions, perhaps through the Socratic approach of questions and answers, where they think of different solutions and their pros and cons, he just suggests what he thinks is the best solution. Granted, the solution could be good, but the learners are not taken on board to appreciate why this solution is better than theirs. The teachable moment or opportunity is also missed by the teacher, where links could be made between what was learned in class as theory and practice.

5.6.3.3. The balanced teacher

The findings show that other teachers attempt a more balanced approach to supporting and facilitating learner reflection and problem solving. They attempt to engage learners in a discussion of some sort and try to refrain from feeding learners solutions to problematic situations upfront,

which may circumvent reflective thinking and acting in the process. The extract below illustrates this:

> **JMS:** And if at all we had a problem that we had encountered, he did try to evaluate during the running of our enterprise with us. What he did was like, 'I took down some notes based on your running of the enterprise … I acknowledge that you tried. But the problem such as this … I feel like it would have been better handled if you had done this, and what is your take on that? You as Agnes [not real name] ... you as so and so, what is your take on that?'

This case seems better, because the teacher observed learners reflecting on their own problems by themselves, making decisions and acting on them without interruption. He then evaluates the process, after effect, with them. This is commendable because the teacher is neither aloof nor too invested to the extent of choking learner autonomy. This allows learners to develop independence in their judgement and also to learn from their mistakes. However, it looks like the teacher is trying to point out what he thinks would have been the best course of action, when he tries to reflect on the experience with learners. The approach of leading from the front with his own alternative solutions and trying to get learners' views does not pass as effective engagement, because it is more teacher-centred and -directed than learner-centred and -directed. It is problematic whether the teacher does it during reflection, when learners are still running the enterprise, or after the fact when the teacher attempts to reflect on action with learners about how they handled the problems they faced:

> **Teacher Moore:** They can't just come and say we don't know if he has misused money or lost it. I would have two or three questions for them. Like, 'Are you saying he misused the money, or he lost it? What did you do regarding the matter?' They must have answers. They already know. Then at the end, that's when I can give my verdict, if it is necessary. In the process of discussion, they might say this is what we will do.

The narrative above demonstrates that some teachers try to put the running of the enterprise, reflecting on problematic situations and coming up with solutions in the hands of the learners. Here the teacher wants learners to do their due diligence in engaging with the problem and verifying what the issues really are before reporting them to the teacher. Unlike in the previous cases of leading from the front with their own solutions, the teacher rather probes learners for what the problem really is, and the solutions or actions they took to solve the problem. At the end, although

he may give advice, learners can still arrive at their own solutions. This means that the discussion would have opened up a world of possibilities that learners did not see before engaging with their teacher, and could still come to a moment of epiphany without the teacher forcing his way.

5.6.3.4. The phenomenon of distant teachers

On the other side of the coin, findings show that there is the absent teacher phenomenon which manifests itself in teachers who are too aloof and disengaged in both the running of the enterprise and the reflective process itself. They leave learners to struggle with the challenges of the mini-enterprise by themselves like abandoned orphans:

> **OMS:** Aah ... she was lecturing. She just gave us more of the idea of what we are supposed to do when we're writing the report, when we're supposed to write the report, and she would ask how's the business going.

> **PSS:** I cannot talk mostly about the reflection part … she ordered the pies that we requested her to do because they definitely cannot be getting them, maybe asking for my permission from a lesson that we are into going to order pies. She didn't have much involvement.

> **MKS:** No, sir! They were not [supporting learner reflection] because even as for them, I just felt like they just wanted to get done with the whole project so that they can give us marks.

> **KWS:** She didn't do anything. She just stood there then said ... 'I taught you, it's now your turn.'

In the extracts the despondency of the learner is clear, describing the teacher's role as "just lecturing" on the reflective report and stating that she would just "ask how the business is going". This seems like someone distant and uninvolved in the reflective process, because it would be easy to know what challenges learners are dealing with. The statement "I cannot talk mostly about the reflection part" is also telling about the respondent not having much to say about their teacher's support of reflection. The teacher limited her support to daily operations such as assisting with the purchase of stock. What this data seems to suggest is that some teachers did not appreciate the value of reflection enough. They did not make effort to engage learners in reflection and help scaffold reflection to engender learning. They saw their role as ending with the ordinary tasks of supervision, such as helping with buying stock and keeping money for learners. Essentially, they kept their

involvement very low or almost non-existent in the running of the enterprise, let alone facilitating reflective practice.

This absence and aloofness created problems for some learners. As a consequence, some learners did not really appreciate the value of engaging in reflective meetings as an important aspect of harnessing learning from the experience. MKS describes the attitude of their teacher as that they couldn't wait for the project to be done, just like their learners. It is not surprising that this attitude was rubbing off on learners. Elsewhere, she notes that as a team they were not really "interested in reflection" and their experience "was not wholesome", so they did not engage in reflective meetings unless circumstances in the enterprise really forced them to. Some learners like PSS really struggled to come up with meaningful solutions to their problems. He laments that "Honestly, they were not resolved at all. We always went home with us [emotions high], sweating!" Even when they had meetings to help each other find solutions to challenges they faced, these always metamorphosed into fights and would end with high emotions but no solutions to problems. PSS despondently laments:

> **PSS:** We were kids, mostly 16–17 and some 15. So, I believe the presence of a teacher … even if she showed up and sat there not really participating, her presence would have made the whole thing better because maybe she would have had to chip in when some of us are losing it.

PSS's point above further highlights the value of teacher presence, even when the teacher plays no active role in collective reflection and problem solving. He does not want the teacher to run the show but that they as learners are in the thick of things, working to determine the direction of their enterprise. Notwithstanding, he acknowledges that the absence of their teacher at their meetings was not helpful. Her presence would have brought restraint, level-headedness and a call for calm when emotions run high.

Unlike in the general supervision of the MEP, some of the teachers did not seem as confident when it comes to supporting reflection during operation of the mini-enterprise. Therefore, there seems to be some credibility to the view of learners that some of their teachers were distant and aloof when it comes to supporting reflection. The teacher interview extracts presented and discussed next corroborate learners' submissions made above:

Teacher Moore: When they are running the mini-enterprise that's when you are sure there are no meetings ... Because one learner would say, 'I will pop the popcorns early in the morning'. The other would say, 'I will join them for packaging'. Others would say, 'We will rush to come and sell'.

Investigator: Usually when do they talk about these things, is it during the lesson?

Teacher Moore: It's not like they would be sitting down and talking. No. ... Maybe when they are just walking, coming from getting their meals from the kitchen.

This extract perhaps indicates why learners sometimes feel neglected as they operate the MEP, and do not even make time to reflect meaningfully on their experiences. First the teacher emphasises the impracticability of learners having meetings. His learners talk about the project when they meet the teacher in the corridors, and there seems to be very little organisation or deliberate attempt on the part of the teacher to create time to discuss the project during class time. This is illustrated even further in the next line:

Teacher Moore: And then they come and say, 'Please come and open the lab'. Or maybe you as the teacher asking, then they would [say], 'I can come, sir!'

This statement buttresses the point of a lack of organisation, and a laissez faire and lackadaisical leadership approach on the part of the teacher. Learners come in their own time, unexpectedly, or the teacher just asks them about their availability without an organised way of working. When things go this way, and they are forced to discuss the project in corridors, possibly when other learners are absent since it is not a scheduled meeting, it speaks volumes about negligence on the part of the teacher. This negligence is not just about reflection, but also about the general operation of the enterprise. The teacher then wonders:

Teacher Moore: Where do they get time to reflect? Because reflection says, 'No, I absorbed this. Now my mind is processing this. And I'm thinking this way. Maybe I should change and try this way.' They don't have that time.

As much as the teacher may have a valid point that reflection may require a lot of time, which is already hard to find, it does not seem that he is committed to creating that time for learners,

or even doing so during some of his lessons if learners cannot find it outside of class. He just feels absolved by the argument that there is no time.

5.6.3.5. Training on facilitating and supporting learner reflection

Based on the polarity of learner experiences in terms of teacher support and scaffolding of their reflection, a worthwhile question to ask is whether teachers received the necessary support during their teacher training to support learners. Teachers' views seem to differ in this respect. A few teachers believe their training prepared them to facilitate and support learner reflection in the MEP, while the majority of teachers believe otherwise:

> **Teacher Moore:** I think it is fair enough to say we are prepared for this, but the situation on the ground is different.

> **Teacher Boniso;** Uh ... much of it is experience [rather] than the training. Because that is the business, business skills, business environment is a very fluid environment. It's not standard ... what was happening when I was in college is not what is happening today. So, training helped, to some extent, at most of it is more of experience and exposure to the business world, than college training.

> **Teacher Victoria:** We learnt nothing. I think about the mini-enterprise as a whole.

> **Teacher Sunday:** I wouldn't say it prepared me much, but it's one that at times we are using our experience … But honestly, I wouldn't say it prepared us that much to help or equip learners how to assist them [with reflection].

The first quoted respondent believes that the training was sufficient, but the dynamics in the school environment are different. As a result, teachers may not facilitate and support learner reflection to the best of their ability. Teacher Victoria dismisses learning anything, not just about reflection, but everything to do with the MEP. The other two teachers believe that their teacher education training did not do enough to prepare them to help learners with reflection. Most of what they know was developed through experience gained over time in the business world rather than college training. This seems to suggest that teaching learner teachers in business education how to facilitate learner reflection may be overlooked in the colleges and universities. The result of this is that teachers have a challenge in teaching learners involved in the mini-enterprises how to reflect on their experiences effectively.

5.7. Conclusion

This section focused on the findings regarding how learners experience reflection in the MEPs. The findings reveal that reflection takes place differently at different phases of the project. At the beginning students engaging in pre-action reflection, during implementation they engage in conversational reflection, at the end of the project they engage in individual reflective writing. It emerges that meetings are the main platform for learner reflection even different teams have different frequencies of meetings during the implementation of the project. In these meetings, learner may engage in mundane operational aspects of running the enterprise, sharing updates, reflecting on how to solve emerging problems and evaluating each other's performance and giving each other feedback. The last two are clearly lean more towards reflective thinking and acting. It also emerged that there is confusion on what should go into the reflective writing at the end of the project. However, there is concensus that it is largely descriptive, lacking high quality critical reflection of the mini enterprise experience.

It also emerged that teachers serve as facilitators and guides for learners, providing advice on the correct way of doing things in business. As the business plan or portfolio and the operation of the mini-enterprise feed off each other, with the business plan as a guiding tool and evidence of implementation for examiners, and implementation providing actual data that can be compared to the forecasts, teachers play an important supervisory role both in their development and continued updating and revision. Teachers seem to do relatively much better in terms of guiding the portfolio development, and the setting up and general operation of the enterprise. However, challenges and differences emerge on how difference teachers support and facilitate students' reflection. Some take a distant laissez faire approach, some almost take over not allowing learner autonomy in reflective thinking and acting while a few are able to maintain a fair balance in allowing learners to be autonomous and giving support when necessary.

CHAPTER SIX

ENTREPRENEURIAL LEARNERS' APPROACHES TO REFLECTION

6.1. Introduction

In the previous chapter, the findings reveal that learners get to accumulate a myriad of experiences as far as reflection is concerned. Their experiences of reflection include engaging in some form of pre-action reflection prior to the start-up of the operation phase of the MEP. Also, they experience much of the reflection in the business meetings where they deal with different problems that their businesses face, in a democratic set-up where everyone is allowed to share their ideas. The findings also revealed that learners engage in reflective writing at the completion of the project when they report on their experience. Although some learners use this report, which is the last chapter of the portfolio, teachers disagree as to what it should entail. Many of them see it as a mere report that should not contain an evaluative discussion of problems faced and how they were solved. Lastly, a prominent theme is how learners experienced the role of teachers in supporting reflection, where the findings revealed that only a minority of teachers balanced offering reasonable support for reflection and sufficient distance so that learners could reflect on their own. Other teachers' support was either skewed towards over-assisting, where learners experienced teachers solving problems for them, while at the other extreme learners experienced teachers who totally distanced themselves from providing any form of support and scaffolding of reflection. In this chapter, I present the findings of how entrepreneurial learners engage in the process of reflection. It seeks to answer the second research question, the objective being to find out how learners engage in reflection. Quite logically it builds on the previous chapter that focused on the 'what' question, which sought to delineate learners' experiences of reflection.

6.2. Critical incidents and reflective coping

Critical incidents are one of the emerging themes linked to the process of reflection. In the current study crisis events stand out as triggers of reflective thinking and acting. The findings show that learners experienced both negative events and positive events that somehow forced them to engage in reflective thinking and acting of some sort. The negative events I have labelled as 'crisis events' and the positive events I have called 'entrepreneurial opportunities'. What is common about these critical incidents is that they stand out from the normal flow of the business as an episodic problematic situation until resolved (i.e. crisis events) or until the time of their natural lapse in the

case of entrepreneurial opportunities, and the business returns to normalcy. It is worth noting that some of the problems or challenges that learners face are not episodic, but continuous and embedded in the very nature of the MEP and its situatedness. An example here is the challenge of a shortage of time and schedules that conflict with other practical subjects and even teachers.

6.2.1. Crisis events as triggers of reflection

6.2.1.1. Entrepreneurial discontinuous events and context-bound challenges

Most learners reported that they experienced different crisis events during the operation of their enterprise. These crisis events are problematic situations that had the potential and tendency to disrupt the normal running of the mini-enterprise, and in extreme circumstances the potential to lead to loss of business. For this reason, I have called them entrepreneurial disruptive or discontinuous events. Examples of these crisis events emerging from the findings include conflicts and heated disagreements among peers, incidents of theft, failure of suppliers to deliver ordered stock on time or not make deliveries at all, credit sales-related issues, money shortages and discrepancies between financial records and cash in hand, a shortage of time and the pressure of competing practical subject areas, conflicts and uncooperative team members.

6.2.1.2. Issues of supplier failures

Some learners reported experiencing incidents of suppliers delivering goods very late and sometimes not delivering at all:

> **JMS:** There was a time where initially we decided on this other bakery, and they had this thing of bringing the required hotdog rolls very late. That was a problem, because without the hotdog rolls business could not commence, as they were our main product.

> **PTS:** I think the other problem that we encountered was that sometimes the bakery would not deliver the doughnuts to us.

The crisis event faced by the first respondent's team resulted from the tardiness of their supplier. This was a crisis event because it disrupted production or the normal flow of events in the enterprise, and had the potential to result in negative outcomes for the enterprise. The problem faced by the second respondent was that of inconsistency on the part of the supplier. In both situations learners engaged in meetings to discuss ways to solve the problems they faced and come

up with solutions. In JMS's case they engaged in a reflective process to change suppliers, while PTS's team had a 'plan B' for when their supplier failed them. PTS also reports that this incident taught him that:

> … every business encounters challenges, but as an entrepreneur you should know how to deal with such instances. And entrepreneurs should be thoughtful for and have the capacity to think outside the box; they should be able to take decisions and plan ahead of time to prepare himself or herself for the threats that the business might face in the future.

This shows the role that crisis events may play in triggering reflection and action and providing learners with the opportunity to draw lessons from experiences that are applicable to the life of an entrepreneur in the real world.

6.2.1.3. Incidents of theft

Another common incident that learners reported was that of their stock being stolen from storage. This was a critical incident because it had disrupted business:

> **MKS:** So, they were all stealing our pies.
> **RGS:** I do remember certain times we would hear that hunger busters, probably one or two, have been stolen...

The case of MKS was discussed earlier and will be discussed again in detail later. It is one of the best cases to show that crisis events can trigger reflection. In her own words, she reported that they "never sat down and reflected on the failures or the achievement" of their business until a time when she was worried that she could be attacked and all funds be stolen from her, as she kept the funds for the team. Although that was a hypothetical situation, albeit a probable risk, it brought the team together to discuss an actual event of the theft of their pies they were experiencing. The team reflected on the problem and devised a solution of moving the pies to a relatively secure place. The outcome was that "since then we just, there was no theft of pies every day". For RGS's team, the incidents led them to put in place security and control measures to avoid any future incidents. I shall not discuss it here in detail, as it is given more attention later. However, it suffices to say that theft seemed to be one of the common crisis events learners faced. Sometimes they were even caused internally, especially in the case of funds stolen by team members. In most cases, incidents

of theft pushed learners to call meetings and reflect on ways to solve the issue, thus qualifying as a trigger for reflective thinking and acting.

6.2.1.4. Low sales and unpaying debtors

Another related common crisis event reported among learners was that of selling to people on credit who would not then pay up. In many instances the credit sales were forced by low sales. In this sense they had a causal relationship:

> **AMS:** We stock more, they buy less; we stock less, they want more. So, it was a bit challenging, because if we didn't make those sales we made huge losses. … We would sit down and agree to go around giving people on credit or less prices so that we get rid of the stock. … Some did pay, some did not pay, and others made those payments late.

Many learners reported that sometimes their products would not sell as well as expected. As AMS shows above, the fluctuations in demand or sales resulted in "huge losses"; as a way to manage losses, the learners sat down to reflect on the problem and come up with ways to ameliorate the crisis. Among the solutions they are often forced to implement is to sell stock on credit (as shown above). The unfortunate thing is that having to sell on credit brought its own problems, with some people taking the products and not paying on time or not paying at all. The problem of selling on credit was corroborated by the teachers, with an example below:

> **Teacher Clayton:** Yeah, the challenge is that others can sell to other learners on credit, then the learners do not pay.

Although some learners would just sell on credit without a real cause, as implied in the statement above, for others it was a problem that was hard to escape due to the perishable nature of the products (such as doughnuts for AMS or pies for PSS). For example, PSS reports that "it was hard because we had to make sure that pies get sold, all of them, before the end of day. … even if I can say that I don't want to sell anything on credit today, if people don't buy, I just have to sell them on credit." As if that was not trouble enough, some learners would then either get cheated or could not even recall who they had sold to:

PSS: For most of us, people just decided to take our pies and not pay up … they [PSS's colleagues] wouldn't even produce the list of the names of people that they sold the pies to. So, like, for instance, I experienced the same thing. It was on this day that I sold a pie to some guy in a certain class. And then he said to me, 'Okay, you can come in and collect the money tomorrow.' So, the following day … I went to their class. I asked to see that person … and they said, 'This person doesn't exist!'. So, it means that person told me a different name, and I couldn't even remember his face, for crying out loud!"

The interview extract above shows how demoralising and embarrassing the issue of selling on credit could be for the learners. Some lack the basics or maturity to know that they have to write down a list of the customers they deal with. It also highlights the lack of trustworthiness of some members of the school community, implying that problems that exist in the larger society can be experienced in the mini-enterprise. As a result, the business needs to protect itself. Different teams came up with agreed solutions to address the issues of low sales and problems related to debtors. PSS reports that during their "weekly meetings" they "had to … advise each other… to … work in pairs or sell in pairs", so that they are able to recognise their customers. Others agreed to take the remaining stock and "buy for our family members" (AMS). PTS also relates a similar experience of coming "together as a collective and let out ideas of how we can resolve" a "problem where many of our doughnuts were not bought" on a particular day. They "decided to take them with us and maybe sell them to our families or our neighbours so that they don't expire in the storeroom." The plausible conclusion from these experiences is that learners engage in reflective meetings to solve the crisis events they are faced with. In a sense, the crisis events were a trigger for reflection.

In addition, learners explained that they drew lessons from some of these problems. AMS notes that they learned that when running a business, "at times you're going to feel like giving up but you wake up motivated to push." To him the key lesson was that of staying motivated and resilient, regardless of challenges. PSS reports not drawing lessons as a collective but "in writing … as different individuals. ... because we didn't have time." It is implied here that the reflective writing was done at the very end of the project, not when they were still running it. Interestingly, when he did a similar project at senior secondary school, he opted for selling a more affordable product to avoid the stresses he faced during his junior secondary education MEP. This implies that although lessons were not drawn immediately, they were pre-consciously learned.

6.2.1.5. Problems with handling finances and discrepancies in financial records

Among the other crisis events that learners faced, the findings show that they had challenges relating to the handling of finances:

> **TMS:** We did get some mishaps, especially when dealing with the money at the end. You'd find the money not balancing and maybe shortages in some instances.

> **BLS:** I would say it is the time when we're supposed to split our proceeds ... our profit, and then we find out that the money was missing. The money that was recorded in the books wasn't balancing with the finances we had at hand. So, I would say it is safe to assume more than mine was misused by the treasurer.

> **Teacher Clayton:** … they may tell you that they made sales of … BWP200 for that day, then they just bring BWP100, out of the of sales for BWP200. The other BWP100 is gone! … [S]ome have problems with [correctly calculating] change. The others may be selling and putting the money in their pockets.

As shown in the extracts above, learners sometimes had their financial records not balancing with the funds they had at hand. For other learners the problem could be the result of failing to calculate the change correctly, resulting in the money made from sales not corresponding to the total that could be gained, as reported by the teacher. For other learners the shortages could be emanating from miscalculations, not that any funds were embezzled (TMS). However, in some situations learners helped themselves to funds from the enterprise, causing shortages as a result. Sometimes the shortage could be caused by the one who keeps the funds (BLS) or learners selling items and keeping part of the money for themselves (Teacher Clayton). As learners meet these challenges, they either reflect on them individually or collectively to solve them and perhaps draw some lessons from them. For example, TMS reported engaging their teacher after failing to solve the problem by themselves, and fortunately discovered that their issue was due to miscalculation, and no funds were stolen. BLS felt "demoralised about venturing into partnerships" but also learnt the value of choosing "better financial personnel who are trustworthy..." and the value of using "banks because it's safer to put your money there than in the hands of someone else."

6.2.1.6. Problems of conflicts with peers

Most respondents reported observing or experiencing conflict during the operation phase of the MEP. The issue of conflict has been discussed earlier, in relation to the nature of meetings. Hence I shall not go into detail here. As observed earlier, conflicts can occur during production or during meetings when learners attempt to reflect on the problems they are faced with. Learners come up with different ways to solve their conflicts amicably through dialogue or by engaging their teacher to arbitrate:

> **MKS:** I'm saying we were using harsh words against each other or verbally having a conflict. So, the words that we would use would cut deep. And due to the arguments, you'd find out people would end up with Jim going over there and holding grudges.

> **PSS:** Like somebody who would then decide to tell us that they have sold a pie on credit and then they don't even know the person they sold to […] and they don't even know where to find them. That is when the fight would erupt, because it means that if you don't know that person, then you have to pay the money. And that person will just refuse … so the fight was mostly about the money.

> **JMS:** When we started off there were a few hiccups, but along the road we found our rhythm and we are moving as intended.

According to the first respondent quoted above, learners experienced conflicts that manifested themselves in people using harsh and offensive words against each other, forming cliques of people they want to work with and begrudging one another. Generally, the findings show that conflicts were cause by different things. For example, PSS reports that for their team fights could arise because some learners sold on credit, and wouldn't even know who they sold to, but would be required to make payment for the items concerned. Conflicts also seem to be caused by non-cooperation when "people not doing what they were not supposed to do in the business" (OMS) or lack of trust with one another and workload pressures from the project. For example, for OMS's team people who were deemed uncooperative were failing to find the time to go and buy stock because they would have "left school late", while in MKS's team another learner may be trying to complete work that is due, but teammates would think they don't want to participate in the project because they "don't want to be seen around school selling". From JMS's perspective, the conflicts

seem more like a product of team dynamics, when peers have not yet found their "rhythm" as they start to know each other and work together, but this eventually normalises:

> **Teacher Boniso:** Conflict is bound to happen when people are working in groups, they in the process, learn conflict management, they also know they learn teamwork in the process. So it becomes very, very interesting to watch when learners are running [the enterprise] and finding their way around working with each other.

In the above excerpt the teacher confirms that conflicts in the MEP seem unavoidable when different people are brought together; however, she notes that learners still have to find a way to work together regardless of the conflict or resolve conflicts, and as a result learn conflict management and teamwork skills in the process:

> **MKS:** We had to sit ourselves down [and say] that, "Okay, guys, this thing requires teamwork, you can't always be right or wrong in a team case, you are with other people here. And moreover, we are in this because you want to achieve one goal, which is making profit."

In agreement with the statements by the teacher and JMS earlier, the excerpt above shows that some teams managed to resolve their conflicts and work together in unison. MKS reveals that the harmony did not come about by chance, but through deliberate effort. They had to sit down and talk about the issues among themselves. In agreement, JMS further submits that the experience taught him that he "had to brush up on my conflict resolution skills; … time management skills; [and] … team building skills." Without these skills it would be difficult for conflicts to be resolved amicably. In a way, he reflected on the skills necessary for him to get his team working harmoniously towards one goal. He also notes that problems such as tardiness "where one is late by 5 minutes, one 10 minutes, one 7 minutes, one 8 minutes, and another 12 minutes, we will never start on time and the agenda will never be addressed" can potentially lead to frustration and conflicts with those who are punctual. Solving an issue like this would take more than one person committing to making adjustments – the team as a whole, jointly and severally, would have to take responsibility; hence it was important for learners to talk about issues and move forward in unison as a team. The adjustments made by team members require changing and discarding dysfunctional behaviours, a sign of growth and learning.

As in the case of JMS reflecting individually about the skills that he must summon as a general manager to bring his team together, MKS also shows that the conflicts they experienced forced her to reflect on the type of leader she wants to be in the future when she sets up her own enterprise:

> **MKS:** So, I was just thinking … After all, I'm going to be working with other people, what is the proper way to treat them and to talk to them? And if I could be a boss, how am I going to be handling things? If there are conflicts between my workers, how am I going to be able to, to like, solve them? How am I going to create that safe environment for my workers so that they use appropriate words, won't be fighting, and they [share] everything equally without feeling that one person is doing is much worse than what the other party is doing?"

The excerpt above shows that the conflicts help the learner to reflect, and connect current experiences with future aspirations. MKS realises that being an entrepreneur means she would have to work with people and be a leader, and this forced her to ask herself pertinent questions about appropriate ways of treating and talking to employees, solving conflicts among her employees, and also creating a safe space for everyone. The product of this individual reflection was a meeting with her team where they discussed the importance of working as a team, and humility to know that "everyone has their own ideas, their own points of view", implying the need to compromise and have mutual trust and respect, attributes that seemed lacking in their team at the beginning. In conclusion, it is plausible that conflict triggers reflection at both the individual and group level, forcing members to find creative solutions to their conflicts and also draw lessons about important interpersonal skills they need for the team to flourish.

6.2.1.7. Conflicts with other practical subjects and teachers

Conflict with other practical subjects: Albeit not a discontinuous event, like the previously discussed crisis events, learners reported being conflicted with other practical subjects, teachers of those practical subjects and non-practical subjects. These subject areas competed with the MEP for both time and effort:

> **PSS:** We had other different practical subjects. … So, others had Design and Technology, it had its own practical, others had Art. So, the point that I'm just driving at is just to say,

time, there wasn't really time. Time constraint – there wasn't really time because all these other projects, they are demanding.

MKS: So, there is always a lot of work to do because you also have an Agriculture project, which was so much. You'd find out that the Agriculture project was also marked, and the marks were higher than that of the business project. But still, the business project would insist that you go, you go sell...

From the extracts quoted above it is clear that the MEP competed with other practical subjects for time and effort. Some practical subjects, just like the MEP, are also a form of authentic or performance-based assessment which required learners to develop both a portfolio and a project/artifact. As a result learners experienced serious time constraints and a project being "demanding" in terms of workload, especially when done together with the MEP. MKS corroborates this, lamenting that the MEP affected them negatively because "there is always a lot of work to do". In addition to the MEP they also had the "agriculture project, which was so much" and was weighted higher "than that of the business project" (MKS) in terms of grading but "more time was taken by the business project" (OMS). Understandably, this increased the pressure and stress on learners, as all of the projects had to be done and completed at around the same time. This explains why some teams, like MKS's, "never sat down and reflected on the failures or the achievements". PSS confessed that now it was "honestly all about to have work done and not to reflect to look back" and draw lessons from experiences because they "didn't have time", unless forced to do so by circumstances.

Conflict with other subject teachers: Furthermore, due to its demanding nature, the MEP caused conflicts between the entrepreneurial learners and teachers of other subjects. These conflicts seem to arise for various reasons. Learners *"*... had problematic time with other teachers" of other practical subjects "because every teacher wants their job to be done" (PSS). This is confirmed by one teacher who observed that "when that time for running the mini-enterprise comes, they [learners] will also have a challenge with PE teachers [and] other optional subjects. They [teachers of other practical subjects] would demand them [learners]" (Teacher Miller) as their projects are also part of authentic assessment for their specific subject areas, and work must be completed before the deadline.

Unfortunately, it seems that the conflicts with teachers extend even beyond other non-practical subject areas. PSS laments that "… even for subjects that don't have practical [projects], the Social Studies teacher would want their notes to be to be completed, the Science teacher would want the notes to be completed." This seems to suggest that learners struggle to complete work for other subjects, infuriating their teachers as a result. Some learners also "asked teachers from different subjects to release us early to go and prepare ourselves for selling" and this "consumed time from those teachers' lessons and they were not happy about it" (SGS). To these other teachers it seemed that entrepreneurial learners were "being selfish, focusing on one subject" and "[T]hey couldn't understand that it was part of the project" (SGS).

Teacher Miller points out that learners are thrown into this predicament when they select their optional subjects as: "… there is a certain way in which the subjects are paired", for example, Business Studies is "paired with Art and PE" [Physical Education], meaning that when the time came for operating the MEP, learners faced many demands of them. Therefore, learners are thrown into situations where there has not been careful consideration about the implications of the time demands and workload pressures during the time for working on projects, and the possible effects of such arrangements on the welfare of learners and learning in general. With all these pressures, it becomes clear why some teachers and learners cared more about pushing sales than making time to engage in reflection – they are just working under immense pressure and competing interests.

6.2.1.8. Too many demands on time

Building on the last point, the challenge of time is a recurrent emergent theme during the operation of the MEP. OMS reported that limited time was a "big challenge" for them as they "had to attend to our studies and also do the business". As a result, most learners reported that the MEP also affected their ability to study effectively. One learner reported that she "didn't have much time to study" (KWS), while another complained that "you won't even have time to study during the study time, because you are busy counting money, and the money is refusing to balance" (PSS). Yet another learner shared the same sentiments, stating that "I felt like somehow a little time was given to studying and more time given to the project" (OMS). There seems to be consensus among learner respondents that the MEP demanded a lot of time, to the extent that it threatened the study time for other subjects. Another observation in relation to studying was that the MEP made it difficult to consult with other teachers on the times that they would be free:

MKS: And sometimes you would make appointments with teachers, maybe when you need help with something, and they'll tell you that, 'Okay, 'I'm only going to be free at lunchtime or around tea break. That's the only time I can be free …' but that is the time you have to be selling the pie … so, it really affected.

All these submissions show that the demanding nature of the MEP not only causes conflict with other subject teachers, but also eats into learners' study time. It also makes it difficult for learners to go for consultations with other teachers outside class time. This means learners may not only have issues with other teachers for failure to complete assigned work, but also with the time to study effectively. This has the potential to affect learners' overall performance. The time constraints with respect to this study may also be an explanation for the failure to engage in reflection, as most of the time would be consumed by ordinary business operations such as preparing products for sale, selling and cleaning up the labs, and going to replenish stock. This is not helped by the fact that learner respondents also report pressures of workload and exhaustion that comes with working on the project. Teacher respondents confirm these sentiments:

Teacher Victoria: … break time is only 30 minutes, and sometimes they get delayed by five minutes at the last lesson. They'd have to go for their meals, where they queue for food, and when they come back it is almost time. So, what we normally do is, sometimes if there is something to be prepared, like Russians and stuff like that, at around 5 to 10 minutes before tea break, we remove them, or maybe in the morning we remove them from the freezer so that they defrost. Then 5 minutes or 10 minutes before break time we set up everything, then when they come, they just sell.

Teacher Moore: Learners complain, 'When are we getting time sir? We start school at 7:30 am, and period one begins. Break time is 25 minutes.' So, it's a challenge … if you have female teachers, they end up doing production for them. Either they cook or cut the cakes or something, they end up taking it up. So that when break starts or lunch, they just come to sell.

The extracts above show that time is the biggest challenge, especially during tea break. That time is already short, yet it is complicated by many factors, ranging from being released late to having to get food after queuing, and having to come back and prepare their products for sale. All this seems impractical for learners to find the time to sell and clean up after selling. Thankfully,

some learners are fortunate in that some of their Business Studies teachers realised that the time available for setting up shop – especially during tea break – was limited, so they step in to help.

Another teacher also confirmed the seriously time-constrained nature of the MEP, submitting that it is indeed "… time consuming, and very stressful for learners" (Teacher Miller). This situation is not helped by the fact that "when it comes to project there is nowhere it's being scheduled for … What you see on the timetable ... is my teaching time, where now I'm focusing on delivery of content" (Teacher Moore). In corroboration, Teacher Boniso agrees that "the mini-enterprise is not necessarily allocated in the timetable, so learners would have to sacrifice some of their time to run it, maybe during study and so forth or during lunch and the time is very limited." This means learners are forced to do the MEP outside of class time and it is difficult to find that time, especially with other academic interests and commitments competing for the same time. Teacher Boniso added that due to the limited time learners have for products, "even the quality may be compromised". This may have an impact on their bottom-line.

6.2.1.9 Excessive workload and exhaustion

As the subheading above suggests, for many learner respondents the MEP is not only demanding time-wise, it is also characterised by cumbersome, stressful and tiresome workload demands. For example, TMS reported that it was "an eye-opening experience, because there was a lot of pressure" because "… you're working under pressure." Most learners seem to agree with this assertion that the project was very tiring.

Founded on the experiential learning philosophy that is epitomised by learning by doing and hands-on activities, learners reported that every day they engaged in activities such as purchasing stock, preparing products for sale (which for some included cooking and packaging), selling, and handling customers. The hands-on nature is captured succinctly, albeit not exhaustively, in the learner respondents' voices below:

> **RGS:** … in the morning we had to make sure that we prepare the hunger busters, then after packaging them properly then we would make sure we calculate our expected returns once we are done. And then after that, around break time, we had to make sure that we go to the business department and then we get all our hunger busters and count them, and set up shop. After setting up shop we had to make sure again that we have change for giving back

money ... and we had to make sure that there is an organised line for the children who would come to buy and then we had to make sure that there are people there who are selling.

OMS: Usually since we were learners […] we had to attend to other school duties to do our schoolwork. The cooking was done during Business Studies lessons. Some lessons were allocated to projects, and some were allocated to teaching. And sometimes it's during break time, our lunch.

So, the business day typically began before lessons commenced, which means that the activities of "preparing" hunger busters had to be done and completed before the beginning of the first period. To put this into perspective, the hunger buster is described by the respondent as a "burger that is made of fat cakes, beef patties, lettuce, tomatoes and a sauce" and they "sold hunger busters and hot chocolate" (RGS). This implies that the preparation would entail some form of cutting vegetables and cooking the beef patties, then bringing all of the ingredients together to make the burger. Then there is the process of packaging and counting and recording the output, plus calculating the expected revenue, which was also done before lessons. Some learners engaged in producing things such as hotdog rolls, popcorn, fried chips, and so on, that involved some form of tedious preparation. After the cooking, the environment, cooking equipment and utensils had to be cleaned. As noted above, fortunately for some learners they were assisted by their teachers with defrosting frozen ingredients and even cooking (see comments by Teachers Victoria and Moore above). Some learners sold products that came ready-made, like pies, cakes, and doughnuts that did not need much preparation.

With the products ready, other activities related to selling took place during tea break and lunch time. Some learners would still do even more preparation during lunch time when they have a longer break. Selling was also a cumbersome process because it involved dealing with the product, calculating change, and also handling customers. As noted, here some learners struggled with giving the correct change and also ensuring that "there is an organised line for the children", so that the transacting is not chaotic. Some had to move around the school to sell instead of setting up shop in one place. After this whole process there was still cleaning to be done. Some groups would even have a debrief or a meeting at the end of the trading, to evaluate the day and make decisions about whether they needed to restock or take the money for safe-keeping. If they restock they have to decide how much goes into savings and how much goes to replenishment of the stock.

Owing to all these processes and critical incidents and challenges, and the fact that they "had to attend to other school duties" like attending lessons and doing other school assignments, the experience results in stress, pressure and exhaustion for most learners:

> **SGS:** It was a lot of work, we came home a bit late, but not too late. It was tiring to come from running the business, to having a meeting, then walking home. For some of us, school is like five kilometres away. […] It was hard, I'm not going to lie. Just difficult! So, after the meetings when we came home, we tried to rest and some of us even overslept.
>
> **BLS:** Oh, I'm not going to lie, being a salesperson was exhausting and very demanding, something I was new at.

In the extracts above learners confirmed that the mini-enterprise experience involved a lot of work, which is described as "tiring", "hard", "difficult" and "exhausting". This is not helped by the fact that some learners had to even walk distances of about five kilometres to get home, while some "overslept" due to the toll of the experience on the body. It was not just operating the business that was a lot of work, but also the write-up of the portfolio:

> **Teacher Moore:** Then on top of that, the project itself is demanding, it's a portfolio of minimum average of 25 pages. […] That's where all the problems start: some run away; some are overwhelmed; and … some will say we have done the work … [that] is substandard based on how the learner has been doing in the past two years.

The teacher respondent confirms the learner's submission that the project is demanding, but adds the aspect of writing of the portfolio. The minimum of 25 pages may be a lot of work for adolescents, because the write-up is supervised and may entail a back-and-forth process of writing and rewriting until a product that meets the examiners' standards is produced. What also comes out is that the effects of the demanding nature of the project include learners being overwhelmed, running away or absconding from lessons, submitting substandard work even by the standards of the learner, and conflicts among learners. This represents outcomes that are embodied in terms of both perceptual and emotional experiences for the learners, and also social aspects in terms of potential conflicts arising and absconding from lessons. Issues of motivation are also implied,

especially when the combination of critical incidents and other challenges is added to excessive workload demands. Some learners just get discouraged and lose motivation:

> **AMS:** We felt like giving up at some point, but since it was a project, we had to, we had to manoeuvre with it and get through.

> **BLS**: … as time went on, I just gave up hope on the running of the business.

The extracts above show that the learners' motivation began to wane due to excessive work and exhaustion, and they felt like quitting the project. This is in agreement with the earlier observation by the teacher respondent that the learners get overwhelmed and start running away. Some, although present, just work to finish the project without the initial excitement. The first learner reported that they "felt like giving up at some point, but … had to manoeuvre and get through with it" (AMS) because it was a school project. The second learner reveals that he became disillusioned with the running of the enterprise, to the extent of giving up. The project just became a burden, and also forced some learners to re-evaluate the desirability of entrepreneurship as a possible career choice:

> **PSS:** Honestly, speaking right now, I am even studying Entrepreneurship and Business Leadership with BAC, but I do not want to become an entrepreneur because of the levels of stress that we encountered. I don't want to experience that again, that is why. I want to work for somebody, and somebody pays me.

This case is a paradoxical one. The learner did the MEP and is now pursuing entrepreneurship at tertiary education. However, the stress that he experienced has made entrepreneurship so distasteful to him, to the extent that he would prefer intrapreneurship instead. The statement "I want to work for somebody, and somebody pays me" suggests that the participant wants to shift the possible risk and challenges that could come with running a business to someone else. However, the challenges associated with the MEP do not have the same effect on all learners. Instead of being a source of discouragement, it becomes an opportunity to learn more about entrepreneurship. An example is one participant who referred to "situations where you'd be under pressure and also the problem-solving situations" (TMS):

SGS: I always had the drive for entrepreneurship … before we started doing the project […] I was selling toffees in school. And what I can say is that running a business is tiring, but at the end of the day, you will have something to look back on and say 'I did that'.

MKS: I really want to be a businesswoman. So, I saw the mini-enterprise as an opportunity to learn more about what should be done and what shouldn't be done. So I did the best that I could, and I'm still holding on to what I learned from the enterprise.

SGS confirms that he was always entrepreneurial and as a result was not overwhelmed by the associated challenges. As much as he concedes that running a business could be tiresome, for him it brought a sense of fulfilment, and provided a feel of what he aspires to be like. The second respondent seems to concur that future aspirations of being an entrepreneur seem to give learners the forbearance and resilience to handle the pressures and challenges associated with the project. Instead of being disheartened and demotivated, they become fired up to do their best and learn the most from their experiences, no matter how challenging.

Overall, the tiring nature of the project forces learners to have emotional and perceptual experiences that result in evaluating the experience as good or bad, desirable or undesirable. The weight of the pressure and workload may dampen their motivation or even lead to disillusionment with the project and even with a career in entrepreneurship. In this sense the learner would have reflected on the experience and concluded that it is undesirable for the long term. However, learners who already have aspirations to be entrepreneurs may reflect on their experiences differently and take them as learning opportunities, even when they are exhausting and challenging.

6.3. Entrepreneurial opportunities as triggers of reflection

The findings reveal that reflection is not only triggered by discontinuous or crisis events, but by entrepreneurial opportunities. During the operation of the mini-enterprise learners experienced events that were opportunities for their business. Examples of these events included talent shows (such as beauty pageants and 'pens down' show at the end of the term), career fairs, and weekend sporting events. While crisis incidents presented a problematic situation that disrupted the natural flow of events in a negative way, opportune events created prospects of better business, thus disrupting business in a more positive way by creating high demand and increased sales during

those times. Therefore, in anticipation of such events learners embarked on pre-action reflection to prepare themselves to take advantage of them:

> **SGS:** There were certain times when we had (the first week we had at school) something like talent shows or beauty pageant. So, we ended up bracing ourselves and made preparations, because everyone was going to be there. And even people from outside like friends and family members would come.

From the narration above, the events led learners to think of preparing themselves so that they fully or optimally benefit from such events. These events were crowd-pullers, increasing the number of potential buyers and by extension the demand for the products during the event:

> **SGS:** ... we had a meeting at 7am at school about what was going to be done and how it was going to be done by 12pm. By 12pm we would have cleaned, and the marketing department and the production person from the production department would go together to the shops, buy the raw materials and then come back then start production. The talent shows were usually around 2pm, so we had two hours to prepare as many of the product as possible for sale.

What is evident above is that learners' preparation had to start with a plenary session where they discussed what they would need to do and how they would do it, and the targeted completion time when everything was to be done. What is also evident is that planning must have included discussion about activities to be done to prepare themselves, such as cleaning their place of work and selling, deciding on the restocking amounts, and cooking as many of their products as possible. Due to the pre-action reflection or planning, "things went really good" and the experience gave learners "the motivation to want to do more". Furthermore, during the event the respondent reported that they "made more than we thought" because people "came in large numbers" and supported their enterprise. Like other critical incidents, the event resulted in positive emotions, such as feeling "happy", "overjoyed", and "the feeling of a person who has just won a lottery", as well as beaming with smiles. As a result of the pre-action reflective meeting, and the following action of preparation plus positive outcomes, positive emotions and motivation were elicited. Events of this nature suggest that reflection is not always about solving a problematic situation, but may also be inspired by positive events or opportune experiences to help entrepreneurial learners to exploit them optimally. The positive outcome and associated emotions and feelings may play the epistemic role

of reinforcing the need to look out for similar opportunities in the future, and also how best to prepare for them for maximum possible benefit.

6.3.1. Summary

In many of the experiences that the interviewees shared the crisis events seemed to be a precursor, if not a trigger, for events forcing learners to engage in reflective thinking and action. This happened even for mini-enterprise teams that ordinarily did not have regular meetings or interest in evaluating the performance. An example is MKS's team, who reported that they "never sat down and reflected on the failures or the achievements" but were forced by both perceived possible events and ongoing incidents of theft to engage in reflection. In some instances crisis events caused the business to stop, such as where suppliers delivered very late, as in the case of JMS where production could not start, or imposing a "negative impact on the whole enterprise" as "it would be not making profits on the day that there were no deliveries" (PTS). MKS shared the same concern about the incident of theft they were faced with, arguing that "if we don't take care of the situation at hand, we're just going to be running at a loss".

Sometimes the impact was felt bodily, especially in situations where members were not cooperative and active in the enterprise. Colleagues felt that they had "to compromise their duties or leave what they were assigned to do to go fill that person's spot because they were not being active". The embodied nature of critical incidents also came alive during conflicts, which were emotionally charged or affective by way of arousing different emotions, such as fear of loss, anger, disillusionment, discouragement, and others. These impacts cause enterprise team members to feel compelled to call a meeting to sit and discuss "areas where we faced issues …[and] discussed ways in which we could have avoided making a loss" (BLS) or to talk "about mostly the challenges that we faced and how we can help each other overcome them" (PSS) and "take action" (MKS) to ameliorate the problematic situation. This suggests that the process of reflection was not just mentalistic, sometimes it involved an active trial of solution and regrouping to think of new solutions if the initial one does not work.

In essence, the results of such reflective meetings were mostly oriented towards problem solving for both one-time problematic situations and potentially recurrent ones, such as having a contingency plan in the case of no deliveries: "... at break time [we] rushed to another store to buy the cream doughnuts and sell them during lunch hour since the time allocated to sell is during tea

break and lunch time." As much as this solution ensured that they didn't lose a whole day of business, they still lost the opportunity to sell at break time, since they "… would come back when time is already up, meaning that you can only sell during lunch time" (PTS). The process of engaging in reflection is mostly triggered by episodic crisis events, as a way to return the business to normal operation. This means that if they are not attended, the mini-enterprise would be in disequilibrium.

6.4. Epistemic emotions as triggers of reflection

As much as the critical events or incidents may, on their own, propel learners into a process of reflective thinking and acting, they carry with them emotions and feelings that may also play a role in influencing reflection. Put another way, due to their problematic or disruptive nature the discontinuous events seem to have a tendency to arouse emotions and feelings in learners which also play the role of triggering reflective thinking and acting. They result in situations that make learners feel all sorts of emotions, such as surprise, anger, anxiety, shock, stress, disillusionment, and others. For example, RGS reported that her team members felt "surprised" and "disappointed" at the news of theft in their business. JMS described feelings of "disappointment", "anxiety", "failure" and "a bit mad" resulting from incidents of unreliable suppliers failing to deliver their hotdog rolls, disrupting production as a result. BLS reported feeling "demoralized" as a result of missing funds, while MKS was worried about security or the potential loss of funds and had feelings of shock about the theft of pies in their business.

The interview extracts below are illustrative of how emotions and feelings in a crisis event may influence or serve anepistemic role in reflective thinking and acting. RGS's team had been experiencing incidents of theft in their enterprise. As a result:

> **RGS:** [….] people were surprised and people they knew that we had to make a certain amount of profit for everyone to get something. So, if something like that happened, they knew it will cause a slow down for the business and […] cause us a huge loss. So, some of them were disappointed, some of them they just wanted to make sure that they don't get frustrated from that day.

The crisis event involving the theft of their products that learners experienced aroused emotional responses through experiencing feelings of "surprise" and "disappointment", and implied fear of losing their return on investment or profits, making them resolve "to make sure that they don't get frustrated from that day". Interestingly, frustration is also an emotion that some of the learners were motivated to prevent by all means. This means the feeling of frustration from the learners' perspective could be linked to the past, present, and future. What was experienced in the past and in the present (theft and resultant associated feelings) should not be experienced ever again in the future. For that to happen, learners realised that drastic measures needed to be put in place to prevent this emotion being experienced again. This means that emotions are not only outcomes of events, they can also be an impetus and target of action after a critical incident to prevent (in the case of a crisis event) or to re-experience (in the case of reflection and action resulting in positive outcomes). Furthermore, it seems the anticipated return on investment provided some incentive and motivation to work in the MEP. Beyond threatening the success of the enterprise, theft also threatened expected gains for individual members, hence the strong emotions that were stimulated. Therefore, the potential of loss and the possibility of experiencing negative or hurtful emotions spurred learners to reflection and action:

> **RGS:** So, it was necessary to have accountability around the time to avoid errors and for things to run smoothly. During the middle of class we would check if everything was going well and whether everything balances. We had to reduce or prevent the chances of that occurring while we were selling. I think we just had to make sure again we count our stock in the morning, we count again in the afternoon each and every time. We had to make sure that our teacher checked as well, because the majority of the time sometimes they [learners] had to go into the office because they had to do a lot of work. When they are in the office, there is always a teacher around, because learners could come and steal here and there. So we had to make sure that certain measures were taken [to protect the stock].

The heart of this interview extract seems to be preventative measures put in place to prevent the recurrence of theft, and also the setting in which the decision for measures was taken. Starting first with the setting, RGS locates the setting and time "in the middle of the class". This means they had to have meetings during the lessons to formulate and decide on the "accountability" and other "measures" which were then implemented to protect the business and their investment. This assumption seems plausible, especially that class time was used to reflect and "come up with more informed decisions" (BLS) by other teams. Therefore, they must have evaluated the business to see

the gaps that made them vulnerable to theft, and decided to come up with various specific security and control measures and to implement them. Examples of these measures included actions such as counting of stock at different times of the day; checking if things are going well and records are balancing; and having the teacher look out for them in their absence when other learners used the offices, which was their storage space, to "reduce or prevent the chances of that [theft] from happening" again going forward. Furthermore, the process of "checking if everything is going well and whether everything balances" seems to suggest a rigorous process of assessment and evaluation of business operations to identify loose ends that may need attention, resulting in the implementation of security and control measures. The fact that the security measures were recurrent means the process of evaluating the business must have been continuous after occurrence of the crisis event, as it was also both a reaction and a security measure born out of the incident of theft. This further buttresses the notion that emotions and feelings are not only potential triggers of reflective thinking and acting, but also that the emotional discomfort and pain may influence measures taken to avoid experiencing the same emotions in future.

In another related example, MKS as a leader and treasurer of the enterprise was worried about her personal security and the risk of being attacked and robbed of the money she had in her possession. She ruminated on these worries and possibilities alone and eventually brought her team on board with suggestions of how to spread the risk:

> **MKS:** Okay, we called a meeting some other time […] because I had a lot of money on me from the business. I just wanted to distribute it among the group so that, maybe, if something could happen to me ... if maybe I get attacked, people don't get the whole amount, you just know that, okay, we have other people holding the money.

MKS's case also highlights the role emotions play not just in current crisis events but in potential ones. MKS called a meeting as a leader concerning an issue she had been thinking and was possibly worried about. This was a matter of fear for her personal security, and the risk of potential loss of assets of the business in the form of funds. She feared that a potential attack on her posed a risk that would be a fatal blow to the business if funds were stolen from her. She called a meeting to share her thoughts with her team, saying "What we did that day is that we distributed the money amongst ourselves for security" (MKS), implying that the meeting availed others an opportunity to engage in participatory sense-making through evaluating the status, the reasons advanced in challenging it and becoming convinced of the suggested solution. What makes this

case even more interesting is that this team had up until then "never sat down and reflected on the failures or the achievements", and some of their members "were not really passionate about the whole selling concept" but "were just doing it because they just wanted to get done with the it" and "they wanted to get marks" (MKS) since the project was an examination requirement, as Paper 3 of the Junior Certificate Business Studies subject.

Interestingly, at the said meeting the team ended up reflecting on the issue of theft, another security issue that was affecting their enterprise, involving the theft of their pies, which had not been attended to until that time:

> **MKS:** And if we don't take care of the situation at hand, we're just going to be running at a loss. It would be worthless to have sold the pies and invested in the business. And then we're like, 'there are no CCTV cameras here. And we are not sure if it's the learners, the teachers or the stuff that are taking our pies'. We just came to the conclusion of asking the teachers that … we just take them [pies] inside the office. So that if it's inside the office, we know that learners are not allowed in at all. If the pies are going to be missing, then that means the teachers are going to be responsible for the pies that are always missing in our boxes.

Implied in the first line above is that this matter evoked feelings of worry and fear among the learners, that if no action was taken they were "just going to be running at a loss". There is also an implied fear that their investment of effort (in terms of selling) and return on investment would have been in vain since they collectively contributed towards the start-up capital. The latter seems more compelling because, as noted, the learners were not really motivated about the business, but the expected profit-sharing at the end of business incentivised their efforts somewhat. She further points out that since there were no CCTV cameras in the building, they could not tell who the culprits were so that they could be brought to book. This implies that in their deliberations they wondered about ways in which the culprits could be identified and caught, if not deterred by the possibility of being identified by CCTV. They were "not sure if it's the learners, the teachers or the staff that are taking our pies". It is also plausible to deduce from this interview extract that they also tried to identify loopholes in the business that made their stock prone to theft, and diagnosed it as a lack of security, which was identified as needing to be tightened. Consequently, they came to the "conclusion" to ask their teachers at the Business Lab to allow them to store their pies inside the office, because "if it's inside the office, we know that learners are not allowed in at all", and if the

pies went missing, “then that means the teachers are going to be responsible for the pies that are always missing in our boxes.” Their Business Studies teacher acceded to their request and the problem never happened again. This case is a further demonstration of how emotions can trigger a process of reflection on critical incidents. Engaging in reflection is not an end itself – that is the learning that comes as a result of reflecting and acting. For example, in both of the cases discussed above, the learners drew lessons from their experiences in the form of spreading risk and safety and putting control measures in place to protect the business and minimise vulnerability. If they had learnt about these concepts in class, they got to see them in action, and they become more relevant. In this sense, emotions that triggered the whole process played an epistemic function in reflection.

Emotions and maturity: In their collective epistemic role, emotions also reveal much deeper knowledge about learners’ motivations as they participate in the MEP, and by extension their willingness to volitionally engage in reflective practice. For example, PTS reports that when their supplier failed to deliver doughnuts on a certain day, there were differences in feelings in his team:

> **PTS:** The team wasn't impressed at all ... [but] some would be rejoicing ... Meaning that uh ‘Yay, today we don't need to walk around the school looking for customers selling doughnuts!’. But it had a negative impact on the whole enterprise.

> **OSS:** For others, I'd say they were happy with it because they wanted to consume some of the fat cakes and we were always refusing, because it's part of the business. So due to the rain, we were throwing the damages away. So they used the opportunity to say, ‘No, give me this one. Let's not throw it away.’

What these findings seem to reveal is that the emotions and feelings learners express during crisis events manifest individual learners’ authentic selves. They help reveal the differences in maturity levels among members of an enterprise team. The more mature learners are more likely to demonstrate negative emotions of worry, anxiety, and even anger, disappointment, frustration and being unimpressed, while the immature ones would be happy or rejoicing that the crisis event happened and may mean that there would be no work for that day or they would get to eat the product, without due regard for the implications to the health of the enterprise. The latter class of emotions aroused during crisis events indicates that those who felt that way cared less about the success of the enterprise and possibly learning from it. Learners in this category cannot be expected to be invested in engaging in reflection to find solutions to issues bedevilling the enterprise, due to

low maturity levels and low epistemic emotional involvement. In contrast, learners who cared about the health of the enterprise, their customer base, their peers, and their invested capital and return on investment expressed negative emotions and feelings when crisis events occurred, and were more likely to call for meetings to reflect on their challenges and creatively come up with solutions to problematic situations. For this category of learners emotions may have a stronger epistemic role, as they engender deep reflective thinking and acting to address problematic situations and lead to them gaining more learning in the process of successfully resolving the problem.

Teacher respondents' views seem to corroborate the above findings, and highlight the view that the issue may be more nuanced than just matters of maturity. They seem to understand the issue of learner maturity as a subset or function of learner diversity and mixed-ability teaching, as the extract below illustrates:

> **Teacher Boniso:** You know, in one class, we'll be having an array of abilities. And each one of them comes with a unique character and level of maturity. So, some of them are really mature, even when they face challenges; you will realise that this learner is really determined to stand up and make sure this thing works. But there are those that give up too quickly. And some of them are even so immature that they even eat stock if it's something that could be eaten ... But that's mixed-ability teaching, and in the process, they are also learning ... you show them that you see, some of you eat stock, that's what kills businesses.

From the participant's response above, learners differ according to their abilities, character, and maturity levels. These differences determine how learners react to different situations during their participation in the project. The respondent observes that more mature learners are more resilient when faced with challenges, while the less mature have low tolerance to challenges. Other traits of immature learners include the proclivity to wish to feast on the stock. This seems to explain their emotive response when negative events happen in business, since these present an opportunity to enjoy what they have always been denied. Diversity brings many things into the picture, such as the social and economic background of the learner. One could also wonder if the desire or temptation to eat stock could tied to the thrill of novelty – in their social background the products being sold may not be so common. However, considering how stressful and exhausting the mini-enterprise can be, responses of happiness when business is disrupted may not just be about immaturity, but a sigh of relief at getting a much-needed break. The findings on crisis events show that emotions can be an indicator of learners' care structure and a function of learner diversity and

maturity as they engage in the process of reflection to deal with critical incidents they are faced with. The idea of care structure is expanded further in the next section discussing motivation.

Epistemic emotions: Epistemic emotions also reveal learners' motivation when running the mini-enterprise. For the majority of learners the mini-enterprise was financed by their personal contributions and the school was not funding them. Hence, when they sat to come up with business ideas, they "had to make sure" that they "come up with the idea of something different, something that a lot of people can come and buy and that can bring a lot of profit for us too" (RGS). They also "… calculated […] how much" they "are going to gain" (OMS) from the business idea and settled for ideas that had the potential to "bring a lot of profit" (RGS) for the shareholders. Profit maximisation seems to be in the psyche of most respondents, as stated by MKS: "we … need something that is going to profit us again at the end of the day". At the end of business the profits would then be shared among the learners based on some type of internally agreed arrangement. The prospect of sharing profits seemed to bring a sense of motivation and was an incentive for learners to work hard towards a profitable outcome, and thus had an emotional aspect due to that expectation. This perhaps explains MKS's feelings of fear and worry when they experienced theft – that if they "don't take care of the situation" they "just going to be running at a loss" and all their efforts would be worthless and their investment in vain:

> **BLS:** … when we're supposed to split our proceeds ... our profit and then we found that the money was missing. It kind of demoralised us about venturing into partnerships when it comes to businesses.

> **RGS:** They knew that we had to make a certain amount of profit for everyone to get something. So, if something like that happened, they knew it will … cause us a huge loss. So, some of them were disappointed, some of them they just wanted to make sure that they don't get frustrated from that day.

Due to the expectation of profit, when crisis events threatened the bottom-line and profit margin the entrepreneurial learners seem to have expressed emotions as shown above. Emotions and feelings of demoralisation, disillusionment, disappointment, and frustration ensued. For example, BLS's team became disillusioned about doing business as a partnership because their treasurer had misused their funds. The experience together with the associated emotions made them reflect on the disadvantages of a partnership as a form of business ownership, and led them to lose

faith in it. As for the case of RGS, the expectation of everyone having "to make a certain amount of profit" spurred them into reflective thinking and action to promptly and decisively deal with the issue of theft that affected them, and also to prevent them from feeling frustrated again.

However, the emotions learners feel, especially relating to loss of expected profits, do not always imply that they are invested in the mini-enterprise for learning purposes above personal gain. As much as learners have a legitimate expectation of return on investment on their start-up capital that they contributed at the beginning of the enterprise, some of those whose motivation is purely and solely monetary gain may be less interested in the process of reflection, just pursuing sales until and unless forced to engage in reflection. This is illustrated in BLS's response when he conceded that "the group that I was in, we weren't really invested in the whole general meeting and discussing the business arrangements or rather how the business was doing, we only cared about pushing the product". Unfortunately, they failed to see that the process of reflection would help them solve a lot of their problems and potentially result in better profitability, until their teacher forced them to have meetings during lessons for evaluating the performance of their business.

An almost similar situation is confirmed by RGS's team, who felt surprised, disappointed and frustrated by the incident of theft in their business, which they responded to. He submitted that their "goal was to make sure that at the end of the day or the project was for everyone to be having money" and it gave them "a sense of motivation". Furthermore, on the question of whether making money was the biggest motivation, rather than learning, he concedes as follows:

> **RGS:** Well, yes, I think so. To a certain degree, because from that young age, not a lot of people would actually learn ... they are looking at this as just a project at around that time, not paying attention to the important aspects of just working together in a small enterprise. Not knowing that in the future it would benefit them if they worked well together.

This revelation is quite instructive – that whereas making money may be one of the strongest motivations for some learners, for others it may be the only motivation, rather than learning about entrepreneurship. This perhaps explains why some learners reported that they were not interested in reflection, evaluating the business and drawing lessons from it – because of the aims of the learners and curriculum planners being misaligned. Whereas money could be an incentive and motivation to work earnestly on the MEP, it is clearly not good enough if learners fail to achieve the objectives of the project. Also, when the project fails, the demoralisation from the loss of

potential profits may be devastating, leading to low staying power and making unhealthy and extreme conclusions due to disillusionment. Motivation is an important aspect of the MEP because it can be stressful, demanding hard work and takes up lots of time amidst the competing assignments and projects of a final-year Junior Certificate learner. So if entrepreneurial learners unwittingly learn in situations of this nature, where money is the primary motivation, and even from engaging in reflection to solve their problems, it may not be a deliberate and conscious form of learning but a pre-conscious and serendipitous one.

Emotions as an indicator of values and social contract: In addition, by revealing learners' care structure, the findings also show that emotions aroused by crisis events show the extent to which learners care about their personal image as individuals and also as a collective. The emotions and feelings then become the fuel that gives the learners the drive to solve any crisis incidents that arise along the way through collective reflection. JMS brings this understanding to the fore when he describes his personal emotions and feelings and those of his team when their supplier continuously failed them through late deliveries which were affecting the business negatively:

> **JMS:** I was anxious and disappointed, but more anxious because remember, we came to our community and promised them a product. If we don't deliver, they will look at my team. My team will look at me. Right? Because it will mean that me as a leader, I have failed them and they as a team have failed the community. So, me as a team leader, I feel anxious sometimes. Sometimes a bit mad. … I had to ensure that every day everything moved as planned, everything moved as was agreed upon. So that is usually how I felt … that's how my team felt, uhm ... if we did not deliver, as we had promised to deliver.

The interview extract above reveals that the entrepreneurial learners experienced different emotions, such as disappointment and anger, but mostly anxiety when their supplier failed them. A construct of intentionality of emotion is revealed in that emotions are either directed at the failing supplier (e.g. anger and disappointment) and towards the self and others when anxiety kicks in. This intentionality of emotions and feelings when it extends beyond the self seems to be emanating from the social contract entered by the entrepreneurial learners, suppliers and customers. In other words, the suppliers are obligated to deliver fresh quality products at the right time and the entrepreneurial learners are obligated to honour their part of the deal by making payment for deliveries. At the other end of the spectrum, the entrepreneurial learners are obligated to sell a quality product to the customer base within the specifications of a reasonable price, quality and

consistency. The words “we came to our community and promised them a product” are an indicator of a social contract between the entrepreneurial learners and their customers, and in this regard there is a sense of obligation and commitment to honouring the promise to serve.

The emotion of intentionality is directed to the self by way of feelings of anxiety on the part of the leader; this propels him to offer direction and leadership when faced with challenges, to deliver on his mandate and obligations first to his immediate team members, and second to the school community regardless of the hiccups. Of all the feeling and emotions felt, the respondent reports that anxiety was the strongest, suggesting that the entrepreneurial learners felt more obligation to honour their social contract with the customer base, the school community. Anxiety seems to be born out of the fear of failing the team and the customers, and it made the leader “ensure that every day everything moved as planned, everything moved as was agreed upon”. These emotions and feelings of anxiety, anger and disappointment were also shared by the team, as shown by the words “that’s how my team felt”. That served as fuel, propelling them as a collective to deliver on their mandate through collectively finding solutions through reflective thinking and acting. The affective aspect is also revealed in the psyche of the team in terms of resolve and determination:

> **JMS:** No matter what hiccups arise, […] if this service provider did not come to the event, it doesn't mean that production has to stop. It only means that you have come up with a solution to address the problem that arises at that particular day and time.

This statement is a revelation of a fighting spirit, resilience, and high tolerance of stressful situations that a person who is not emotionally strong my crumble under. Disappointment could lead to discouragement and a desire to quit, but in this case the psyche is that of fighting to find a solution to solve problems that arise, and that is done through collective sense-making, decision-making, and action, all of which are elements of reflection.

The element of community brought up here, which JMS refers to, seems to amplify the epistemic role emotions may play in reflection, demonstrating the embeddedness and situatedness of reflection in the context of the reflective learner’s lived world. In fact, the very process of reflective thinking and acting in the mini-enterprise experience speaks to the attempt of the learner engaging in a process of inquiry to stay afloat in their interaction with their environment. The environment may comprise competition from the peers who are also running enterprises at the same

time, their customer base in the school community, and sometimes members of the local community and the business industry that supplies them. Emotions seem to play the role of revealing the state of this interaction (i.e. whether it is problematic or not) and act as fuel to propel the reflective thinking and acting process to bring the problematic situation and the associated feelings and emotions to equilibrium. If the desired solutions are achieved, emotions and feelings of triumph, jubilation and satisfaction would be expected. The whole process is epistemic, in that it fosters participatory sense-making and learning as learners see what works and what does not work as a result of reflective thinking and acting in an attempt to satisfy their market.

Emotions as an indicator of emotional intelligence: Lastly, I address the role of emotions in collective problem solving or sense-making as revealed by the findings. Whereas many learners in the study demonstrated that they managed to deal with different crisis events affecting their enterprises effectively, turning around problematic situations through reflective thinking and acting, some learners failed to do the same. I raise PSS's team, (introduced above) as a case in point here. They were experiencing an avalanche of bad debts and even being swindled out of their stock by would-be customers. There seemed to be a lack of maturity and ability to properly diagnose the situation and come up with effective solutions:

> **PSS:** For most of us, people just took our pies and not pay up … they [PSS's colleagues] wouldn't even produce the list of the names of people that they sold the pies to. So, like, for instance, I experienced the same thing ... it was on this day that I sold a pie to some guy in a certain class. And then he said to me, 'Okay, you can come in and collect the money tomorrow'. Okay, so tomorrow during ... I can't remember if it was break, or lunch time, I went to the class. And I, I used to write a list of those who are owing. So, I asked to see that person in class, […] and they said, 'This person doesn't exist!' So, it means that person told me different name, and I couldn't even remember his face, for crying out loud! It was just so devastating, because it was when someone is trying to make money and you are not even supportive, just tell lies that you are going to pay him yet you're not going to pay. It wasn't a nice feeling, honestly speaking.

Like the preceding case, PSS's is not only dramatic and emotive for the narrator of the experience, but even the listener cannot help but be moved by the gravity of the experience and the desperation it caused the learners. One can only imagine the embarrassment and humiliation on PSS's face when told, "This person does not exist!" Even worse, he was obliged to pay the

enterprise for the pie he had been swindled out of. Unfortunately, as he notes, the situation was not unique to him, as other team members did not know who they sold to on credit and could not "even produce the list of the names of people that they sold the pies to" on credit if any follow-up was to be made. The exclamation or expression "for crying out loud" is suggestive of frustration, a feeling of defeat, and exasperation. Hence he summarises the situation as "devastating", denoting the emotions that the critical incident elicited. The fact that they were selling an extremely perishable product seemed unhelpful to their situation, because all of the the products had to be sold "before the end of the day", making it really hard not to sell on credit on a given day, thus "making it hard to make sure the process doesn't occur again". It seemed that the proverbial vicious circle had come to strike them again and again.

Not surprisingly, the learners "had meetings […] to discuss about this issue. That is, the main issue of people having to buy our pies on credit and then and then not really paying". The meetings were characterised by "fights, fights" over "selling to people on credit that you don't even know". Instead of helping to carefully analyse the problem, hypothesising possible explanations of why they were not doing well, like perhaps questioning the quantity of pies they stocked, the affordability of the product to their customer base, switching to other products or adding other fast-moving products to supplement and complement their main product, implementing solutions and evaluating performance over time, they seemed unable to do that. Emotions took over and became a hindrance to efficient and effective participatory sense-making during reflection sessions. It seems that the problem of emotions short-circuiting proper reflective thinking and problem solving cut across the different issues they faced as an enterprise:

> **PSS:** So, each week we had a meeting. Eish...! Fights, fights … There were people who don't want to sell or help just with anything. So yeah, I believe that was the main thing I ... We also experienced conflict when it was a time to share the profits. We had to forego our profits. We fought because we were selling to people on credit that we don't even know. And now they were refusing to pay.

As shown above, the fights were over problems of non-cooperation of members, "who didn't want to help with anything" like getting involved with selling. The repetition of this problem in the narrative seems suggestive of how severe this problem of members failing to shoulder their responsibilities had become. TMS's narrative helps to bring a better understanding of the dynamics of problems of this nature. She notes:

TMS: … a group member … wasn't really active with the whole project. The team felt jeopardised in the sense that now they have to compromise their duties or leave what they were assigned to do, only to go fill that person's spot because they were not being active. […] So, them being absent is no good to them as it is not to us.

As noted above, a problem of this nature robs the non-cooperating partners of the opportunity to learn from the project, while simultaneously increasing the workload of those who are committed. This would understandably bring more frustration or the feeling of being "jeopardised" to those who are committed, especially in that their product was not doing well in the market and the time pressure and exhaustion learners experience from the project and other competing school responsibilities. Unfortunately, to the question of whether they ever managed to solve any mini-enterprise problems or challenges they faced during their meetings, PSS concedes that "Honestly, they were not resolved at all. We always went home with our … sweating!". This is notwithstanding the fact that the meetings were called to talk about "the challenges that we faced and how we can help each other overcome them" (PSS) in the first place. The "sweating" is indicative of the high emotions and tensions that the learners remained with at the end of unproductive, tense and extremely emotionally charged meeting sessions. As much as non-cooperation and other crisis events are a problem on their own, it seems plausible to deduce that learners' lack of emotional intelligence and conflict management and resolution skills affected their ability to soberly engage in effective reflection that would lead to lasting solutions and learning.

In essence, there was no meaningful reflection in the meetings. PSS also conceded as follows:

PSS: There, I have to be very honest, we didn't really do that [reflect]. Because as children, as just learners, as teenagers, we're just excited about your selling and selling pies and making profits, but we didn't really reflect back. It is honestly all about to have work done and not to reflect, to look back to check if we're doing the right thing or not, or if you're following the plan or not. Like I said, we held weekly meetings where even though mostly it was fights, we had to make sure that we advise each other on what to do or if we are working in pairs or selling in pairs, so that if somebody lies to you saying that they are so and so, at least you are with somebody. So that they can be able to recognise you when we are supposed to make payment.

The issue of meetings spiralling into conflicts instead of being proper reflection platforms seems to have been experienced by different teams. For example, OMS observes that in their team there were more excuses instead of taking responsibility – blaming one another and "more of complaining in the business than solving" even though "some problems were solved":

> **OMS:** Team members were upset. They were annoyed. They didn't like it. They felt like there is no progress when people don't cooperate. Yes. So, they would complain in that way ... their solution was talking, complaining, and then some, yes they would listen and go buy as they're supposed to.

A common crisis event and area of conflicts for many mini-companies arose around the time of sharing of profits at the end of business, as there was no correspondence between the records and the amount of cash available:

> **BLS:** I would say it is the time when we're supposed to split our proceeds ... our profit and then we find out that the money was missing. It kind of demoralised us about venturing into partnerships and when it came to businesses. The money that was recorded on the books and the finances or the capital at hand were not corresponding. So I would say it is safe to assume more than mine was misused by the treasurer.

> **TMS:** We did get some mishaps, especially when dealing with the money at the end. You'd find the money not balancing and maybe shortages some instance. … We called our teacher to try being a mediator in the whole situation. […]. The problem was just, I think it was miscalculation, not that any money was stolen or anything. We tried [to solve the problem by ourselves without the teacher]. But you know, sometimes when dealing with your age mates, it's really hard for them, for others to comply. So, when introducing a teacher, that's when we were able to control the situation. Also, at that stage in our lives, we're not, you know, mentally mature to deal with such situations, if that makes sense.

These problems seem to suggest that there is a big knowledge gap in how learners conduct their meetings, especially for purposes of reflective participation and acting. Another important emerging issue noted in the study is the seeming lack of knowledge of how to manage emotions and de-escalate tensions, so that tough crisis events draw learners apart instead of bringing them together to productively problem solve and learn from the experience. Emotional intelligence may

be a key factor in helping learners to develop healthy relationships and cooperation in the operation of mini-enterprises and effective reflective thinking and acting to handle problematic situations that are bound to happen.

It is worth noting that even though learners may not reflect collectively during the running of their enterprise project, they at least subconsciously reflect and learn for the future. For example, PSS notes that:

> **PSS:** Because I, when I went to senior school, I did the selling with.... our class did the selling thing under the … subject that was called or that is still called Development Studies. So, I had to implement that. For instance, one of the challenges that we faced when we were in Maoka Secondary School, doing this project of selling pies, was that we were selling something which is expensive, which is maybe out of budget for these learners, because they didn't really support us. But other classes which were selling cheap stuff like Nik Naks, or ice pops, things that cost 1 pula and not BWP12 like pie, they sold their things and be finished. So I had to implement that at senior school, where I'm at now selling Cool Times, something which was cheap, which was just going for BWP3 and I didn't sell anything on credit. So the solution that I wrote about on my individual portfolio when I was studying Business Studies, I implemented that in a Development Studies in Form 5 when I was now a doing the project of selling Cool Times. So, I can say that I learned something.

The excerpt above shows that even though learners may not engage in effective collaborative reflection, they are able to reflect alone. The major undoing of the MEP is that there is no clear guidance on how learners can engage in reflection as a group as they are running the enterprise. The unfortunate thing also is that learners who are not able to reflect in groups only get a chance to reflect at the end of the project, when they are evaluating the whole project or reporting their overall experiences. Even on this there is disagreements among teachers on whether it should be a mere description of roles and responsibilities that learners had or should include reflection on the challenges they faced and how they solved them, and lessons learned. Notwithstanding, it is evident that learners may be picking up lessons and using those lessons in the future when they are placed in similar situations.

6.5. Process of collective reflective practice

6.5.1. Different ways of engaging in intuitive and reflective coping

The findings on the criteria or process used by learners to engage in collective reflection in the running of the mini-enterprise experience are varied. Most learners could not articulate the criteria of their process of engaging in reflection. A few respondents outrightly pointed out that they "had no criteria" (TMS) or "wouldn't say that there was really a systematic approach to that" (PTS). While the majority could not articulate the process, they did follow it, especially in reflecting on problematic situations. For example, one lamented that "[t]here was more complaining in the business than solving", while another noted that they "held weekly meetings even though they were mostly fights" and most of the times no solutions were brokered, even though the meetings meant to "discuss" or talk "about the different challenges that we faced and how we can help each other overcome them" (PSS).

A possible explanation for this situation is that reflection is not a requirement in the MEP as it is presently conducted. Learners engage in reflection mostly intuitively to cope with critical incidents that threaten the survival of their enterprises, even though some may not be aware of it. Some learner respondents seemed not to have the vocabulary for it, and even denied engaging in it, but with further questioning it would become clear that they do engage in reflection in their own way intuitively. Therefore, I coined the term ***intuitive reflective coping*** to describe the different ways in which learners engage in reflective learning in the MEP. This reflection appears in various ways: as a diagnostic or an investigative exercise (*reflection as investigation*) to assess the performance of the mini-enterprise and identify problems that may not readily stand out; *problem-driven reflection* to find solutions to problems they are experiencing and are aware of; *pre-emptive reflection* to proactively prevent potential problems after risk assessment of some sort; and reflection *as planning* to prepare for upcoming events. The last two overlap, and I therefore treat them as one – engaging in *preventive/proactive reflection* – as they both imply reflecting in anticipation of an experience. Meetings are the common platform used by learners for engaging in collaborative reflection to achieve different ends or goals. This whole process and its resultant outcomes is presented in Figure 8 below, followed by a discussion of findings.

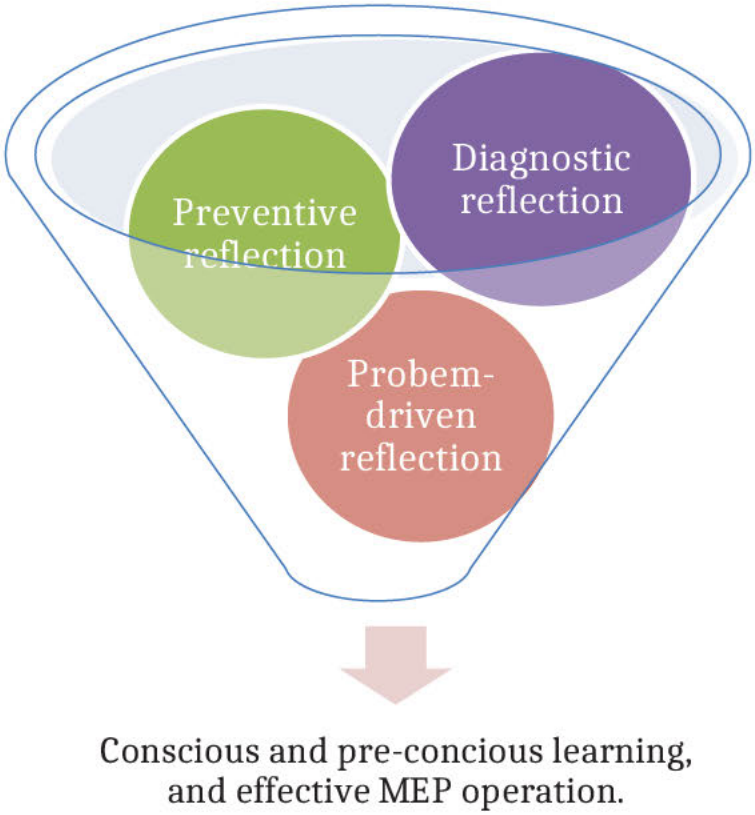


Figure 8: The different ways of collective reflective process

6.5.2. The proactive reflective process

As noted above, one of the ways in which learners engage in intuitive reflective coping is through planning ahead for future events. This may include overall planning for the MEP experience as a whole or events that emerge during the operation of the project. Findings showed that proactive reflection as overall planning had an anticipatory nature, to help learners to come to decisions about their business ideas and anticipate potential challenges. An example of this is through the use of SWOT analysis, which although helpful could not anticipate all challenges. Another way in which learners engaged in a proactive reflective process was the use of self-questioning, thinking and acting. Most learners reported coming up with ideas following the structure of the MEP, where individual ideas are contributed then market research is conducted on the best three. Others take a more market-driven approach to generating and selecting ideas based on market research. In this market-driven approach, the process of market research starts off as informal followed by a more rigorous formal process that involves distribution of questionnaires. A typical example is presented below:

MKS: How about maybe when we're just passing by the staff room or … just talk to other learners, ask them, 'What would you like to buy from me if at all I was to sell something in school as a business learner?' And then, we got back to each other with the information. Then we sat down, we were like, 'You know what? The other thing that we can do is just to … write the questionnaires and then just distribute them.' So, we, we did that. After that. We just gathered the results that we got then we decided that okay, fine, since most of the learners and the teachers, the staff would like to buy our pies, then that's it.

The respondent shows that some of the learners engage with potential customers informally to get a feel of the market and products or services their potential customers may like. Armed with this preliminary data they develop questionnaires and collect more formal data. What is interesting about the above excerpt is that it also reveals how the reflective process unfolds. The pre-action reflective process unfolds as a process of self-questioning, collective thinking and doing. The process starts off with a question:

MKS: What is it that we can sell to the learners, something that can be so very affordable?

This question not only thought about a product that potential customers would like but also that it must be affordable. The target market must not only like the product, but they must also be willing and able buy it if it is availed. This question was followed by another question that reflects thinking: "How about maybe when we're just passing by the staff room or … just talk to other learners, ask them, 'What would you like to buy from me…?'" This question was not only inviting a discussion but also a course of action that must be embarked upon as part of the pre-action reflection and decision-making process about the future of the enterprise. It seems learners agreed to this as they went forth to collect the preliminary data as suggested and came to sit for another meeting to deliberate on the findings. Probably, upon trying to collectively make sense of the data by evaluating it, they realised that it was insufficient and inconclusive. They think of what they could do next to make it more robust and come to a conclusive decision. The statement, "You know what? The other thing we can do is…" seems reflective of learners' active thinking or brainstorming. Like the previous decision, it was also followed by action or implementation of developing the instrument, administering it, analysing the data, and coming to a solution. The process of reflecting by self-questioning, thinking and doing continues even further, to when they decide on the start-up capital. They asked themselves: "So how much are we contributing?" This was most definitely followed by suggestions and actual contributions, especially since their "school

is not sponsoring" the project. Furthermore, this process demonstrates the holistic nature of reflection; that is, reflection is not only a cognitive process but may also involve action.

Proactive reflection not only occurred prior to the start-up process, but also during the operation of the business. Anticipated critical incidents in the form of entrepreneurial opportunities for action also triggered pre-emptive or anticipatory reflection. This occurred because the anticipated events presented opportunities that had the potential to increase demand exceeding any normal day of business. Due to their promise and short span, the events required careful planning to optimise them while also managing risk to avoid overstocking and having lots of stock remaining at the end of the event. The reflection also needed to anticipate the preparatory activities required by members of the team to gainfully exploit the opportune event when it happens. This type of reflection also increased learners' readiness to cope with the demands of anticipated episodic opportune events and the project as a whole.

6.5.3. The diagnostic reflective process

Another way in which learners engaged in the reflective process was through a process of investigation, comparing the business plan with what was happening on the ground even though no problem may have been noticed. I have called this the diagnostic or investigative reflective process to denote the character of this reflective process. Some of the respondents reported or provided no evidence of ever referring to either the business plan or material taught in class while running the business. MKS reported that they "never went back to the business plan", and TMS simply states, "I don't think we had gotten to a point where we had to refer to anything we learned in class. Yes, we just went and sort of dealt with them at that point. We didn't refer to anything!" It is worth noting, however, that this does not imply that they did not engage in any reflection of some sort. This only means that in their reflective practice they did not make reference to taught materials as contained in books (either textbooks or notebooks or any such instructional materials and learning resources) and the business plan which is meant to guide the running of the mini-enterprise. Another respondent also shared that their team experienced a similar oversight, but their teacher emphasised the need to refer back to what they did in class:

> **AMS:** She [the teacher] was the one who was concerned about us connecting what we did in class and what we are doing. She would advise us to go back and look at what we did in class and what we are doing. When we were talking about the challenges we faced, she

would tell us that our weakness is that we do not go back to see what we did in class, and what we are doing. And that's the part we failed doing.

The interview extract above shows the role that some teachers played in helping learners not to engage in reflection in a vacuum, but to make connections between theory and practice when operating the enterprise and being faced with challenges. The importance of making these connections is also highlighted by Teacher Boniso, who noted that she employed tests and revision "questions that would allow learners to reflect on their mini-enterprise". In this way the links and relevance of the practical experiences and the taught information are strengthened to help develop a deeper learning of the content.

Unlike the learners mentioned above, a good number of respondents reported some form of reference to the business plan and taught material during the duration of the MEP:

OSS: We did [refer to the business plan]. The reason was to identify our strengths and weaknesses, and where we went wrong, and what we were supposed to be doing and not doing.

BLS: I would say they were co-dependent on each other [...] because in class we are taught on how to run a successful business, things to look out for, what to avoid ... So, we used that information […] in the daily running of our business. We updated our records on a weekly basis because I recall having to do financial statements [… and at] the end of the week we would sit down to write down our financial positions. We used live data of what was happening on the ground. We didn't make assumptions or things like that ... The data showed that the business was not performing well. Because the predictions we made were high and then the turnout was low.

SGS: Well, we did refer to the business plan every Friday, because we didn't do it every day, it was going to be tiring and boring to do the same thing every day. What we were doing is, we checked whether what we wrote on the business plan, is it what we were practising? […] And there are some things that we didn't consider in the business plan that we did, so we ended up jotting them down into the business plan.

All the respondents quoted above are generally representative of the majority of respondents in seeing the entrepreneurship content taught in class, the business plan and what occurred in the mini-enterprise as "co-dependent" and by extension their reflective processes compared these co-dependent aspects of the MEP. This co-dependence manifested itself in the following ways: the content provided knowledge information for developing the business plan operating the business; the business plan guided the operation of the business; and the operation provided live data and actual figures that could be compared to forecasts made in the business plan. RGS reported that they had "to refer back a lot" to what was taught in class during the development of the business plan, but not the running of the enterprise. In terms of operating the business, the taught content and the business plan helped learners to look forward to what they should do, what to anticipate and even what to avoid. In a way, this seems like material for anticipatory reflection and reflection in action during operation. The plan served as a standard to facilitate reflection on the performance of the enterprise as well as a means through which learners could evaluate their thoughts, decisions, and actions. This is revealed in the words of OSS, who shared that their reason for referring to the business plan "was to identify our strengths and weaknesses, and where we went wrong, and what we were supposed to be doing and not doing". SGS shares the same sentiment of using the business plan for comparative purposes in an investigative reflection process. This process revealed discrepancies between forecasts and actual figures and blind spots or things that they had overlooked. As much as these reflective processes led to changes in the operation of the business, they also led to the updating and revision (where applicable) of the business plan or portfolio, thus demonstrating the co-dependence.

RGS demonstrates the value and even the consequences of not using investigatory reflection optimally by not adjusting what was in the business plan to the reality on the ground. He laments that "one thing that I think we could have evaluated together as a group at the time is maybe we could have increased the output of hunger busters". When their customers "wanted more" most of the time he found that the products had already "ran out" or "sold out" (RGS). A review of the product demand against what was planned would have revealed this lacuna, and the opportunities would have been fully exploited, but learners seemed to blindly follow the plan as it was drafted.

In contrast, SGS reported that their team "did refer to the business plan every Friday… after business day" where they analysed "how the business went throughout the week" and "then refer back to the business plan". The goal was to check if what they were doing tallied with what they "wrote on the business plan" and whether it is what they "were practising" (SGS). This process

indicated that even though everything was seemingly going well, there were some things that they did but that were not captured in the business plan: "Like the idea of selling to teachers, the teachers were not our [target market when] we did the business plan [at] first," (SGS) – but teachers proved to be among their biggest customers. As a result, they updated their business plan to include the unexpected occurrences in the field. Furthermore, their reference to taught material was done during the course of doing business, they "didn't wait for, like, at the end of the day, at the end of business day or before, [but] during the course of the business, when stuff ... when something was happening" (SGS), and they would refer to the books or the teachers to check if they were on track.

Other respondents shared a similar experience or followed a closely similar approach. They see the MEP as implementation of what was taught in class, since the practical aspect followed after they had covered all the material needed to run a successful enterprise. The content taught in class, the business plan, and the practical aspect of operating of the mini-enterprise were seen as "co-dependent on each other" (BLS) as they "had to incorporate everything" (BLS) they learned in both developing the business plan and operating the mini-enterprise. The taught material guided them on things to look out for and avoid in the daily running of the business. BLS expands and illustrates this co-dependence and how reflection unfolded in the process. He notes that they "used live data of what was happening on the ground" to analyse and evaluate performance, comparing it to the business plan forecasts. The outcome showed that their revenues and sales were far too low compared to the predictions. They tried to work hard to increase sales, but their "projections were still high", so they eventually decided "to make alterations" to their projections in the business plan so that they were more realistic. However, noticing that making adjustments to the projections was not enough. BLS reports that:

> **BLS:** We had a team discussion on what to do … the way forward regarding the low outcomes we were receiving. So, we decided to go with loss leaders whereby we made sales, promotional sales. And also, we decided to bring in another product, which was chocolates. The chocolate did well compared to the toffees.

These findings show a tripartite process of reflection that learners engage in: using concepts taught in class, comparing, and reviewing practical outcomes of running the mini company against projections in the business plan, and making adjustments to both the business plan and business practices. Some of the learners saw emerging problems as manifesting in two types, the first being textbook type of problems that could be solved through material taught in class and found in their

notebooks or textbooks, and the second type being those which forced learners "to deviate from what we learned and actually brainstorm new solutions" (JMS). JMS explains how the latter occurred in the specific circumstance where their preferred supplier kept failing them by making very late deliveries that were frustrating their business:

> **JMS:** When you're studying from books, they will tell you that if there are two product providers with qualities of the same level, you're going to have to choose the one which puts less stress on your organisation, and the one who charges less. But that wasn't the case with us, we had to choose one that charges more. One that put more hustle on our enterprise … we had to go collect what was ours and at our own time, because sometimes you'd have to miss a lesson, go collect an order, or you would have to go during your own spare time to go collect your order.

In the last excerpt of the interviewee's response it is clear that as much as learners appreciated the value of referring to both the material learned in class and the business plan in their reflection, they could go beyond these learning resources to creatively find more pragmatic solutions, even if they seemed to contradict what they had learned. It seems that they were open-minded enough and realistic enough to push the frontiers of their thinking and acting to arrive at solutions that will benefit the business. They somewhat appreciated the fact that the problems they faced required unconventional solutions.

6.5.4. The problem-driven reflective process

Unlike in the case of investigative reflection, sometimes discontinuous events may be so disruptive that they cannot escape the notice of acting agents. They outrightly trigger reflection that begs for a solution by making their presence felt in an urgent and robust way, forcing the learners to stop, regroup and think of a solution – even though for some reflection and meetings may not be something they were invested in, as was the case with some teams. Generally, the findings show that there is a discernible unitary and uniform approach for the process of reflection across the responses. As already noted, learners seem to engage in a process of intuitive reflective coping to restore problematic situations back to equilibrium. The curriculum does not help by providing structure on how learners are supposed to engage in reflection to deal with this situation more systematically. This I will broadly call a reactive reflective coping approach, albeit the data shows that there are varying degrees of structure that learners follow. Whereas the majority of learners

reported experiencing some crisis events, many of them fail to describe how they engaged in such a reflective process. Many would indicate that they sat for a meeting and discussed the issue, where everyone shared ideas, or in the worst cases they just complained and fought throughout the meeting and eventually landed upon a solution. The reflective process in this category of learners is totally unstructured.

In the second category, the reflective process seems semi-structured. Although almost bearing the hallmarks of a semi trial and error approach rather than a systematic approach, the learners articulate a more reasoned out process. The case of BLS's team may apply here, even though the crisis was revealed by the vast different between the projections and the live data. In their approach there is an attempt to be systematic by identifying the problem, possible solutions, and implementing the solution by way of making adjustments to the projections. On re-evaluation they see that sales are still low, and then think of diversifying the products, a solution that eventually worked. So at first it seems they had partly identified the cause of their problems; although the projections were too high, they may not have been the actual cause of low sales. The demand for their product may have been low; customers may not have liked it much and were therefore unwilling to spend on it.

The last category of findings shows a more structured process of engaging in reflection. Here I bring two cases. Reflection at this level is characterised by first clearly and correctly identifying the problem that learners are faced with and its root cause. Secondly, they clearly identify the impact or implications of the problem to the business if not addressed. Thirdly, they devise possible solutions to the problem and choose the best, most workable solution. Fourthly, they implement the chosen solution and observe the outcome. If it works, they have their solution. Lastly, if it does not work, they implement and observe alternatives until they find one that works. The cycle continues until the next problematic situation. This process was followed by MKS's team and JMS's team in slightly varying degrees. MKS's team established that there was a problem of theft and noted that its potential impact was that if they "don't take care of the situation at hand, [they]'re just going to be running at a loss" (MKS); this was potentially caused by poor security since there were "no CCTV cameras" in the lab where they stored their products. With that they understood that it was difficult to identify the culprits since they could be fellow learners, teachers or members of staff because the lab was accessible to many people. They came up with the solution of asking their business teacher for permission to store their pies "inside the office so that if it's inside the office, we know that learners are not allowed in at all [and] the pies are going to be

missing, then that means the teachers are going to be responsible for the pies that are always missing in our boxes." They spoke to their "Business Studies teacher, then she agreed to keep them in her office by her table. The outcome was that … since then there was no theft of pies" (MKS). The last line indicates a process of implementing a solution and observing the outcome. Another interview excerpt below confirms this structured process that follows the inquiry process:

> **JMS:** Our supplier was bringing in our products extremely late. That was a problem. And the impact that had on that was that since how they're supposed to be our main income, or our main income source, in our enterprise, we were not reaching what we're thriving for. You understand? So that was the impact of not bringing our product on time. And then the possible solutions where, we could … we could have someone pick that up or we could change a supplier. So, we tried having someone pick it up, but the thing is, they did not prepare our hotdog rolls at the agreed time. […] break time was at 10, the latest that we had to be done preparing our hotdog rolls was at 9. They failed to adhere to that time. So, this meant that the solution of having someone go collect was no longer on the table. The best possible solution was now changing suppliers, which is when now I went and approached Spar. And I said, Okay Spar this is the thing, I have this enterprise based in school. I need this from you, 'Can you provide to me on time, and I will pay on time?' 'Yes, we understand your arrangement we can, but we do not deliver so, you will have to collect' [that is Spar]. We gave them a two-day trial run and they performed beautifully, and we then switched to Spar full time. Now, our production line could commence as initially agreed. So yeah, that was a problem. That is how we addressed it. And we had agreed to this as a collective.

This last case builds on the previous examples about the structured reflective process. It is a process of reflecting and acting that is iterative until the problematic situation is brought under control. Like the other examples preceding it, albeit relatively more structured, the learners engage in the reflective process by first identifying the problem and its impact on their enterprise. They also brainstormed permutations of possible solutions. Since the supplier was offering a better price for the hotdog rolls, they were willing to at least ameliorate the problem of tardiness by collecting for themselves. That is, they implemented the solution and observed for improvement. When that failed to work well, they implemented the second solution and gave it a trial run or observation period until they were satisfied with the outcome. To tie everything together, these findings on the different ways in which learners approach reflection not only speak to the structure of the reflective process, but also its quality. The less structured the reflective process is, the lower the quality, even though at times it may stumble on solutions at times. However, at other times it may not help learners to arrive at solutions and draw the correct lessons from the experience. It also shows the

importance of each step in the reflective process. For example, if BLS's team had initially diagnosed that their main problem was that their product was less attractive to customers, they would have probably not rushed to adjust the projections. The forecasts may not have been very problematic in the first place, since their revisions did not change the problem of the enterprise struggling with low sales. Also, the differences in the structures of the reflective processes may be better understood as a continuum rather than a dichotomy, thus representing the fluidity and subjective nature of the varying degrees of quality and structure of reflection, which are hard to define in absolute terms.

6.6. Reflecting on learning

6.6.1. Learning lessons pre-consciously

Reflection is not an end but a means towards certain ends. As much as the findings have shown that reflection helps learners cope with the mini-enterprise experience and also facilitates enterprise success through helping them to deal with problematic situations or gainfully exploit entrepreneurial opportunities, its greatest value comes from facilitating deep and meaningful learning of entrepreneurship from practical experience. Therefore a question worth pondering is 'How do learners' reflection practices relate to learning in the mini-enterprise project?' That is, do learners, either as individuals or as a collective, draw lessons from the reflective process as or after they deal with different critical incidents? Respondents were asked whether they ever deliberately drew lessons from an experience as a team during the collective reflective process. Their responses indicated that although they reflected on experiences and tried to find solutions to problems they faced, in the end they did not draw lessons from the evaluative situation as a collective. The extracts below demonstrate this:

MKS: As a team, no, we didn't.

PSS: It was as different individuals [...] because we didn't have time.

The excerpts above revealed that they did not engage in bringing together lessons from each experience or event that they reflected on, especially after finding solutions. Their focus seemed more focused on addressing situations they were faced with, and ensuring that the enterprise was a success. However, at the end of critical events there is no evidence of learners deliberately consolidating main lessons from the experience as a team. It came as a revelation that learners did

not report collectively reflecting on the main lessons, they learned from different situations that they dealt with. PSS suggests that the reason for this was because they did not have time. To some extent this reason may be plausible, as the challenges of availability of time have already been raised.

Even though there is no evidence of learners consolidating the main lessons from each experience as a collective, it does not mean that lessons were not drawn at all by all learners. There is evidence of learners drawing lessons from their experiences as individuals:

> **MKS:** But as an individual, like I said before, I really want to be a businesswoman. So, I saw the mini-enterprise serving as learning more about what should be done and what shouldn't be done. So I did my best that I could. And I'm still holding on to what I learned from the enterprise, which is communication skills, listening to teams, and how to work with teams, how to write letters to people. So that's what I treasure.

> **PTS:** This taught me that every business encounters challenges, every business encounters threats, but as an entrepreneur you should know how to deal with such instances. And entrepreneurs should be thoughtful for and have the capacity to think outside the box, should be able to take decisions and plan ahead of time so as to prepare himself or herself for the threats that the business might face in the future.

> **BLF:** It taught me to choose better finance personnel people who are trustworthy.

> **JMS:** So what this taught me was, you know what, I had to be a team player, you understand? I had to brush up on my conflict resolution skills, I had to brush up on my time management skill.

MKS argues that she drew lessons from the experience as an individual, and her aspirations of being a businessperson played a role on this. The use of phrases like "this taught me that …" shows that learners are able to interpret and draw lessons from different situations and experiences in the mini-enterprise. PTS came to understand that challenges are to be expected when running an enterprise, and therefore one needs to be a creative problem-solver who thinks outside the box, with good planning and decision-making. Having dealt with an unfaithful treasurer in their enterprise, another learner began to understand that business cannot always be trusted, and to appreciate the

value of banking with financial institutions. JMS showed that experiences revealed skills that he needed to refine to be successful. Some even reported that they used these lessons when dealing with other business-related situations at a later date. Others reported that they we just interested in selling rather than learning (KWS), or did not recall doing it personally and intentionally (PSS). This seems to show the limitations of not having a systematic process of reflection that makes learning from the reflective process deliberate and intentional. This does not mean that learners in these situations do not learn anything at all, because all learners could share the knowledge, skills, and competencies they learned from the project. It perhaps suggests that they learn serendipitously and pre-consciously. This hypothesis is supported by some teachers, who argued that "they are learning but unaware" (Teacher Victoria). Teacher Moore shared a similar sentiment, positing that he is "afraid to say they actually do reflection and draw lessons from this. They will only realise [the lessons] maybe four or five years from now." This communicates a need to make learning more deliberate rather than accidental and incidental through proper reflective learning processes.

6.6.2. Lessons learned and their major influences

Learners participating in the MEP learn and develop knowledge and skills or competencies from the experience. From the findings, what learners learned can be grouped into knowledge, skills, attitudes, and values. This does not negate the fact that they must have been taught entrepreneurship content before drafting the business plan and implementing it. The co-dependence between taught entrepreneurship content and the MEP has been established, as one respondent reported:

> **JMS:** We had to incorporate everything that we learned in class, everything that we had read from our notes, we had to implement it.

The ability to implement everything taught implies that the content must be learned, to first prepare the business plan and later execute it. This means learners must have knowledge of how to conduct market research, advertising, price determination, financial forecasting, and preparing trading profit and loss accounts, customer care, sales management, and so on. Reflecting on their experience, most learners' learning relates mostly to applied knowledge, skills, and attitudes. In terms of knowledge, learner respondents reported learning forms of knowledge that can be classified as procedural knowledge of how certain things are done in business (e.g. preparing a business plan), declarative knowledge of basic concepts of entrepreneurship, and lastly developing

a self-perception about entrepreneurship (i.e. whether they want to be entrepreneurs or not). This means that by the time the project comes to an end, learners would have formulated ideas and feelings about the desirability of entrepreneurship as a possible career choice or a general entrepreneurial mindset. In terms of skills developed, the findings show that learners develop different types of skills, such as opportunity recognition and evaluation, operational skills for the effective running of the business (such as carrying out market research, selling goods and services, handling change and customer care, time management, problem solving, contingency planning, and production). Learners also reported developing interpersonal skills that enhance teamwork and cooperation, such as the importance of good communication, appreciating diversity, being considerate, the value of teamwork, and conflict resolution and management. The last category of reflections on learning entail attitudes and values developed, and these include optimism, passion, patience, confidence, security consciousness, a sense of punctuality and time management, good work ethic, being organised, and ethical ways of doing business.

Respondents alluded to various aspects of the MEP as having played a pivotal role in their learning. Most respondents reported that the collaborative nature of the project contributed the most to their learning. Although teamwork was not smooth, it helped the work to be bearable through sharing responsibilities, and sharing ideas, encouragement and suggestions for improvement. For others the teamwork benefits extended to other subject areas. Closely related to teamwork was support from their teachers. They guided in the day-to-day operation of the business and helped learners to solve problems they faced. Learners who experienced very little to no supported at all seemed to experience more conflicts and frustration with the project. The practical and hands-on nature of the enterprise project was noted as one of the aspects that contributed the most to learning, as it gave learners an opportunity to apply taught content in "all the processes" of "running the business" and boosting learners' confidence as a result. For example, some learners reported being timid and nervous to go out selling, but over time they developed the confidence to handle customers and sales on their own. The project allowed learners to tap into their creativity, such as in the development of "eye-catching advertising" as well as a level of "flexibility" and "risk-taking" in trying out different solutions. The element of flexibility seem to be tied to the ill-structured nature of the project, because for every problem there are multiple possible solutions as opposed to just one, allowing learners to experiment with different solutions and to change them if they don't work. Some of the solutions seemed to lean more towards trial and error and learning from mistakes.

For others critical incidents played an important role in learning, as they "learned from having hiccups and solving them". For many respondents the profit motif ran across their description of their experiences. It described the clarity of vision or goals on their part for engaging in the project – "to make profit". Although the over-emphasis on making profit rather than learning may be problematic, it makes sense why it would be a source of learning and motivation for learners who have invested personal resources with the hope of making more in return. This expectation seemed to be a driver to dealing with reflective learning, especially in the face of crisis events that threatened their expected returns. In sum, although learners engage in reflective coping to deal with different situations, they also glean some lessons from the experience as a whole, and they attribute such learning to different aspects of the project.

6.7. Conclusion

The findings on the process of reflection that were observed show that learners reflect in different ways. They may engage in reflection as planning for activities that they intend to undertake either before running the enterprise or during the running of it when opportunities emerge. They may also reflect by referring to content taught in class and consulting their business plans as a diagnostic exercise to detect potential problems that they may not have identified, so that they address them before they cause much damage, or realise when it is too late. Furthermore, they may also engage in problem-driven reflection to deal with problems that stand out, the solution to which may not have been found. This process may be iterative and involve trial and error until the best solution has been determined. The findings further suggest that learners engage in a reflective coping approach which is reactive to critical incidents they are faced with. This reflective process ranges from unstructured forms to a more structured reflective coping process. The structure of the reflective process may be an indicator of the quality of reflection. The less structured reflection may be an indication of a low quality of reflection, while the more structured reflective process represents a comparatively higher quality of reflection. The findings further suggest that many learners do not deliberately from the outset pursue drawing lessons from the reflective process. The learning seems to occur pre-consciously, owing to the unstructured nature of reflection, and the fact that there is no deliberate attempt for learners to reflect on the lessons learned. Learners therefore seem to learn serendipitously rather than deliberately.

CHAPTER SEVEN

EXPLICATION OF THE REASONS FOR REFLECTION IN THE MINI-ENTERPRISE PROJECT

7.1. Introduction

In Chapter Five the findings showed that the nature of the MEP sets the stage for reflection, as it is designed as an action-oriented pedagogical tool and authentic assessment. This means that it simulates a real enterprise where learners generate and evaluate business ideas and implement them collaboratively in the school community. Due to its practical nature, reflection occurs as a function of the phases of the project. That is, at the conception stage learners engage in anticipatory reflection; during the implementation phase they engage in reflection in action; and lastly, in the project completion phase reflection manifests itself as reflection on action (looking back on the whole experience). Furthermore, reflection was revealed to happen through the platform of meetings, thus occurring mostly through collective and conversational reflection. It also came out clearly that teachers play an important and meaningful role in reflection, even though learners' responses showed that there are shortcomings on the part of their teachers in properly facilitating reflection.

In Chapter Six the findings presented focused on how learners engage in reflection in the MEP. The findings revealed first of all that learners engaged in reflection through a process that involves collective reflective thinking and acting. This implies that reflection is not an exclusively mentalistic process but an embodied, enactive, and affective process embedded in the local setting. To encapsulate all these different aspects, I have termed this a *participatory reflective process* occurring through the platform of learner meetings, involving collaborative reflection and acting on different problematic situations and opportunities. In addition, the findings revealed that in the process of reflection learners are triggered by critical incidents (which consist of crisis events and entrepreneurial opportunities) to set in motion the process of reflection. The critical incidents not only create a perceptual experience that results in an evaluative situation to be reflected and acted upon, they also almost simultaneously spur *epistemic emotional experiences* which also play a role in motivating reflection and acting on the evaluative situation. The findings revealed that learners in the mini-enterprise experience are neither formally required to engage in reflection nor given a standard format for reflection during the operation of their projects, except in Chapter 4 of their portfolio at the end of the project. Consequently, out of their own intuition and volition, most learners engage in collective reflection and acting in a variety of ways that I have termed *intuitive reflective coping,* to deal with different situations they encounter as

they run their mini-companies. This chapter of the thesis brings together the experiences of learners in reflection as outlined in Chapter Five and the 'how' of reflection described in Chapter Six, to understand why reflection occurs in the way it does in the mini-enterprise experience in the light of evidence from the findings, and the lens of the literature review and theoretical and conceptual framework.

7.2. Reflection as a participatory process

7.2.1. Participatory reflection and action

An examination of participants' responses about their experiences with the MEP shows that learners tend to engage in collective reflective thinking and acting. That is, learners ruminate on their experience, evaluate it, and come up with possible solutions through a dialogic reflective process, mostly in meetings, and take action to try and address the problematic situation they are faced with. If the proffered solution fails to correct the problem, learners go back to think of other solutions or use alternative solutions brainstormed in the initial reflective process. Therefore, quite often this process is not always linear and does not have a predetermined structure. Rather, it is an intuitive and iterative process that sometimes involves a trial and error process manifesting itself in a spectrum of reflection practices ranging from structured (or systematic) reflection to an unstructured (unsystematic) reflective process as a way of coping and adjusting to changes in the business environment and within the enterprise itself. The end point of reflection is when the desired situation is attained.

This process seems to align well with Dewey's theory of reflective thinking and acting, which is premised on the inquiry process (Morgan, 2014; Pepin, 2012, 2018; Rodgers, 2002). However, to encapsulate the broad and complex nature of this collective reflective process characterised by collaboration, dialogic reflection, and action that is emotive, embodied, enactive, and embedded in the educational contexts of the learners, I adopt the term *participatory reflection*. Reflection in part entails a disciplined, purposeful, and systematic sense-making process that connects past experiences with future experiences and equips the learning agent with insights and capabilities to know how to act in future related situations (Lindh & Thorgren, 2016). Therefore, I borrow from the enactive approach of socially situated cognition or embodied cognition to explicate the participatory reflective process in the MEP, because the findings of the current study seem to resonate with research on participatory sense-making (Mitchel et al., 2007; De Jaegher & Di Paolo, 2007, 2008; Di Paolo & De Jaegher, 2017; Candiotto, 2019). This approach is non-reductionist as it is able to draw from different research methodologies, including phenomenology and pragmatism, and more importantly is predicated on

studying learners' experiences with a whole-person focus that includes the mind, the body, emotions, actions and social interaction situated in specific contexts (Gallagher, 2014). In addition, it liberates reflection from the accusation of being a mentalistic orientation of Dewey's theory (Hébert, 2015), even though his soft pragmatism was founded in non-Cartesian dualistic ontology and epistemology. That is, it gives a different perspective of looking at reflection as a process that does not happen exclusively in the mind, but involves the whole person. It also shifts reflection from an individualistic process to a more collaborative, dialogic, and democratic process where autonomous agents engage in reflective thinking and acting through social interaction.

The process through which sense-making occurs in reflection was revealed to be relational, emotive, and embodied. The sense-making process involves coordination, which consists of deliberate, purposive and coherent actions, by collaborating learning partners engaged in reflection to work towards one goal in resolving problematic situations or opportunities for action that they encounter (De Jaegher & Di Paolo, 2007). In the case of the mini-enterprise experience, coordination should not be understood as a rigid and synchronised process akin to rhythmic choreographed motions (De Jaegher & Di Paolo, 2007), but a flexible yet coherent and cohesive process that allows interacting partners to engage in a social interaction that helps them achieve a common goal. A loose rhythm of regulated discussions, emotions, movements, and actions is required to sustain this conversational, affect-laden and enactive reflective process, which in turn influences interaction processes of the involved agents. To borrow from Candiotto (2019), participatory sense-making in reflection organically generates robust and emotionally charged discussions about different alternatives regarding an evaluative situation and selection of the best course of action. In this process learners maintain their individual autonomy for the sense-making and decision process to yield the best outcomes for the project, and it is intellectually stimulating enough to bring new perspectives to the table that others may not have thought about (De Jaegher & Di Paolo, 2007; Candiotto, 2019). This understanding of coordinated social interaction is aptly described as:

> … the regulated coupling between at least two autonomous agents, where the regulation is aimed at aspects of the coupling itself so that it constitutes an emergent autonomous organisation in the domain of relational dynamics, without destroying in the process the autonomy of the agents involved. (De Jaegher & Di Paolo, 2007, p. 493)

A few things stand out from the above conceptualisation of social interaction in sense-making contexts: first, the need for a regulated coming together of interactors to create and sustain an identity

for the team; and secondly, that interactors maintain their individuality and autonomy even though going through relational dynamics that at times may threaten such autonomy. Thus, participatory sense-making in reflection is a dynamic process whereby autonomous coupled agents generate and transform shared meanings of their experiences through coordination and interaction within a given situated context (Candiotto, 2019). This understanding is important to appreciate the complexity of reflection involving the whole person in the world. It appreciates that reflection is not a neat process, limited only to reflective thinking and acting, but includes all other aspects of being; that is, being as the individual self and being with others. The group dynamics, characterised by emotive fights at the beginning of the project which eventually normalised into more organised, united and productive teams that found their rhythm, is testament to this complexity and reality of participatory reflection. When teams reach the stage of norming and performing, it does not mean that the individual autonomy of coupled learning agents ceases – if anything, it continues to blossom. For this reason, participatory reflection appreciates that the autonomy of each learner remains pivotal, because the entrepreneurial abilities and strengths of individual learners thrive when freedom to think and act independently in line with team objectives is encouraged (Järvi, 2015). As a result, the utilisation of each learner's knowledge, experience, and unique abilities is encouraged, because when individual learners share their thoughts with peers for consideration they have an opportunity to learn from discussions, decisions, and tested outcomes of their decisions jointly and severally.

7.2.2. The nature of the mini-enterprise project and its influence on participatory reflection

To understand why learners engage in participatory reflection one first has to understand the nature of the MEP as a practical pedagogical and assessment tool, and the context wherein it is situated. The findings of this study revealed that the MEP is indeed a practical experience that combines the theory of entrepreneurship with practice. Earlier studies have established the need for entrepreneurial learning activities or programmes to be able to bring together entrepreneurship content with practice by simulating real-world ventures (Hietanen & Järvi, 2015; Higgins et al., 2013; Kassean et al., 2015; Lackeus & Savetun, 2019; Neck & Greene, 2011). As a vehicle for experiential learning, entrepreneurial activities reflect real business very closely in educational settings by including elements of enacted practice. These elements include direct experience as material of learning, involvement of the whole person, collaboration, uncertainty and ambiguity, risk, interaction with the outside world, learning from mistakes, reflection on critical incidents, a facilitator, and a system for assessment and feedback (Andresen et al., 2020; Arpiainen et al., 2013; Higgins et al., 2013; Lackéus, & Sävetun, 2019; Pittaway et al., 2011).

The MEP, like many other entrepreneurship education programmes, has been shown to share these attributes by being situated in the real-life world where entrepreneurial learners work as a team to develop business ideas, and research the feasibility and viability of their business ideas in the actual potential market, the school community (Grewe & Brahm, 2020; Järvi, 2015; Moberg, 2014). In addition, during the production phase of the project learners not only deal with routine issues of production planning, engagement in actual production, packaging of product and selling the finished product to customers, they also have to deal with a lot of uncertainties, ambiguities and problematic situations involving different stakeholders (such as customer complaints, supplier failures, conflicts with peers, etc.) of the enterprise (Arpiainen et al., 2013; Järvi, 2015; Lackéus, & Sävetun, 2019). To solve these they must put their procedural knowledge and tacit knowledge garnered through past experiences into practice and classroom learning (Grewe & Brahm, 2020; Määttänen, 2015). Both learners and teachers confirm that the project is undertaken after having completed the theory aspect of the course relating to entrepreneurship, and some do apply the theory to practical situations and also use the practical knowledge in classroom situations. This confirms the findings by Grewe and Brahm (2020) that mini-companies as an experiential learning tool assist learners to grasp concepts and be able to apply them to specific tasks as needed, thereby developing entrepreneurial competencies. The reflective process in the mini-enterprise is necessitated by the different challenges learners face that are embedded in the nature of the project itself and is consequently a means for learning from them (Grewe & Brahm, 2020; Järvi, 2015; Lindh & Thorgren, 2016; Pepin, 2012, 2018; Pittaway et al., 2012).

To borrow from Jarvis and Parker's (2006, p. 13) definition of holistic learning, the MEP engages "the whole person – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses)" in the building of "an experience which is then transformed cognitively, emotively, or practically (or through any combination) and integrated into the individual's own biography resulting in a changed (more experienced) person." This view of learning seems to align with Merleau-Ponty's concept of the "intentional arc", which also emphasises the unity of the mind and body working together as a harmonious whole in learning (Larsen & Adu, 2021; Koopman & Koopman, 2020) where learners bring back past experience to make sense of the present experience, enabling them to view the world in a new perspective. Merleau-Ponty explains the intentional arc as follows:

> … the life of consciousness – epistemic life, the life of desire, or perceptual life – is underpinned by an "intentional arc" that projects around us our past, our future, our human milieu, our physical situation, our ideological situation, and our moral situation, or rather, that ensures that we are situated within all of these relationships. This intentional arc creates the unity of the senses, the unity of the senses with intelligence, and the unity of sensitivity and motricity. (Merleau-Ponty, 2012, p. 374)

From this perspective, a learner can be viewed as a lived body, the body which is their intentional opening to the world, wherein they perceive and interpret their experience within a contextual presence (Jing & Ejgil, 2017). Put in another way, experiences are accumulated with their distinctive attributes and associated context-based emotions and feelings, causing the learner to develop certain predispositions to act and feel a certain way in future related circumstances and contexts (Koopman & Koopman, 2020; Magrì & McQueen, 2022). Higgins et al. (2013, p. 138) agree with this holistic view of learning in entrepreneurial contexts as they aver that entrepreneurial learning is "an enacted practice, in that learning is a process of knowing, a means of accounting for and shaping the entrepreneur's experiences revealing their tacit and embodied knowledge."

As in other entrepreneurial programmes that use mini-companies (Grewe & Brahm, 2020; Järvi, 2015; Pepin, 2018), entrepreneurial learners take centre stage as autonomous acting agents in the MEP, as evidenced by their constructing of own experience through collaboratively generating, evaluating and selecting a feasible business idea of their choice; setting parameters of how they (the selected business ideas) will be implemented through business planning; and going on to implement them through operation of the mini company and taking the lead in dealing with critical incidents and opportunities that emerged during operation. To this extent, the MEP as a project-based approach to learning embodies the core ideals of the enactive paradigm identified by De Jaegher and Di Paolo (2007) as autonomy, embodiment of cognition, sense-making, emergence and experience. The idea of constructing experience implies that experience is not just passive, where learners are passive recipients of occurrences in their lived world through their sensory receptors (Jarvis, 2013). The entrepreneurial experience is revealed as a combination of perception and action. Owing to these attributes of the MEP, learning can take place in a truly holistic manner.

The subject of learner autonomy goes hand in hand with that of the teacher's role as a facilitator in the MEP, which also draws from the constructivist learning theory. Unlike traditional teaching methods, which are teacher-centred, constructivist teaching approaches are founded on learner-

centredness, with teachers playing the role of a facilitator (Fiet, 2001; Löbler, 2006). The findings further reveal that the learners are at the centre of the MEP, from inception to implementation of the project, with teachers serving as facilitators, mentors, and guides. Teachers as facilitators are important because the minds of learners are still developing, creating a need for consideration of the qualitative changes they are undergoing and the challenges that may come across in running the enterprise (Hägg & Jones, 2021). The facilitatory role implies that teachers must allow room for learners' autonomy so that they are the main drivers of their constructed experience while providing guidance, creating a platform for reflection, initiating, prompting, and scaffolding conversational reflection where need be (Fiet, 2001; Löbler, 2006; Järvi, 2015). However, although teachers executed their roles as facilitators on other aspects of the project fairly, many of them struggled to maintain a fair balance between allowing learners reasonable space for reflection and taking control over the reflective process. Most teachers were reported to be either be too controlling, to the extent that they identified problems and proffered solutions to learners, or were too distant, to the extent that they neglected learners and left them to struggle alone with problematic situations. Both extremes are not healthy for entrepreneurial learning. The first has the potential to deny learners opportunities to develop reflective skills, while the second may lead to frustration. This confirms the findings of Kreber and Castleden (2009) and Coulson and Harvey (2013) that many teachers are not good at facilitating reflection and lack the passion to engage in it. This implies potential gaps in the training of teachers on how to scaffold reflection in PjBL activities where reflection is expected.

Notwithstanding the preceding findings, overall the MEP simulates the way in which entrepreneurs learn through factors that influence entrepreneurial learning such as: being realistic (based in the real world); action orientation and constructed experience involving 'learning by doing'; learning from crises, mistakes and failures; emotional exposure; problem solving and social interaction (Cope & Watts, 2000; Higgins et al., 2013; Kassean et al., 2015; Pittaway & Cope, 2007; Pittaway & Thorpe, 2012; Rae, 2000). Similar findings have been made in studies conducted on secondary school learners regarding expert entrepreneurs by Pittaway et al. (2011) and Arpiainen et al. (2013). Their studies add aspects of critical incidents emanating from new work environments in the entrepreneurial activity, support from the outside world, conflict between theory and practice, teamwork issues such as time management, individual differences among learners, open dialogue and feedback among learners and teachers, free expression of feelings and reflection, most of which are corroborated in the current study.

7.2.3. Meetings as a platform for reflection

Learners engaged in mini-companies have been found to use meetings as a forum for collective reflection and problem solving (Järvi, 2015). In the current study the purposes of meetings included handling operational matters such as submission and collection of funds and deciding whether they are stored or used to replenish stock; to "discuss … how the business is doing" and "get updates of the financial position" and updates from different departments; evaluating the performance of the business and making decisions on how to resolve problems faced by their enterprises; and also for learners to evaluate each other and learn from mistakes highlighted by peers. These findings corroborate those of previous research on entrepreneurial learning within active learning environments such as the mini-enterprise. For example, in Finland Järvi (2015) studied eight teens aged 16–18 years operating a kiosk within their school. Through the encouragement of their teacher, learners used meetings to dialogue and make decisions on the daily operational activities of their kiosk, and also to reflect on operational decisions and any problems they faced during the running of their enterprise. Much like the findings of the current study, learners evaluated external information such as customer feedback and applied their knowledge and skills as a team to establish the most appropriate action to take based on their existing knowledge.

Being a collaborative project, the success of the MEP is dependent on teamwork competencies, both during operation and during meetings. Teamwork competencies refer to knowledge, skills and abilities that enable learners in experiential learning activities to engage in effective goal setting, communication, negotiation, problem solving, task coordination and conflict resolution and the like as they deal with authentic situations arising from the project (Hero & Lindfors, 2019; Lackéus, 2020; Pazos et al., 2022). It goes without saying that these skills are essential for running effective meetings and the challenging nature of the project creates a conducive environment for their development. In Järvi's (2015) study the meetings operated in a democratic style where every learner was free to share their opinion to arrive at negotiated decisions, but in the current study some differences were noted. In the MEPs each enterprise had an organisational structure which ideally would guide how meetings take place, with separation of roles: for example, the general manager chairing the meetings, the secretary taking minutes, and general members participating in turns and democratically. However, very few respondents reported being able to do this well in an atmosphere of cooperation and mutual respect. For some learners the smooth running of the project and meetings seemed elusive as group dynamics came into play, and they had difficulties working together in the beginning, but relations improved with time (Watzek et al., 2022). The configuration of the entrepreneurial journey is both a

boon and a challenge (Dimov, 2017). For some learners, crisis events overwhelm group members, resulting in their meetings descending into chaos, even until the end of the project. However, other learners develop teamwork-related competencies as a result of participating in the MEP, such as communication, collaboration, cooperation, mutual respect, separation of roles, and problem solving, that they were able to take into other subject areas.

Pazos et al. (2022) identified two types of conflict that learners working in collaborative action-oriented entrepreneurial activities are likely to face: cognitive conflicts and personal conflicts. Cognitive (or task-related) conflicts result from holding different ideas and perspectives about the entrepreneurship content or approach to dealing with situations or issues in the business, with the power to improve innovation and performance of teams (O'Neill et al., 2013). In contrast, personal conflicts are detrimental to performance and may arise out of issues that have more to do with interpersonal frictions and tensions, and even unproductive arguments resulting from personality, character, and disagreements over other differences (O'Neill et al., 2013; Pazos et al., 2022). For example, in the current study issues of learner diversity, such as ability differences, behavioural (e.g. uncooperative team members), and lack of mutual respect and personality clashes were sometimes sources of conflict that affected business performance and the ability of team members to deal with problems. Cognitive conflicts seem to be important for learning purposes, as they may bring out different perspectives to solving issues and may result in learning through transformation of cognitive structures (Pazos et al., 2022; Rogoff, 1990). This perhaps explains why in the current study some learners lauded meetings and reflection for bringing solutions that they would otherwise not have thought about, and created opportunities for peer evaluation and learning from mistakes in their practice. These findings confirm those of earlier studies, albeit in this instance conducted on entrepreneurship education, that meetings and collaborative work open learners up to different perspectives and ways of doing things, and contribute to their confidence in their capabilities (Hero & Lindfors, 2019; Kubberød, 2018). This does not imply that personal conflicts have no value, as they may also challenge learners to develop non-cognitive and interpersonal skills such as teamwork and conflict resolution, especially because the success of the project depends on the team pulling together towards the same goal.

Despite their value, it is worth noting that not all learner teams held regular meetings. Some held meetings only when there were pressing issues, only to find that there were other issues that also needed to be addressed, while others had their meetings only when their teacher created time for them in class to discuss matters affecting their business. Järvi's (2015) study found the value of teachers in

encouraging meetings at initial stages of the project and gradually releasing support over time as learners become more confident in operating the business autonomously. This highlights the importance of teacher support and creating a healthy environment that allows learners to be themselves, especially in the early stages until the teams find their rhythm and work harmoniously, before gradually letting go of the reins as learners gain more confidences in managing their affairs autonomously (Dimov, 2017; Järvi, 2015). This came out clearly in the study, where for some teams that struggled to work together and hold successful meetings, teacher presence could have helped to instil order and direction. Furthermore, even though learners may deliberate on some matters affecting their enterprise outside of scheduled meetings, they seem to provide a better platform for a more focused approach to addressing arising problems, reflection and decision-making, while simultaneously providing learners with an opportunity to concentrate on collaborative work (Hero & Lindfors, 2019; Järvi, 2015; Kubberød, 2018).

7.3. Triggers of reflection in the mini-enterprise project

7.3.1. Critical incidents as triggers of reflection

Critical incidents have been discussed in the entrepreneurial education literature as important for initiating and accelerating reflective learning (Lindh & Thorgren, 2016). They do this by forcing learners to combine past experiences and novel insights from current experiences while simultaneously evaluating their thoughts and actions (Cope & Watts, 2000; Lindh & Thorgren, 2016). Thus, they challenge learners' self-concept, expanding their knowledge schemes and self-regulation capabilities (Higgins et al., 2013; Pittaway & Thorpe, 2012). They also trigger reflection and consequently result in novel and improved approaches to exploiting entrepreneurial opportunities (Cope, 2005; Deakins & Freel, 1998; Politis, 2005; Rae & Carswell, 2000). Additionally, they help them to know how to handle authentic and ill-structured problems that involve some risk, ambiguity and uncertainty (Deakins & Freel 1998; Pittaway & Cope, 2007; Sánchez, 2011). In the current study critical events that arose as learners worked on their projects included incidents such as: theft of money or stock, customers who did not pay back for products they took on credit, the weather affecting production, suppliers failing to deliver on time or not delivering at all, fluctuating customer demand, mistakes that required revision, and competition from other learner enterprises fighting for the same small market share in the school community. Most of these critical incidents resonate with those found in previous studies (Arpiainen et al., 2013; Lindh & Thorgren, 2016). In addition, it was found that these episodic events negatively affected learners' mini-companies, exposing them to various risks that propelled them to engage in collective reflective thinking and acting by evaluating the problematic situations

and developing solutions through a process that involved emotions, thoughts, and actions (Lindh & Thorgren, 2016).

This happened notwithstanding the fact that there is no evidence of an explicit or express requirement by curriculum planners for learners to reflect on their experiences, or of a standard way in which they are expected to reflect (e.g. standard reflective journals or diaries that are part of the portfolio) during the implementation phase of the MEP. At the very least, there is a semblance of reflective writing in Chapter 4 of the portfolio, at the very end of the project, which is a descriptive report of their roles and activities during operation. As a result, many of them are forced by critical incidents to engage in *intuitive participatory reflective coping* during the implementation phase, using different approaches to the collective reflective process in meetings. Intuition here implies reflection that emanates from intrinsic motivation rather than influenced by either curriculum planners or implementers in the person of teachers.

The notion of coping can be understood as the repeated cognitive and behavioural process of rethinking, revising, and adjusting thoughts and actions in order to manage specific conditions that strain the business internally or externally (Lazarus & Folkman, 1984, as cited in Singh et al., 2007). In addition, this process involves the use of different strategies to respond to changes in the interaction between the entrepreneur and their environment from which these challenges come (Drnovšek et al., 2010; Singh et al., 2007). In essence it entails "managing taxing circumstances, expending efforts to solve personal and interpersonal problems, seeking to master, minimise, reduce or tolerate stress induced by unpleasant and stressful situations" (Drnovšek et al., 2010, p. 194). Coping is a phenomenon that has been studied in entrepreneurship research, ranging from dealing with entrepreneurial failure (Singh et al., 2007), managing negative emotions (Ahmed et al., 2022; Thompson et al., 2020; Uy et al., 2013) and strategies for dealing with challenging role expectations, performance, and well-being (Drnovšek et al., 2010; Örtqvist et al., 2007) emanating from the pressures of engaging in entrepreneurial activities.

The dominant types of coping include problem-directed coping and emotion-directed coping (Drnovšek et al., 2010; Singh et al., 2007; Thompson et al., 2020). Problem-directed coping involves the use of proactive and action-oriented intellectual and behavioural mechanisms to deal with emerging problems in the enterprise. It takes an approach that is akin to Dewey's inquiry process involving recognition and definition of the problem, brainstorming possible solutions, evaluating the pros and cons of generated solutions, and finally enacting the selected solution (Drnovšek et al., 2010; Pepin,

2012; Rodgers, 2002). In contrast, emotion-directed coping involves a relatively passive behavioural response by the entrepreneur to regulate and mitigate affective effects of critical events through strategies such as "avoidance, minimising and distancing oneself from the problem" (Drnovšek et al., 2010, p. 196).

The concept of coping does not seem to have been applied to entrepreneurship education at the basic education level. Nevertheless, experience-based entrepreneurial activities such as mini-companies simulate many aspects of real enterprises, including critical incidents that challenge learners cognitively, behaviourally, and emotionally, that would elicit some forms of coping mechanisms (Andresen et al., 2020; Arpiainen et al., 2013; Higgins et al., 2013; Kassean et al., 2015; Lackéus, & Sävetun, 2019; Pittaway et al., 2011). It is therefore not surprising that many learners were found to engage in intuitive reflective coping, which is participatory in nature, involving cognition, enaction and affection. Notably, this process leans more towards problem-directed coping, just as in the case of practising entrepreneurs (Singh et al., 2007). However, although emotions play a role in reflection, it does not seem that learners were comparatively good at engaging in emotion-directed coping, as some were frustrated to the extent of engaging in the project just mechanically or engaging in constant fights because of the stresses and anxieties of the project. Entrepreneurship can involve many incidents that induce emotional responses such as stress and anxiety (Ahmed et al., 2022; Singh et al., 2007; Thompson et al., 2020), and therefore some of the dispositions that entrepreneurship learners should possess include resilience and perseverance in the face of adversity, and the ability to manage their emotions to ensure success as entrepreneurs (Shepherd, 2004; Thompson et al., 2020). In fact, Ahmed et al. (2022) argue that much more interest should focus on the process of becoming resilient rather than just measuring resilience or ability to cope with adverse incidents.

The question of how critical incidents catalyse reflection still needs to be probed further. From a philosophical perspective, critical incidents seem to be a game-changer from the view of experience of hermeneutic-existentialist philosophers like Heidegger and Merleau-Ponty and how we learn from it. Heideggerian philosophy's concept of "transparent coping" focuses on everyday events that subjects engage in without active reflection (Dibley et al., 2020; Koopman & Koopman, 2018). Merleau-Ponty's notion of sedimentation also assumes that people learn through accumulation of past experiences together with their context-dependent characteristics; such accumulated knowledge is re-activated when similar circumstances arise in future, serving as latent background for current experience (Magrì & McQueen, 2022; Merleau-Ponty, 2012). Although he does not see this process

as mindless, but rather as a wholly embodied process that involves mind, body and affect, he assumes that it happens without reflection (Magrì & McQueen, 2022).

Although also espousing the notion of development of habits of action in its epistemology, the ontological premises of Dewey's pragmatic philosophy of a process-world gives a different spin to the understanding of learning from experience to that of phenomenology. With its roots in Darwinian evolution, the process-world theory assumes that the world is always changing and unpredictable. As a result, according to Dewey (1958, p. 41) "[t]he world is a scene of risk; it is uncertain, unstable uncannily unstable. Its dangers are irregular, inconstant, not to be counted upon as to their times and seasons. Although persistent, they are sporadic, episodic…" This means that as much as the knowing agent's or acting agent's motor intentionality is directed towards the world in the construction of experience, the world on occasion changes in sporadic and unpredictable ways and works against the acting agent, resulting in episodic problematic situations (Kilpinen, 2008; Määttänen, 2015). Therefore, by accepting change in the environment as a constant, the learner learns through interaction and adjustment to environmental conditions, by developing intelligent habits of action that help them to know how to act in future by mastering the consequences of their actions in given situations to bring about certain outcomes. Therefore, Määttänen (2015) concludes that pragmatism is a philosophy that places greater emphasis on ontology rather than epistemology, even though it does not imply that the epistemological aspect is of a lesser value.

This ontological view of the process-world at the heart of pragmatism resonates with what transpires in the business world or the world of entrepreneurship, which is fraught with cut-throat competition, incessant risks, instability, uncertainty, and ambiguous problems (Cope, 2003; Cope & Watts, 2000; Higgins et al., 2013; Mitchell et al., 2007; Ravasi & Turati, 2005). Uncertainty and ambiguity in the real world results from the challenges that entrepreneurs are often faced with, which may include ill-defined, complex, emotive, poorly understood and not fully developed problems (Higgins et al., 2013; Ravasi & Turati, 2005). These same attributes of the world of entrepreneurship are encouraged to be incorporated in entrepreneurial learning activities that seek to simulate that world. To illustrate, Pittaway and Cope (2007) and Pittaway et al. (2011) in their studies identified the following key factors as essential for learning through an entrepreneurial activity: action orientation and experience; uncertainty, ambiguity, and emotional exposure; opportunity exploration and problem solving; mistakes; crisis and failure; social practice and social engagement; and self-efficacy and intentionality. This is how entrepreneurial learners are given opportunities to learn in situations that

attempt to replicate the world of entrepreneurship and the way entrepreneurs learn as closely as possible.

These critical incidents are a demonstration of the dialectical tension between internal forces within the enterprises seeking to influence the market to their gain, and the oppositional forces from the environment also pushing to undermine such efforts, by creating conditions of resistance that make the enterprises more vulnerable (Määttänen, 2015). As a result, the mini-enterprise experience seems to be a dialectical interaction between learners and their business environment in a quest for survival (Illeris, 2007; Määttänen, 2015; Mitchell et al., 2007). This quest for survival forces acting agents to make adjustments in the enterprise, and even in their own knowledge and habits of action, that not only transform the experience but also their being (Biesta & Burbules, 2003; Deakins & Freel, 1998; Gallagher, 2014; Jarvis & Parker, 2005; Jarvis, 2012). The transformation of experience seems to be stimulated and driven by the problematic situations through the risks and discomforts they pose to both the learners and their mini-enterprises, propelling the entrepreneurial learners to engage in reflective thinking (sense-making to understand the problem, its causes, its effects on the business, and possible ways of solving it) and action in order to restore the situation to its equilibrium (Biesta & Burbules, 2003; Gallagher, 2014; Moon, 2006; Rodger, 2002). Once the problem is solved, the learners can continue with transparent coping, but the solution is sedimented into their repertoire of embodied knowledge and becomes useful for future similar situations (Biesta & Burbules, 2003; Gallagher, 2014). It is in this sense that "[t]he nature of the problem fixes the end of thought, and the end controls the process of thinking" (Dewey, 1958, p. 15).

What is also observed in the mini-enterprise is that the solution at times was not a one-time thing but caused changes to the way things were done. For example, learners experiencing theft became aware of the need to put in place safety and control measures, and to practise continuous monitoring and evaluation. Another example was learners who struggled to recall the customers they sold to on credit and calculating change correctly deciding to go work in pairs, so that they would be able to help each other to identify people they sold to on credit and with calculating change to avoid loss of funds. Lindh and Thorgren's (2016) study had similar findings that reflection often led to learners rethinking ways of doing things in their enterprises and sometimes totally changing the business model or even the products being sold. These findings show that the restoration of normalcy does not always mean returning the situation to its exact former status, but at times results in transcending the status quo (Biesta & Burbules, 2003; Gallagher, 2014). That is, in certain circumstances it implies new ways of doing things in the enterprise at a higher level and standard of practice, through the application of

concepts learned in class or even going beyond classic textbook solutions. In this way, new intelligent habits of knowledge were developed and maintained.

The process though which solutions to crisis events are so broad and lead to new operational habits of doing things in the enterprise could be explained by Merleau-Ponty's concept of "maximal grip". This concept derives from the way people learn to execute expert performance in a well-coordinated fashion involving perception and manipulation. In practical tasks, maximal grip entails a situation where one looks at something below the level of referential intentionality, subconsciously estimating the best distance and posture to handle it as a whole or in parts using the best grip possible, or finding the best angle through which one can get the best view (Jing & Ejgil, 2017). This concept is well captured in Merleau-Ponty's (2012, p. 564) words:

> My body is geared into the world when my perception provides me with the most varied and most clearly articulated spectacle possible, and when my motor intentions, as they unfold, receive the responses and action specifies a perceptual ground, a background for my life, a general milieu for the coexistence of my body and the world.

In the case of the mini-enterprise, the learners focus their attention and judgement to get the best understanding of present situations, and develop the best solutions that optimise the performance of the enterprise. Consequently, the process of getting to the root of the problem and arriving at the solution result in the development of new habits and ways of doing things which are integrated into their biography. For example, through a maximal grip, learners may develop best techniques of dealing with customer objections, reading possible conflicts and either preventing them or navigating them in a win-win way, or developing the best technique of preparing a product, meticulously manipulating one's body movements and tools so that the processes lead to the best outcome and happy customers. Consciously or unconsciously, learning would have occurred in the process, as will be exhibited by new and creative ways of doing things practically.

Cope (2005) has described two forms of learning initiated by critical events. The first is adaptive generative learning, which occurs in the first situation above and applies for routine tasks that entrepreneurial learners regularly face in the operation of their enterprises. The second is proactive generative learning which results in transformation and arises from situations that are unique, unprecedented, and challenging, that require acting agents to develop new solutions to problems and also render their current stock of knowledge insufficient (Cope, 2005; Moon, 2004/2013; Pittaway &

Thorpe, 2012). According to Cope (2005) proactive generative learning goes even further, to enable entrepreneurs to recognise potential critical incidents early on and proactively take appropriate action pre-emptively, if need be, as the critical events are visualised and anticipated before they occur.

Even though pragmatist ontology holds the key to explaining intuitive reflective coping in the mini-enterprise experience, existential phenomenological views that emphasise pre-reflective learning are not totally rendered irrelevant to this study. In a way they help one to perhaps understand how learning occurs in the absence of reflection or low-level reflection. All learners explained that they gleaned lessons from the mini-enterprise experience. Teacher respondents also confirmed that learners do engage in unconscious learning and that they may not be aware of this when running the enterprise. Jarvis and Parker (2005) have termed this form of learning pre-conscious learning. Due to the intuitive reflective coping nature of reflection in the MEP, there seems to be no evidence of learners deliberately and collaboratively summarising main lessons drawn from experiences, even though some individually are able to draw lessons and implications from critical events that were resolved. This implies the possibility of unconscious learning from critical events. Affectivity played a pivotal role in connecting critical events to reflection. This role is discussed below.

7.3.2. Epistemic emotions in reflective learning

Generally, affect and cognition are understood to contemporaneously play a role in learning in general (Brady, 2013; Damasio, 1995; Illeris, 2007; Jarvis, 2012), as well as in entrepreneurial learning in particular (Arpiainen et al., 2013; Cope, 2003, 2005; Cope & Watts, 2000; Lackéus, 2013, 2014; Lindh & Thorgren, 2016). Entrepreneurs need to be competent in using emotions to optimise learning and also to prevent their interference with learning (Shepherd, 2004). In fact, Shepherd (2004) and Neergaard et al. (2021) have recommended the use of innovative pedagogies in the teaching of entrepreneurship to trigger learners' emotions that resemble the authentic experiences of entrepreneurs as closely as possible, to assist learners to learn from critical incidents (such as failure), to be aware of emotions as a conduit for knowledge construction, and to regulate them so that they are not a hindrance to learning. In the current study affectivity has been revealed to be a large aspect of participation in the mini-enterprise experience, especially as a response to and in dealing with critical incidents. Experiencing critical incidents has been shown to be closely tied to different emotional responses for learners involved with the MEPs in a more causative fashion. It is no wonder that Cope and Watts (2000) have even linked the definition of critical incidents to affectivity, defining them as emotional events because they represent episodes of intense feelings, both at the time of their occurrence and during the subsequent reflective interpretation of the critical incidents concerned.

The findings of the current study corroborate those of Cope and Watts (2000) and Cope (2003), who found that for entrepreneurs the operation of a business is often a challenging and traumatic process that forces them to learn costly and painful lessons through emotional exposure. The justification for this understanding is that often entrepreneurs commit personal resources such as immovable property, machines and equipment, time, effort and finances which expose them and their close relations to potential emotional, financial and social risks (Cope, 2003; Cope & Watts, 2000). In like manner, the MEP is an entrepreneurial activity that simulates real-world entrepreneurship, and therefore shares somewhat similar risks for learners. For example, as a collaborative project mostly funded through learners' contributions, it has shown to expose participants to similar emotional exposure. Learners are either excited about the prospect of gaining profit or fearful of the possibility of loss of their initial investment into the enterprise (Lindh & Thorgren, 2016). Social risks also rise from lack of cooperation, misunderstandings and fights, as success is highly dependent on teamwork and collaboration (Arpiainen et al., 2013; O'Neill et al., 2013; Pazos et al., 2022).

Sources of emotions in entrepreneurial activities: Sources of emotions in the MEPs related to experience were tied to the novelty of the experience and environment, and critical incidents and context-based challenges they were faced with from the beginning to the end of operating the mini-enterprise. At the beginning of the project learners reported being overwhelmed with the emotion of excitement at the newness of experience and the prospect of learning how to operate a business and learn new skills. This implied interest and readiness to engage in entrepreneurial activity. However, for many learners the excitement was short-lived when the realities of running a business sank in. This brings us to the biggest source of emotions and feelings in the mini-enterprise experience: critical incidents (Cope & Watts, 2000; Lindh & Thorgren, 2016). These included the disparity between learner expectations versus reality, MEP challenges (e.g. safety and security issues, supplier failures, defaulting debtors, low sales, etc.), and collaboration or teamwork issues (non-cooperative peers, poor time management, lack of mutual trust, stealing of money made from sales). These findings corroborate the results of an earlier study by Arpiainen et al. (2013), who found the novel learning environment, collaborative learning, and challenging tasks to be sources of emotions and critical incidents in entrepreneurial learning situations. They also found triggers in the new learning environment to include support from outside, the conflict between theory and practice, and uncertainty and confusion. Under collaborative teamwork, specific triggers of emotions and feelings include teamwork issues, time management issues, and learners' individual differences. Lastly, under challenging tasks, problems of interacting with the real world, issues of leadership and people

management, and effectively dealing with knowledge and skill gaps stood out as prevalent sub-themes. These sources of emotional experiences and the emotional experiences themselves were found to be connected to the development of entrepreneurial competencies (Lackéus, 2014).

Due to the emotional exposure from critical incidents (i.e. crisis events and entrepreneurial opportunities and context-based challenges), learners developed more entrenched attitudes, beliefs and values about entrepreneurship as a whole or aspects of it. For some the positive attitudes towards entrepreneurship were strengthened regardless of the challenges; some became disillusioned with entrepreneurship and even partnerships due to the frustrations and challenges they experienced. This dual effect of emotional experiences goes against the common assumption that negative emotions always result in negative outcomes (Doern & Goss, 2014; Kollmann et al., 2017; Thompson et al., 2020). It confirms the findings of past studies that concluded that negative emotional experiences could have a positive effect on other entrepreneurial actors by triggering their motivation, effort and resolve to pursue certain goals, standards and values (Cacciotti et al., 2016; Foo et al., 2009; Hayton & Cholakova, 2011). For others they may result in feelings of disappointment, discouragement and disillusionment, eventually leading to abandoning the problematic situation without solving it or even totally giving up on the desirability of entrepreneurship opportunities altogether (Doern & Goss, 2014; Kollmann et al., 2017).

Identifying the sources of emotions as they relate to critical incidents is a more superficial level of analysis of learners' emotional experiences. What is of greater interest and importance in this study is how emotions play an epistemological role with respect to reflective learning in entrepreneurial activities such as the MEP. *That is, how do emotions explain why reflective learning happens in the way it does?* The findings regarding emotions in the previous chapter reveal that emotions are like a window through which learners' experiences in the experiential and PjBL activities may be understood. They reveal that entrepreneurial learners' fears about both current and potential crisis events propel them to engage in reflective thinking (sense-making of experience and brainstorming possible solutions) and acting, either to solve current problems or pre-emptively prevent potential discontinuous events by way of implementing suggested solutions (Brady, 2013; Thompson et al., 2020). They also reveal the levels of learner maturity and emotional intelligence, which have a bearing on how they are likely to deal with emerging issues in a productive way (Thetsane & Matsela, 2014). Emotions are also an indicator of the things that entrepreneurial learners care about the most, including values, and therefore focus attention and action when the things they care about are affected (Cope & Watts, 2000; Lindh & Thorgren, 2016). Furthermore, emotions in the mini-enterprise experience have

been shown to be subjective, intersubjective and embedded in the environment where events occur. The question is, how do these revelations explain why reflection occurs in the way it does in the MEP?

Parallels between emotions and cognition: Several scholars with a holistic view of learning believe that emotions play an important role in cognition (Damasio, 1995; Illeris, 2007; Jarvis, 2013; Shepherd, 2004; Peter & Jarvis, 2006). They submit that pure reason that is totally independent of emotions in the quest for knowledge is an illusion, as emotions influence knowledge and knowledge influence emotions (Brady, 2013; Damasio, 1995; Illeris, 2007). Furthermore, they argue that emotional intelligence may even be a greater predictor of success in life than IQ (Goleman, 1995; Illeris, 2007), and emotions may help acting agents to act promptly in emergencies where rational thinking processes could be too slow for safety (Brady 2013; Goleman, 1995). For example, in situations of danger they enable the subject to speedily mobilise behavioural resources to facilitate a quick reflexive reaction. Physiologically this is possible because the amygdala in the human anatomy forms the seat of the emotional system, while the neo cortex is primarily responsible for rational thinking. In certain situations the emotional system is capable of acting independently of the thinking brain (Brady, 2013; Goleman, 1995). Also, some emotional reactions and memories can be developed unconsciously without the involvement of cognition, and during emergencies they may be triggered, causing the subject to act reflexively without mentally processing their action beforehand. Therefore, emotions are understood as affect programmes which are essentially short term, reflexive and automated responses to a limited number of stimuli (Brady, 2013; Goldie, 2002). Their ability to bypass conscious thinking comes in handy in producing quick responses where the subject is in potentially dangerous and urgent situations.

As shown in this study (previous chapter), emotions also play an important role in revealing care structures, values, and evaluations of environmental events, made sense of through subjective meanings and potential for action (Brady, 2013; Döring, 2003; Illeris, 2007). All these attributes give emotions the impetus to play an epistemological role in learning. To delve deep into explaining the epistemological role of emotions in the mini-enterprise, especially in relation to reflective learning, I draw on the perceptual model (Brady, 2013; Döring, 2003). The perceptual model seems helpful in understanding and elucidating emotional aspects of the mini-enterprise experience as it attempts to explain perceptual experiences and emotional experiences. Phenomenologically, learners' emotional experiences in the current study agree with the literature as they have been shown to be intentional in the sense of being directed towards some object or event that has occurred or the environment (Brady, 2013; Goldie, 2002), and even the self (Döring, 2003) and others. Often the intentionality of emotions

in the mini-enterprise experience revealed learners' care structure in relation to their goals, standards and values, just like practising entrepreneurs (Thompson et al., 2020). The emotions experienced about peers and events seemed somewhat evaluative in the sense that learners instinctively assessed a situation according to what they value the most in terms of goals, standards of practice and values, resulting in certain emotional states and feelings. For example, the feelings of disappointment and anger towards suppliers were a result of their actions, which were assessed and perceived as potentially detrimental to the business and damaging to their expected profit margins.

This conclusion corroborates Brady's (2013) argument that the intentionality of emotion extends beyond the aboutness of an object or event, to include appraisal of the way a given event or object is valuable or unvaluable. The inward-directedness of emotions was revealed in how different experiences made them feel (e.g. good, excited, disappointed with one's failures, ignorance and lapses in judgement) and how those emotions triggered learners to engage in reflection to avoid experiencing similar negative experiences in the future, and even on certain occasions similar emotions. It would not be entirely wrong to conclude that even in those critical incidents that are positive, such as entrepreneurial opportunities that are planned for and exploited, the thrill that came with positive results would still influence future reflection and action. For example, one participant felt that the success experienced during an entertainment event felt like they had won BWP 1 million, but regretted that their planning was too conservative and they could have made more if they had bought more stock for production and sale. Therefore, it is not only perceptual evaluation (in the form of learners' observations) but also emotional evaluation that would influence participatory reflective coping to facilitate solving the problematic situation, change beliefs and perceptions, adjust and adapt goals, and be prepared to cope better with future similar situations (Brady, 2013; Thompson et al., 2020).

In agreement with the literature, the findings confirm that due to their intentionality and evaluative nature, emotions can be pivotal to development and the pursuit of knowledge and understanding by facilitating reflection, especially with regard to critical incidents (Brady, 2013; Candiotto, 2019; Goldie, 2002). According to de Sousa (1987, p. 196) "[e]motions are determinate patterns of salience among objects of attention, lines of inquiry, and inferential strategies". By bringing to the attention of the entrepreneurial learners things that are of significance or importance in the environment that would otherwise have been overlooked, emotions facilitate reflection on evaluative situations of interest through capturing and consumption of attention, motivating inquiries about the object of attention (Brady, 2013). In this endeavour, emotions marshal or rally attentional, inferential, interpretive, and behavioural resources in the form of action taken to deal with the critical incident, as

deemed appropriate by the acting or knowing agents (Brady, 2013; Brun & Doguoglu, 2016; Döring, 2003). This explains why participants reported that after a spate of emotions they often engaged in dialogic reflection in their meetings to come up with possible solutions to critical incidents, and acted on proffered solutions.

The role of emotions in reflective learning in the MEP can also be understood from the constructivist perspective, especially as it relates to learning for the long term. Illeris (2007), invoking Piaget's cognitive constructivism and Holzkamp-Osterkamp's critical psychology perspectives, views cognition and affect as two different spheres that operate contemporaneously in a parallel but interdependent fashion through a process of continuous adjustment. In this relationship emotions are made up of evaluative judgements of environmental situations that are perceived and interpreted cognitively by the acting agent as possibilities for action. Both the affective domain and cognitive domain form schemes through an adaptive process of assimilation and accommodation as the subject interacts with the environment. The difference, however, is that while cognitive schemes become mental structures (Rogoff, 1990; Löbler, 2006; Moon, 2006; Woolfolk, 2011), affective schemes become affective patterns or stable modes of feeling (Illeris, 2007). This does not mean the two are analogous, but more pointedly, affective modes are understood to be located outside cognitive structures, albeit pivotal for their motivation. For example, entrepreneurial learners can only be moved by a problem that attracts and sustains their attention and interest. From a cognitive perspective, assimilation in the adaptation process is more additive, whereby present entrepreneurial knowledge is consolidated with knowledge structures from past experiences or situations, while accommodation implies a total transformation of mental structures to accommodate the current situation (Moon, 2006; Pritchard, 2009). Affectively, Illeris (2007) argues that adaptation or adjustment occurs though affective patterns or relatively stable modes of feeling and reacting, changing gradually and unconsciously through assimilation as the learner interacts with the environment.

Accommodative adjustments, on the other hand, occur through a conscious and robust restructuring of affective modes. Accommodations are linked to reflection, which "causes a radical reconstruction of the individual's comprehension of certain sets of conditions and contexts, there may also be a correspondingly radical shift in the emotional patterns" (Illeris, 2007, p. 83). For example, some learners did not have any negative attitudes towards entrepreneurship, but due to the challenges and frustrations they experienced they developed some; others, due to experiencing dishonesty and a lack of cooperation from their peers, began to despise partnerships in business. This implies that learners may have engaged in some emotional evaluations of their experience during intense moments

of discontinuities or disturbances, and knowledge gained in such situations influences emotional systems such that they formulate compound emotions that average individuals evaluate into an overall impression of objects, others, or events/situations, consequently directing future action or the potential for feeling a particular way about different aspects of the MEP or entrepreneurship in general. These findings potentially shed some light on why entrepreneurship programmes may result in a negative impact on attitudes and intentions towards entrepreneurship (Fayolle & Gailly, 2009; Kassean et al., 2015; Oosterbeek et al., 2010; Testa & Frascheri, 2015; Von Graevenitz et al., 2010), which is sometimes even worse than in those who have no entrepreneurship education (Testa & Frascheri, 2015). It is worth noting that not all learners who experience hardships are turned off entrepreneurship – some understand that hardships, challenges, and emotional roller-coasters are part and parcel of the entrepreneurship experience. Therefore, this understanding also explains how emotions contribute towards the entrepreneurial mindset (Kuratko et al., 2021), and trigger perseverance and resilience during adverse circumstances (Thompson et al., 2020), and why other studies have found entrepreneurship education programmes to positively impact entrepreneurial attitudes, efficacy beliefs and desirability to start a new business (do Paço et al., 2015; Fayolle et al., 2006; Jones & Colwill, 2013; Mwasalwiba, 2010; Peterman & Kennedy, 2003). Learners who come into the project with the intention to become entrepreneurs in future seem to be more resilient, as they view the experience as a preview of what the life of an entrepreneur entails, and the dispositions of perseverance and resilience perceived as necessary for survival.

Emotions and collaborative reflection: The MEP is a collaborative project, and for that reason learners engage in reflection through participatory reflection in meetings. Candiotto (2019) has done some groundwork research on how epistemic emotions play a role in participatory sense-making that can help explain why reflection happens in the way it does in the MEP. Her submission that "[w]hat happens in the room where the interlocutors are brainstorming is not just a storm of brains, but also a storm of feelings and emotions" (Candiotto, 2019, p. 239) proved true for learners engaged in the MEP. The findings of the current study have revealed that the mini-enterprise experience can become highly emotionally charged, especially during meetings, hindering sober reflection and problem solving for some teams in the process. Yet other teams go through a process of group dynamics, learn to manage problematic situations and their emotions, and others have mutual respect, with a separation of duties, and avoid stepping on each other's toes. Only a few respondents reported positive emotions in their groups, and consequently engaged in participatory meaning-making and problem solving without fights and misunderstandings. The majority seemed to struggle, and their emotional instability affected performance of the business negatively. The quality of engagement in participatory or

evaluative situations was affected to some extent by the emotional composition and maturity of the team (Candiotto, 2019). Teams that have emotional maturity shared positive vibes and worked together harmoniously, and seemed to make better progress compared to those that exhibited poor emotional intelligence. This shows that emotions act as socially extended motivations of participatory meaning-making in reflection and acting. They are not exclusive internal states but a force that is experienced by acting agents that drives learners' interaction with the social world through relationships. They are the fuel that serves as motivation for action and the raw material of mental processes in the intersubjective dimension of learning (Candiotto, 2019).

Caveat on emotions: Typically, the perceptual model assumes emotional experience to be analogous with perceptual experience. Its central proposition is that emotional experiences make up sufficient reasons or evidence of evaluative judgements in the same way as perceptual experiences (Brady, 2013; Döring, 2003). Döring (2003) further supports this understanding, arguing that emotions resemble sense perception in having representational intentional content that may justify belief and action. However, the findings of the current study have also demonstrated that emotional experiences do not carry the same weight as perceptual experiences or evaluations. A good illustration of this is when peers made an emotional assumption that their treasurer had stolen funds, but further evaluation of records with the teacher proved otherwise and demonstrated that there were mistakes in the calculations. Brady (2013) is in agreement with this conclusion, arguing that whereas it is acceptable to form beliefs based on our perceptual experiences (because such experiences are sufficient reasons for beliefs about the external world, objects and events), emotional experiences do not carry the same weight in constituting evidence for evaluative judgements. He argues that it is common practice to hunt for reasons or evidence to back up emotional experiences; even cases where epistemic defeaters are absent are evidence to this fact. A case in point is that when people make emotional assumptions they often try to find reasons to justify or support their emotional hypothesis, even though it may be wrong. For example, a colleague assumed that MKS did not want to go selling when she asked to be excused on one occasion. Acting on an emotional construal, the peer falsely concluded that MKS was making excuses because she was ashamed of selling and thought the task was beneath her dignity. However, this was an assessment made out of distrust and was unfounded; in reality, MKS had an assignment that was due and asked a colleague to stand in for that reason. Therefore, perceptual experiences and emotional experiences differ in epistemic strength. For that reason, there is a need for emotional responses to be controlled and regulated by investing energy in trying to understand the evaluative situation. Learners who let their emotions run uncontrollably were always in fights when they were supposed to engage in productive reflective meetings. This shows that the lack of emotional

intelligence may stand in the way of reflective thinking, problem solving, and practical reasoning in certain situations (Candiotto, 2019; Goleman, 1995).

Invaluable as they may be to the epistemological enterprise, emotions have been shown to be imperfect and potentially misleading if their evaluations are taken as true at face value. Acting agents should do not take their emotional evaluations to be true at face value, but need to critically analyse their accuracy and take appropriate action. This has been revealed to be the case in the findings, where emotions attracted attention to situations, led to an in-depth evaluation of events, and sustained effort directed at dealing with the evaluative situation appropriately. The findings confirm the importance of teaching learners how to regulate their emotional states and perhaps the need for more emotional intelligence training to excel as entrepreneurs (Kuratko et al., 2021).

7.3.3. Conative aspects of the mini-enterprise experience and reflection

Another possible reason why critical incidents seemed to cause learners to engage in reflective thinking and acting is the motivational aspect of the mini-enterprise experience. Motivation and volition are generally understood as subsumed under conative constructs in entrepreneurial learning (Kyrö et al., 2011). From a psychological perspective, motivation is "an internal state that arouses, directs, and maintains behaviour" (Woolfolk, 2011, p. 459). It consists of internal and external goal orientation, need for achievement, fear of failure and self-efficacy beliefs. In contrast, volition has to do with our endowed faculty of free will that allows us to determine and pursue our own desired ends. It consists of matters such as the will to learn, and employ persistent effort against challenges, evaluation processes, self-regulation and other control strategies (Kyrö et al., 2011). The findings from the current study show that the mini-enterprise experience challenges learners' motivation and volition. At the beginning of the project learners develop financial and production forecasts which serve as weekly targets for their enterprises. In addition, for most teams the MEP was financed by partners who each expected to gain a share of the profits made at the end of trading. This created the conditions for goal orientation and need for achievement. It also explains why even when no problem had been detected in their enterprises yet, some learners would have collective reflective meetings to compare their production outputs and sales revenues with their forecasts. Where disparities were found, solutions were devised and implemented to steer the businesses towards set goals. Crisis incidents carried with them the potential for sinking the business and loss of possible dividends. The fear of failure and loss resulting from the crisis incidents seemed to spur learners into reflective thinking and action to address problems. Also, learners engaged their motivational and volitional faculties in pre-action collective

reflection to take advantage of emerging entrepreneurial opportunities arising from entertainment activities taking place in their schools on occasion.

The motivation, as also revealed by the data, was a desire for good grades in Business Studies. As part of the Junior Certificate Examination, the MEP is Paper 3 of the Business Studies exam, and therefore contributes to the overall grade in the subject. The subject of Business Studies together with other subjects contributes to the overall grade and the possibility of transition to senior secondary school. The notions of motivation and volition are important in the MEP, especially in that the learners reported experiencing different crisis events and challenges. Over time some learners would develop stress, fatigue, frustration and even disillusionment with the project when things continuously went wrong. Some just worked on the project just to get done with it. These findings reveal the value of motivation and volition in experience-based and action-oriented entrepreneurial activities, especially when there are critical incidents where their emotions and feelings may be stretched, particularly when things are not going well, and discouragement sets in. Furthermore, the study confirms earlier research showing that the subconstructs of motivation and volition are invaluable to entrepreneurial learning as they play a role in collective reflective thinking and acting and also in developing an entrepreneurial orientation and identity (Kyrö et al., 2011; Pittino et al., 2017). However, it is important to note that whereas Gregori et al. (2021) found risk-taking, proactivity, self-efficacy, and competitiveness to be positively related to entrepreneurial self-identity, surprisingly they found innovativeness and the need for achievement to be negatively related to entrepreneurial orientation and identity.

7.4. Educational contexts: How they compromise quality reflection

7.4.1. Educational contexts and quality of reflection

The findings of this study reveal that educational contexts play a crucial role in reflective learning for learners in the MEP. These educational contexts are embedded in the environment wherein the MEP is situated and includes different stakeholders who contribute to the learners' mini-enterprise experience in various ways. From a phenomenological point of view and Dewey's pragmatism, context is of paramount importance since the knowing agent learns though interacting with his or her environment and through adjustments and changes in schema structures form intelligent habits (Koopman & Koopman, 2020; Määttänen, 2015; Magrì & McQueen, 2022). For this reason, it is important to analyse "impact of the 'conditions of existence' and the 'enabling conditions' to make explicit how the social world with its rules and structures shapes or inhabits the individual's thinking" (Koopman & Koopman, 2020).

Previous studies have found that learners at the secondary education level do not engage in reflection (Hunter Lindqvist, 2017). Quite to the contrary, this study reveals that learners who are engaged in experiential and action-oriented entrepreneurial activities intuitively engage in dialogic reflection of some sort during the operation of their enterprise as a way of coping with challenges that arise, with reflective writing at the conclusion of the project. What may be questionable is the quality of that reflection. Therefore, in this section I explore the question of why reflection in the MEP may be of low quality based on the educational context. The learning environment is recognised as playing a pivotal role in reflection, as the learner and reflective learning process are embedded in it (Coulson & Harvey, 2013; Hägg, 2017). From a phenomenological perspective, learners are assumed to be born into a social world that is pre-constituted and has preorganised structures, values, and norms (Horrigan-Kelly et al., 2016; Koopman & Koopman, 2020). This reality does not exclude the education system. With specific reference to the mini-enterprise, the educational contexts may include the location of the school, stakeholders such as parents, auxiliary staff and teachers, the learner community, and the business community, the curriculum developers, and the examination body. All of these make up the world, with fully fledged norms, values, and cultures already in place (Horrigan-Kelly et al., 2016) that may have a bearing on the quality of the experience and reflection learners are likely to have as they engage in the MEP.

To capture how these varied situational contexts influence reflection, let me first summarise findings on learners' reflective learning practices in the MEP. In the last chapter the findings revealed that some of the learners had challenges articulating the process through which they engage in reflection. Some expressly stated that they had no criteria for reflection or that they did not really have a consciously well thought out systematic approach to reflection. In-depth analysis of other learners' descriptions of how they reflected as they operated their enterprises showed that few teams engaged in reflection in a more structured way akin to Dewey's steps of the reflective process. For most teams the structure seemed loose or unsystematic, the loose structure implying a more haphazard process that impugns the quality of reflection. Differences were noted in the frequency of meetings to engage in collective reflection: some engaged in reflection only when there were challenging issues that needed to be resolved, while others only undertook such an endeavour when their teachers created a platform to discuss the performance of the enterprise in class and to address arising problems. Even worse, for some of the learners, even though meetings were called to reflect on issues affecting the business, in most cases they proved futile as they were characterised by fights among team members. The situation was not helped by the existence of reflective writing, in the form of a report that is part of the portfolio at the end of the project. The findings revealed that the report does not go deeply

enough into challenging learners to engage in critical reflection. At the least, the report is just descriptive writing, and at best a descriptive reflection which is at the lower levels in the hierarchy of depth and quality of reflection. Looking into educational contexts, I attempt to explore reasons for this.

7.4.2. Peers

The MEP is a collaborative project, involving a group of learners working together. For that reason, reflection is bound to happen collaboratively and cooperatively. This is nothing out of the norm, as reflection is understood to be a relational process that takes place both individualistically and cooperatively between people who share an experience (Jordi, 2011; Marshall et al., 2022). The findings suggest that the composition of the group seems to have an impact on both the success of the enterprise and the quality of reflection. Learners' responses demonstrate that groups that have better cooperation and teamwork seem to thrive, while those struggling with team work also have challenges in engaging in meaning and effective reflection and resolution of problems. For example, some learners lauded teamwork and their peers for helping them to see things from a different perspective, coming up with ideas they had never previously thought about, and helping one another when faced with challenges. This confirms Moon's (2004/2013) argument that peer reflection facilitates this change, not through accumulating new content but by reviewing insights and perspectives through discussion and critique. However, uncooperative peers may compromise the quality of reflection, as seen in those teams who often engaged in fights when they had collective reflective meetings.

Teachers shed more light on this, bringing to the fore the notion of the thrown-ness or fallen-ness of learners into teams of members with diverse socio-economic backgrounds, behavioural characteristics, interests and abilities. They seemed to place more emphasis on the subject of mixed-abilities learning of learners as playing a major role in learning and reflection in the MEP. Enterprise groups with more mature members seem to handle challenges and problems well, while those with struggling and less mature learners may struggle to engage in autonomous effective reflection and resolution of problems. Sometimes the more mature in the group are also able to influence the whole team, while some decried the lack of good leadership as the reason for failing to engage in effective reflection to solve their problems. Also related to learner diversity is emotional intelligence. Peers who are able to reflect on their emotions individually worked towards building peace, while those who exhibited low emotional intelligence had frequent fights, left meetings seething in hot emotions, and failed to productively address critical incidents facing their enterprise.

The mixed findings about the role of peers in reflective learning, problem solving, and entrepreneurial success are insightful. Instead of broadly confirming the findings of Lackéus and Sävetun (2019) and Bellò et al. (2018) on the contribution of peer interaction among learners taking part in entrepreneurship education at the secondary education level as associated with perceived desirability and feasibility of future venture creation, perhaps it is the composition of the team that really plays a role in influencing outcomes. That is, the value and potential of peer collaboration, as found by Lackéus and Sävetun (2019), to increase self-efficacy, pride, and motivation as they explained their work to their peers, might be subject to the cooperativeness, teamwork and goal orientation, co-regulation of emotion and cognitive powers to achieve shared goals that is a function of peer outcomes. Notwithstanding, the general value of peers in encouraging their partners in entrepreneurial activities to be entrepreneurs, thus influencing them to develop creativity and entrepreneurial attitudes (Bellò et al., 2018) cannot be disputed. Also, the power of cooperative and collaborative engagement synergistically resulted in better outcomes, exceeding the added total of each individual member's contribution in terms of effort and ideas (Liu & Matthews, 2005), as learners democratically evaluated and corrected one another and came up with ideas that some of their peers in mixed-ability teams could not come up with. This is important because learners worked under stringent time constraints and the project also demanded a lot of effort to be invested by everyone to succeed. Without such cooperation and collaboration, many learners would collapse under the weight of exhaustion and frustration from the overall work and continuously emerging challenges.

7.4.3. Teacher support

The MEP has been shown to be founded on the ideals of experiential learning where hands-on project work (Mwasalwiba, 2010; Ruskovaara & Pihkala, 2015), collaborative and cooperative learning, learner-centred and -directed learning, learner autonomy (Fiet, 2001; Heinonen & Poikkijoki, 2006; Löbler, 2006; Ruskovaara & Pihkala, 2015).), and teacher mentorship through a facilitatory role are celebrated ideals, in line with the requirements of social constructivist teaching and learning (Fiet, 2001; Leffler & Svedberg, 2005; Ruskovaara & Pihkala, 2015). It is a foregone conclusion that teachers should act as facilitators in experiential and entrepreneurial learning environments, based on the premise that learning should be autonomous (self-regulated and propelled by learner interest and commitment) and holistic (affecting the learners as a whole person physically, perceptually, affectively, cognitively, conatively, socially and culturally) (Fiet, 2001; Heinonen & Poikkijoki, 2006; Mulligan et al., 1992). The findings of the current study reveal that teachers seem to do relatively better with the supervisory roles of supporting learners with the setting up and operation of the enterprise, but struggle with supporting and facilitating learners' reflection.

Notwithstanding, some teachers created time during their lessons to give learners the opportunity to hold collective reflection meetings. Without this deliberate effort on the part of teachers, some learners would not engage in reflection because of the challenges of finding time or lack of maturity to realise the need for them. The teacher-initiated meetings created opportunities for the handling of operational matters such as submission and collection of finds and deciding whether they are stored or used to replenish stock; to discuss how the business is doing and get updates on the financial position and from different departments; evaluating the performance of the business and making decisions on how to resolve problems faced by their enterprises; and also learners evaluating each other and learning from mistakes highlighted by peers. These findings corroborate those of previous research on entrepreneurial learning within active learning environments such as the mini-enterprise. Much like the findings of the current study, learners in Järvi's (2015) study in Finland evaluated external information such as customer feedback and applied their knowledge and skills as a team to establish the most appropriate action to take based on their existing knowledge. That study found that even though learners may have deliberated on matters affecting their enterprise outside of scheduled meetings, the meetings seemed to provide a better platform for a more focused approach to addressing problems they faced, reflection and decision-making, while simultaneously providing learners with an opportunity to concentrate on collaborative work (Järvi, 2015).

However, the findings of the current study also seem to indicate that when it comes to the operation of the mini-enterprise and collective reflection geared towards solving emerging problems, there seems to be an unhealthy balance between learner autonomy and teacher support and facilitation of reflection. From both teachers' and learners' responses, it is evident that many teachers are not prepared to facilitate, support and scaffold learners' reflection as they ought to. Heron (1992, 1999) has conceptualised the issue of facilitation in terms of the exercise of authority by educators. In this regard he outlined three kinds of authority: cognitive authority, political authority and charismatic authority. Political authority deals with how a facilitator exercises decision-making relating to the subject matter and how learning is to occur in the learning environment. Cognitive authority refers to the level of the facilitator's competence in terms of mastery of content and ability to communicate it effectively through different modes. Charismatic authority describes the ability of the facilitator to expertly combine the two outlined types of authority in a professional way to attain their desired ends.

In the current study, teachers seemed to use their authority as facilitators in different ways. Some used a more balanced delegated approach by allowing learners to deal with issues on their own, then evaluating the process with them after the fact to note what was done well and also mistakes made

through discussion. Some teachers exhibited an approach I termed a 'hovering' (or teacher-directed) approach, characterised by not giving learners the opportunity to engage in reflection and solve problems by themselves as autonomous agents, or even in a negotiated way, with everything dictated and directed by the teacher. The other unhelpful approach is the phenomenon of the laissez faire approach to facilitating reflection, which entailed teachers totally abdicating their responsibility as supervisors, mentors and facilitators of the MEP and totally neglecting learners and leaving them to their own devices. These observed approaches in part corroborate Dimov's (2017) argument that adult figures may either hover over learners and be too protective, depriving learners of the opportunity to learn freely from risks and playfulness, or create a safe and conducive environment for learners to thrive autonomously. These differing approaches, especially the teacher-directed (hovering) approach and laissez faire approach, compromise reflection and the potential of learners to learn from their experiences. Dimov (2017) highlights that the hovering approach may possibly emanate from an over-emphasis on cost-benefit analysis or outcomes instead of the entrepreneurial experience and learning that results from it, regardless of profit. This explanation is plausible, as the profit motif seemed to be the driving force behind many projects. However, as Dimov (2017) observed, when too much focus is on the outcomes and not the experience, discouragement and disillusionment occur when things do not go as planned. Consequently, the teacher-directed approach robs learners of the opportunity to develop cognitive and non-cognitive skills such as the ability to exercise their own judgement, thinking and acting strategically, confidence in their decision-making skills, development of reflective learning skills and self-efficacy, all of which are important skills for entrepreneurs (Dimov, 2017; Grewe & Brahm, 2020; Morbeg, 2014; Higgins et al., 2013). In contrast, the laissez faire approach had learners sometimes totally frustrated and even disillusioned with the project, as they could not solve their own problems without teacher support. A fair balance could be for the teacher to work closely with learners at initial stages of the project, but gradually releasing support over time as the learners became more confident in operating the business autonomously – as was done by the teachers in a related study in Finland (Järvi, 2015).

According to Cope and Watts (2000) the roles and responsibilities of a mentor figure in the reflective process include: creating a conducive and free atmosphere that allows free discourse; providing immediate feedback and advice; assisting learners to detach themselves from critical events to be able to objectively find the cause of the problem and the best solution; and also assisting in transferring past learning to future similar situations and avoiding the crisis dragging on for too long. Most teachers in the study and as per learner responses seem to fall far too short on these roles and responsibilities. This is further evidenced by most teachers decrying that they did not have formal

training that emphasised facilitating and scaffolding reflection in the MEP. The situation is not helped by the fact that not all teachers are adept at or have the passion to do critical reflection (Coulson & Harvey, 2013; Kreber & Castleden, 2009). This perhaps explains why many teachers struggled to facilitate learner reflection in the current study. This oversight in teacher education leaves a gap, forcing teachers to learn as they go. They also have very different approaches to facilitating reflection, compromising the quality of reflective learning for learners. Research shows that learners of entrepreneurship either struggle to engage in reflection or do not engage in it at all (Hunter Lindqvist, 2017; Yeoh, 2017), because critical reflection does not come naturally for many learners (Neck & Greene, 2011). For this reason, it is important for teachers to work with learners to guide them through reflection (Higgins et al., 2013), scaffold problem solving, especially at the zone of proximal development, to avoid frustration and help learners to develop critical reflection skills (Coulson & Harvey, 2013). The shortcomings on the part of teachers are the possible reason for learners' reflections lacking structure and rigour. They also potentially explain why some learners' reflective meetings often deteriorated into chaos and fights, for lack of informed quality leadership, support and facilitation on effective reflection. This is evidenced by one learner's lamentation that at least their teacher should have been present as an adult figure during their meetings, to instil a sense of order, discipline and respect for peers among those who did not have respect for each other.

7.4.4. School environment

The school environment plays a pivotal role in the success of implementation of the MEP. The findings show that schools support the project in various ways, some of which include providing learners with start-up capital, helping with transportation for sourcing their stock, making available the school community, consisting of teachers, auxiliary members of staff, and learners, to be the customer base for learner enterprises, as well as helping with other equipment and facilities for the project. Schools also sometimes hosted special events that entrepreneurial learners could plan to take advantage of through pre-action reflection, to maximise sales as they provided a rare opportunity for increased demand for the products. Notwithstanding the positives that schools advance towards the MEP, schools could also impose limits in terms of the running of the MEP and opportunities for reflection. The first challenge starts when learners select optional practical subjects; it does not seem that caution is exercised regarding the demands of doing more than one practical subject, each with a project and portfolio at the end, and how it may impact learners. The other challenge is that even when learners commence operating the mini-enterprise, schools seem to operate in the usual way without due consideration of the fact that the learners may need time to operate their business and even to have meetings to reflect on the performance of their enterprises.

The location of the school also has some influence on the kind of experience learners may have. For example, a school located in the city provides opportunities for learners to interact with suppliers, and have more variety of products; also, even when suppliers fail, they can easily come up with and implement contingencies with relative ease through reflection – a factor that has been found to contribute positively to entrepreneurial learning (Lackéus & Sävetun, 2019; Leffler, 2009; Leffler & Svedberg, 2005). Such opportunities may not exist for learners located in rural areas, thus limiting their experiences for engagement with the outside world in reflective problem solving when running enterprises. Teachers of other subjects also played a role in supporting the mini-enterprises as customers and by releasing Business Studies learners a few minutes before the end of class to go and prepare their products for sale at break time. However, this was not without friction, as they also needed these learners to complete and were unhappy because they felt that the Business Studies learners were selfish in focusing on one subject, and couldn't appreciate the demands of the project on the part of learners. Yet the heart of the problem was that the school schedules did not change to accommodate the operation of the mini-enterprises, which is not allocated any time in the schools' timetables. Although the schools' support of various aspects is laudable, their failures make it difficult for learners to find time for meaningful reflection.

7.4.5. Curriculum planners and the examination body

In the published literature the question of the quality and intensity of reflection mostly focuses on individual reflective writing (Kheng & Sethela, 2015; Moon, 2013, 2006; Yeoh, 2017), but can also be applied to collective or conversational reflection (Hartmann et al., 2023). Although there are different hierarchical reflective models in existence, the Hatton and Smith (1994) model or framework cuts across different disciplines such as teacher education, organisational learning in projects, as well as entrepreneurship education to assess learner reflections (Kheng & Sethela, 2015; Yeoh, 2017). This framework consists of the following levels: revisiting (or descriptive writing), descriptive reflection, dialogic reflection, and critical reflection (Hartmann et al., 2023; Yeoh, 2017). Revisiting entails merely recalling and narrating one's experiences about an issue or incident that occurred, without discussion beyond mere description. It is akin to a report that merely delineates incidents but does not result in any meaningful or productive contribution for PjBL (Hartmann et al., 2023). Descriptive reflection is evidenced by mostly descriptive narration and justification of events based on previous relevant knowledge, without an attempt to look at alternative explanations or new ways of understanding the incident or issue under consideration. This form of reflection results in single-loop learning because whereas the problem is solved, the problem-solving process is not accompanied by questioning or changing underlying values and conditions that caused the problem in the first place

(Argyris, 1999; Hartmann et al., 2023; Moon, 2006). Dialogic reflection involves stepping back from the reflective experience and taking an in-depth analysis and evaluation of the experience and actions from different perspectives, to develop other possible explanations, justifications, and interpretations of experiences, and make connections between current experiences with the existing stock of knowledge or past experiences to revise or change project practices (Hartmann et al., 2023; Yeoh, 2017). This process is more likely to result in double-loop learning, as entrepreneurial learners develop new understandings and/or change processes and strategies in their enterprises (Cope, 2003; Pittaway & Thorpe, 2012). Critical reflection extends the idea of reflection further, to questioning the experiences' taken-for-granted assumptions, beliefs and interpretation, taking into consideration contextual factors. This process is more likely to result in triple-loop learning, as learners question their actions, and are supported by proper justification of values and norms (Hartmann et al., 2023). Deeper and more transformative learning from critical reflection is associated with an "alteration of beliefs, viewpoints and perspectives that shape the individual's perception of the world" (Cope & Watts, 2000, p. 106).

This framework provides a frame of reference that may be useful in thinking about reflection in the mini-enterprise, in terms of assess and evaluating current practices and thinking about how reflection can be improved going forward. Learners' reflections during the implementation phase, albeit conversational in nature, seem to be oscillating between revisiting and descriptive reflection, and very few learners engage in dialogic reflection. Whereas this situation is understandable (although not acceptable or justifiable), it results from the fact that reflection in this section is more intuitive and a way of dealing with discontinuous events. The situation is not any better in the reflective writing at the completion of the project that is required by examiners. There seems to be some confusion between teachers and learners on whether it should be merely revisiting (descriptive writing, which is not a reflection at all), entailing reporting on the roles and responsibilities they assumed during operation, or descriptive reflection including challenges they faced, how they were resolved, and lessons learnt for the future. In teachers' view, the guidelines from the Botswana Examinations Council, which is a custodian of the MEP, requires learners only to describe the departments that they worked in and the responsibilities they shouldered in half a page to one page, and to produce some form of documentation as evidence of participation in the project. This is descriptive of clear-cut revisiting of experience, and no meaningful learning can be expected from it, not even single-loop learning. However, some learners stated that in this section of the portfolio they included the challenges they faced, and solutions implemented or solutions they would implement next time if they were to run a similar project.

Whereas the Business Studies syllabi at Junior Certificate level recommend a learner-centred teaching approach, that emphasises teaching methods such as project work that are action-oriented and experience-based, geared towards cultivating skills such as problem solving and inquiries, they do not mention reflection anywhere (Republic of Botswana, 2008a, 2008b). In my view, the glaring omission of reflection by both the curriculum planners and the BEC is very problematic. It compromises the significant learning that could be drawn from the mini-enterprise experience in form of transformative double-loop and triple-loop learning (Cope & Watts, 2000; Hartmann et al., 2023; Pittaway & Thorpe, 2012). To increase the vocational aspects of the curriculum in public schools, the Revised National Policy on Education of 1994 requires that learners should take in at least two practical subjects (Republic of Botswana, 1994). This study shows that the implication of this requirement may need to be reconsidered, especially in view of the resultant workload demands and lack of time. There is no stipulation of time allocation for running the mini-enterprise in official government documents, yet the lack of time is a major issue in the operation of the MEP and one of the impediments to reflection. Critically reflecting on the body, the stress, the frustrations, and the exhaustion that is associated with a heavy workload speaks to the need for the evaluation of this policy requirement in the national curriculum.

Entrepreneurship education has been criticised for an approach that is akin to propaganda, communication of an illusion where the challenges that entrepreneurs face are glossed over, and it is made to appear like a smooth sailing endeavour where success is certain (Maistry & David, 2017). Based on the crisis incidents and constant challenges that are more often structural functions of the education system, such as excessive time demands and labour-intensive competing projects that are run concurrently in the final year for different practical subjects, power dynamics in the industry where big suppliers may prioritise their own needs at the expense of small enterprises are opportunities for critical reflection that are missed. Learners are robbed of their opportunity for honest reflection on their experiences and the attractiveness of entrepreneurship as a career choice based on the MEP. The opportunity for voicing their critical reflection on the mini-enterprise experience and entrepreneurship as a whole is missed, at the expense of sponsored narratives when a deliberate effort is not made to give the learners such an opportunity.

Although most learners seem to find the mini-enterprise to have positively impacted the attractiveness of entrepreneurship as a career choice, some became disillusioned due to the challenges they faced. A typical example is one respondent who reported that even though he is studying for a Bachelor of Entrepreneurship and Leadership, the challenges he faced in the MEP caused him to aspire

only to be an employee, not an entrepreneur. Komulainen et al. (2013) decried the paucity of research studies exploring the critical voices of learners against being an entrepreneur, and the prevailing narratives of entrepreneurship in the school context. They further argue that it is important to recognise and deal with resistance towards entrepreneurship education emanating from learners, instead of treating them as a homogeneous lot that passively receive entrepreneurship education and its pedagogical practices without an inclination for resistance, as policy documents appear to do. Their study, which analysed high school learners' critical narratives of entrepreneurship based on satire, comedy, tragedies, and crime stories of entrepreneurship, demonstrated that secondary school learners are quite diverse in their persuasions, with some demonstrating opposition to the neoliberal ideals and values of individualism and competition espoused in entrepreneurship education. The study shows that secondary school learners are able to engage in critical reflection when they are given the opportunity to do so, and such opportunities should be exploited.

7.5. Conclusion

This discussion chapter attempted to explain why learners of entrepreneurship who participate in the MEP engage in reflection in the way that they do. To do this, it drew from the findings of the current study, integrating them with previous research in entrepreneurship education and application of the theoretical and conceptual framework employed in this study. It was noted that learners used intuitive participatory reflective coping to deal with critical events and emotional experiences that they faced during the operation of the MEP, because there is no explicit requirement to engage in reflection in action or indication of how such reflection must take place. Therefore, learners are triggered by critical incidents and emotional experiences to engage in participatory reflection and action intuitively as a coping mechanism, rather than a deliberate learning process. Reflecting on the situatedness, corporeality and temporality of the MEP, we observe that it has a serious bearing on the physical body (e.g. it demands lots of work, causing exhaustion and fatigue) and emotions (excitement, anger, disappointment, embarrassment, fear of failure, etc.), and these trigger cognitive, emotional and behavioural responses of participatory sense-making and action (Hjorth et al., 2015; Lindh & Thorgren, 2016; Selden & Fletcher, 2020). Contextual factors play a role in creating conditions for the mini-enterprise experience that result in critical incidents, cause difficulty in reflection, and sometimes mitigate adverse conditions that learners find themselves in. Temporality also plays a crucial role in reflection in experience-based entrepreneurial learning activities. With time, the learners' excitement and motivation seem to wane, and they begin to engage mechanically just to get done with the project (Illeris, 2007). The oversight or omission by curriculum planners to incorporate reflection throughout

the life of the project and not just at the end, resulting in intuitive participatory reflective coping, goes against calls to equip learners with reflective skills (Higgins et al., 2013; Hunter Lindqvist, 2017; Kassean et al., 2015) while simultaneously compromising the learning potential of their experiences.

This disconnect is a lapse in judgement on the part of curriculum planners, especially since the Business Studies curriculum emphasises the use of experiential and constructivist pedagogies, of which reflection is an important part (Republic of Botswana, 2008). Often where there is no intentional effort for learners to engage in reflection, many learners do not do it, or they may lack the competence to recognise promising critical incidents or to reflect appropriately (Hunter Lindqvist, 2017; Lindh & Thorgren, 2016; Yeoh, 2017). In studying learners who have no past entrepreneurship experience, Lindh and Thorgren (2016) have found that learners who fail to recognise critical incidents are more likely not to engage in reflection, and as a result pursue "a low development path" that fails to optimally exploit learning opportunities presented by critical incidents (Lindh & Thorgren, 2016, p. 533). In contrast, their counterparts on the "high development path" developed the awareness to identify critical incidents and the capabilities to analyse and interpret "different task-related situations", taking into account their thoughts, feelings and emotions, and behaviours in the process (Lindh & Thorgren, 2016, p. 531). This implies that the ability to recognise critical incidents is important and precedes the reflective process intended to milk them of all their learning potential. Therefore, making reflection a requirement – especially throughout the life of the enterprise – requires that learners be taught how to recognise critical incidents that have the potential for reflective learning (Lindh & Thorgren, 2016) and also how to engage in reflection effectively (Coulson & Harvey, 2013; Hägg & Kurczewska, 2016). In the next chapter I conclude the study by consolidating the findings of the current study into a theorisation of reflection and the theoretical and practical implications of the study, and recommend future research directions.

CHAPTER EIGHT
THEORISING REFLECTION IN ENTREPRENEURIAL PROJECT-BASED LEARNING

8.1. Introduction

The previous chapter discussed the findings of the current study in the light of previous research and the conceptual and theoretical framework, in an attempt to explain why learners engaged in the MEP engage in reflection in the way that they do. In the current chapter I bring the study to a conclusion by providing an overview of the study, develop the quintuple helix model of participatory reflection, and outline the theoretical and practical implications of the study, the limitations of the study and the conclusion.

8.2. Overview of the study

8.2.1. Background, rationale and research questions

In Chapter One I introduced the study, showing that entrepreneurial education is on the rise globally, and indicated that Botswana has since joined the policy-driven approach of introducing entrepreneurship at the secondary education level, and looks forward to expanding it even to non-business subjects, as in other countries around the globe (Leffler, 2014; Republic of Botswana, 2015b; Ringarp, 2013). The introduction of entrepreneurship education at the secondary education level is somewhat of a positive development, since secondary education enrols the largest number of learners globally (Elert et al., 2015). However, due to its policy-driven growth and popularity rather than organic growth propelled by empirical research inspired from within the field, entrepreneurial education arguably lacks a strong scientific research and educational theory of learning foundation (Ellborg, 2023; Minniti & Bygrave, 2001; Rae, 2000). This is not helped by the fact that earlier research approaches pursued deterministic psychological trait studies through positivist methodological approaches that sought to identify learners already possessing entrepreneurial traits and the impact of entrepreneurial programmes on those entrepreneurial traits (Gartner, 1988; Politis, 2005; Selden & Fletcher, 2020). This approach failed to reveal what works, when it works, how it works and why it works in entrepreneurial programmes (Lackéus, 2014; Maritz & Brown, 2013; Politis, 2005). Recent shifts towards entrepreneurial learning have taken on a different paradigm, accepting entrepreneurship as teachable, and sparked an interest in how learners develop entrepreneurial knowledge, skills, attitudes and competencies from practical and experiential teaching that involves learning by doing (Cope, 2003; Lackéus, 2014; Lackéus & Sävetun, 2019; Pittaway et al., 2011).

Even though reflection is believed to be an important part of learning in experiential and action-oriented activities that involve learning by doing, such as MEPs, and the need for developing reflective entrepreneurs has often been stated (Hägg & Kurczewska, 2016; Higgins et al., 2013; Kassean et al., 2015), there seems to be a paucity of research on reflection at the secondary education level. This is the case even though the use of enterprises or mini-companies is highly prevalent globally. The uptake of reflection remains low and entrepreneurship education struggles with how to teach reflection and how to incorporate it into action-oriented entrepreneurial activities (Hägg & Kurczewska, 2016). Therefore, this study sought to take a pragmatism-oriented phenomenological approach to investigating learners' experiences of reflection in the MEPs among secondary school learners in Botswana. To do this, I employed the following research questions:

1. What are the learners' experiences of reflective practice in entrepreneurial learning through the mini-enterprise projects?
2. How do learners engage in reflection in the mini-enterprise project?
3. Why do learners engage in reflection in entrepreneurial learning in the way they do in the mini-enterprise experience?

8.2.2. Literature review: Towards a holistic view of understanding reflective learning

In Chapter Two I reviewed the literature on entrepreneurship education and how entrepreneurship has been researched over time. It became evident that research carried out in entrepreneurship education over the years can be categorised into thought-based assessment strategies, action-based assessment strategies, and emotion-based assessment strategies (Lackéus, 2014; Lackéus & Sävetun, 2019). The first sought to determine the extent to which participants of entrepreneurship programmes thought they influenced their attitudes, competencies and intentions to start and grow a business. The second category took a longitudinal view, researching whether entrepreneurship education programmes resulted in entrepreneurial behaviour by way of setting up new ventures. The third approach, which is more recent, focused on investigating the link between emotional events (critical incidents) and entrepreneurial learning in a causal fashion. The current study takes this approach as it takes a processual view of the development of entrepreneurial knowledge, skills and mindset for experiential, action-oriented activities anchored on learning by doing.

From the emotion-based assessment strategies, the interest in studying reflection from an entrepreneurship education perspective does not stem from a vacuum. It is deeply tied to the big question introduced in Chapter One, of how people learn to be entrepreneurial (Higgins et al., 2013;

Pittaway & Cope, 2007) and how reflecting on critical incidents and entrepreneurial opportunities for action are catalysts for transformative and entrepreneurial learning in the process of becoming an entrepreneur. As much as this question in earlier research focused on practising entrepreneurs and organisational learning in entrepreneurial learning literature, it has since cascaded down to entrepreneurial learning within the formal entrepreneurial education in basic education contexts (i.e. primary education and secondary education) (Lackéus, 2014; Lackéus & Sävetun, 2019; Pepin, 2018; Pittaway et al., 2011; Pittaway et al., 2015). The literature reveals that for entrepreneurial learning to occur in entrepreneurial activities such as MEPs, the experience must simulate the reality of a real-life business as closely as possible. It must have the attributes of action orientation, constructed experience, authenticity, risk, ambiguity, uncertainty, learning from mistakes and failures, opportunity recognition and pursuit, emotional exposure, social interaction, and interaction with the outside world (Arpiainen et al., 2013; Higgins et al., 2013; Kassean et al., 2015; Minniti & Bygrave, 2001).

In my investigation of reflection in entrepreneurial learning, I draw from the holistic perspective of learning, especially the human learning model (Jarvis & Parker, 2005; Jarvis, 2012). This view defines learning as a combination of processes that involve the whole person (body and mind) in a socially constructed educational situation wherein they build an experience which would then be "transformed cognitively, emotively, or practically (or through any combination) and integrated into the individual's biography resulting in a changed (more experienced) person" (Jarvis, 2012, p. 13). This definition is existentialist as it is predicated on non-dualism between body and mind, the inseparability of the learner and their lived world, and their learning not just being an intellectual exercise of acquiring head knowledge but a process of becoming or self-formation.

Taking as our point of departure the holistic nature of learning, reflection or reflective learning as a process through which new knowledge is developed or transformed from experience must of necessity embody this holistic nature. This is in line with calls for reflection to be researched from a holistic perspective as opposed to a mentalistic one that separates the mind from the body (Bleakley, 1999; Jordi, 2011; Kinsella, 2007a, 2007b). Reflection has been defined in different ways. Dewey (1933, p. 9), known as one of the pioneers of reflection, has defined reflection as an "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends." In contrast, Boud et al. (2013) highlight that it is a process that follows experience, entailing stepping back and recapturing the experience to carefully analyse and evaluate it. Taking a shift from a more mentalistic understanding, Cope (2005b) posits that reflection involves the engagement of the cognitive and affective faculties to gain new

knowledge, skills, attitudes, insights and perspectives from experience, either individually or collaboratively. This understanding aligns with that of Hommel et al. (2023), who from studying the evolution of the concept of reflection from the individual action process to the critical perspective and lastly the social relatedness perspective, conceptualised it as:

> … a conscious and systematic process of elaborating meaning and deepening understanding of a specific content that interrelates cognitive, emotional, and motivational elements; is based on work actions, experiences, and knowledge; takes place in a social context and contributes to individuals' professional development. (Hommel et al., 2023, p. 3)

This latter definition is more holistic and attempts to capture the complexity and dynamic nature of reflection as involving embodiment, social interaction and interaction with the learners' contexts in the process of developing their professional identity within school and for lifelong. It is more helpful in theorising reflection and the development of entrepreneurial knowledge, formation of entrepreneurial mindset and identity in collaborative entrepreneurial PjBL activities such as the MEP or mini-companies.

8.2.3. Theoretical framing: Pragmatism-oriented hermeneutic phenomenology

In Chapter Three I developed a theoretical framework for my study based on the philosophy of hermeneutic phenomenology and pragmatism. Taking a cue from Van Manen (2014, 2016) and Smith et al. (2009) I drew from different theories to understand the phenomenon of reflection from the mini-enterprise experience. In hermeneutic phenomenology I use the philosophies of Martin Heidegger and Merleau-Ponty, while from pragmatism I use Dewey's theory of reflective thinking and acting. Both of these philosophies are ensconced in non-dualism, seeing no separation between body and mind, and man and the world. Therefore, hermeneutic phenomenology is instrumental for investigating what it means to be an entrepreneurial learner and to experience reflection in the MEP within the school environment where the project is situated (Dibley et al., 2020). Merleau-Ponty's philosophy digs deep into explicating the role of the body in experience and relating it to educational contexts (Koopman & Koopman, 2020). The concept of sedimentation in this philosophy views experiences as being passively accumulated with their attributes or characteristics and associated emotions, feelings and context in which they happened as a way of adapting to the world.

Due to hermeneutic phenomenology focusing on passive non-reflective experiences, it presents a difficulty in researching and explaining the experience of reflection. Therefore, I used Dewey's

pragmatism since is not very far removed from phenomenology in terms of accepting non-dualism, embodied cognition, and the non-representativenature of knowledge. It is a philosophy of experience that explains how acting agents learn from experience through reflection and action as a way of adjusting and adapting to environmental factors and conditions (Biesta & Burbules, 2003; Määttänen, 2015). Its ontology is premised on the process world that resonates with entrepreneurship (Biesta & Burbules, 2003; Kilpinen, 2008; Määttänen, 2015). Entrepreneurial learning is predicated on entrepreneurship as a practice that is not static and fixed in nature, but a fluid process characterised by a flow of interconnected events, involving uncertainties, risks, ambiguities, disruptions and opportunities, creativity and innovation in the unfolding of yet unknown possibilities (Hjorth et al., 2015). Since the 1980s there has been a slow paradigm shift to view the study of entrepreneurship as a process (Selden & Fletcher, 2020) and this transition has led to a research interest in entrepreneurial learning from a processual perspective rather than a static and deterministic approach that focuses on the psychological traits of entrepreneurs. According to Hjorth et al. (2015, p. 599), process-oriented research studies presume the givenness of "movement, change and flow" as pre-eminent characteristics of entrepreneurship and business ventures more specifically. Put in simpler terms, business organisations exist in an unstable environment characterised by uncertainty, ambiguity, risk, loss, and success wherein the only constant variable is change.

This means entrepreneurship research that takes this approach must be "phenomena-driven, sensitive to the appearing and re-appearing of events woven with actions, material things, structures and values that cohere in patterns of directionality" (Hjorth et al., 2015, p. 600). It pays attention to individual events or a group of events together with their associated activities and actions as they unravel within their contextual settings. Entrepreneurial PjBL activities simulate real-world ventures. Therefore, researching and theorising reflection (in the current chapter) within such entrepreneurial activities must also be predicated on a process world or the world on the move as it were, consisting of a series of interrelated events, as well as the relational intermingling of embodiment, social interaction, and temporality within the educational contexts. Consequently, I draw from the existentialist phenomenological philosophies and Dewey's soft pragmatism which together enable a meaningful explication of reflection from a cognitive, embodied, affective, socially extended perspective embedded in a fluid understanding of the world.

8.2.4. Methodology

In Chapter Four I discussed the methodological approach and research design employed in the current study. The study investigated the question of how learners experience reflective learning from a

qualitative methodological approach. The qualitative methodology was deemed appropriate to investigate reflective learning as it is a subjective experience. It was also a deliberate deviation from the quantitative approach that for a long time has dominated entrepreneurship education, yet is littered with a plethora of methodological problems ranging from mixed findings, to self-selection bias, negligence of subjective experiences that are not measurable, and cross-sectional studies that fail to establish causality, to mention just a few. The methodology leaned more towards a pragmatism-oriented hermeneutic phenomenology anchored on a philosophical lens of pragmatism. This methodological approach and paradigm were chosen because they are potent for investigating reflection from a holistic perspective that takes into consideration the embodied, enactive, affective, emergent, and embedded nature of learning in the mini-enterprise experience.

The chapter shows that the study employed a hermeneutic phenomenological case study research design because it made it possible to understand, analyse and provide detailed descriptions of sophisticated participants' experiences in bounded contextual situations and conditions through the use of several data collection methods and data sources (Bloomberg & Volpe, 2012; Crawford, 2016; Roestenburg et al., 2021). Hermeneutic phenomenology delves deep into subjective experiences and the meanings that acting agents make of those experiences. It assumes that participants' responses are by their very nature interpretations of what their lived experience means to them, either as individuals or as a group (Friesen et al., 2012; Kafle, 2011). Phenomenology made it possible to research reflective experiences from the perspective of learners who primarily lived the mini-enterprise experience (Henriksson & Friesen, 2012) as made possible by their consciousness in interaction with the life-world (Van Manen, 2016) and triangulated with teachers who have immense experience of observing learners engaging in MEPs over the years. This was a departure from the norm of focusing on primary participants, but has been explained by Smith et al. (2009) as potent as some experiences involve the co-participation of teacher mentors, coaches and facilitators, and the perspective of teachers confirmed and enriched the learners' descriptions of their experiences.

The study involved seven Business Studies teachers and 13 former learners from three Junior Secondary Schools in Botswana. The data generation process was done at the height of the COVID-19 pandemic, which made it impracticable for schools to operate due to COVID-19 regulations that required social distancing and high levels of hygiene. Mini-enterprises are operated in teams and they mostly sell food items, and pull together many clients who are also learners to enterprise stalls, thus increasing the risk of contracting the airborne virus. I therefore switched to the initially planned focus group observations and interviews, and did online phenomenological interviews of teachers and former

learners who participated in the MEPs in the last five years. The participants were selected through the use of purposive sampling and snowball sampling. The sampling strategy was chosen because it helped focus on participants with relevant experience and willingness to participate, while snowball sampling made it possible to connect with former learners at the different schools through referrals. Data was manually analysed thematically using Creswell and Poth's (2018) data analysis spiral, integrated with insights from the hermeneutic phenomenological research literature (Beck, 2023; Dibley et al., 2020; Love et al., 2020; Smith et al., 2009).

8.2.5. Findings

In Chapter Five and Chapter Six I presented the findings of my study. Chapter Five attempted to answer research question number one, describing what the MEP entails as a primary experience, to give context to learners' experiences of reflection in the MEP, while Chapters Six and Seven focused on the second and third research questions, explaining how learners engage in reflection and why they engage in reflection in the way that they do, respectively. Ten themes emerged out of the data analysis process and were divided across the chapters.

In Chapter Five I discussed the nature of the MEP as a primary experience and basis for reflection. This laid down the context for understanding how reflection occurs and why it occurs in the way it does. The second theme I discussed is reflection as a function of phases of the MEP. This theme had sub-themes of anticipatory reflection during the project planning phase, participatory reflection during the implementation, and reflective writing during the project completion phase. These broad divisions provided a temporal frame for categorising learners' experiences of reflection in the mini-enterprise experience. Thirdly, it emerged that as the mini-enterprise is a collective project, reflection takes place predominantly through the platform of meetings (theme: meetings as a platform for reflection). This theme showed that learners engage in these meetings at varying frequencies, the meetings are run mostly democratically, where every member of the team is allowed to share their views, and they reflect on the performance of the projects and evaluate each other on their assigned roles and responsibilities in the project.

Chapter Six could be divided into two main levels or layers of analysis of how reflection occurs in the MEP. The first layer is more descriptive, about how the process of reflection unfolds as experienced and practised by learners, while the second layer is more explanatory, attempting to get deeper into trying to understand why reflection occurs in the way it does. On the first level, the process of reflection was revealed to occur through *intuitive reflective coping*. This means that learners are not

given a requirement and a structure for reflection, but they do it out of their own volition and intuition to cope with situations they come across as they operate the mini-enterprise. It may be a pre-emptive form of reflection involving comparing performance with a plan to find out possible gaps, or reflection for action to exploit entrepreneurial opportunities. Another way is reactive, or problem-driven reflection after incidents that might have occurred in the enterprise. In this process, findings revealed that learners engaged in collective reflection using the inquiry process, albeit at varying levels of rigour for each group. In the process of reflection, it also emerged that teachers did fairly well in executing their roles of supervising the project well, but many fell short in facilitating reflection, failing to balance teacher control and learner autonomy.

In the second layer of the chapter, the emerging theme of *triggers of reflection* was discussed, and it revealed that different critical incidents involving learners' corporality and perceptual faculties play a major role in triggering learners to engage in participatory reflection. Critical incidents were not only revealed to be perceptual experiences but also to involve emotions and feelings Consequently, emotions played an epistemological role in focusing attention and interest on issues learners cared the most about, and marshalled resources for reflective thinking and acting. The last theme was *impediments of reflection*, showing that different contextual factors and conditions in the learning environment caused learners difficulty in engaging in effective reflection, thus explaining the learners' actions and experiences in reflective learning.

8.3. Towards the quintuple helix model of participatory reflection

8.3.1. Preamble

Different models have been developed to conceptualise reflection, especially to explain the reflective practice of professionals and in educational contexts. Some of the models have straddled different disciplines, each with its unique strengths and weaknesses. Examples include Kolb's experiential learning cycle, which helps conceptualise experience-based learning but does not give much detailed explication of reflection, does not clearly indicate the start and end of the cycles, is mostly individualistic and mentalistic, and does not incorporate the complexity and "messiness" of reflection (Moon, 2006, 2013). Cowan's (2006) model attempts to incorporate different events that could occur and be reflected on, by incorporating anticipatory reflection (defining learning goals), reflection in action, and reflection on action at the end of the experience. It also includes elements of facilitation of reflection not included in Kolb's model. Boud et al.'s (2013) model of reflection is unique in the sense that it is more conversational and based on collective reflection; it also attempts to take into

consideration issues of epistemic emotions but does not have roots in entrepreneurship research, although it may be instrumental in facilitating the collective dialogic reflection in MEPs.

Pepin's (2012, 2018) model is another that seems to draw on Cowan's approach and has been developed based on entrepreneurship programmes. Although broadly acknowledging the collaborative nature of reflection, the three forms of reflection do not go deep enough to capture the embodied nature of reflection. Hommel et al. (2023) have recently developed a model that is based on the social relatedness perspective of reflection and attempts to take a holistic approach to reflection, incorporating the socio-physical and spatiotemporal contexts as well as the individual factors (such as personal characteristics, cognition, emotion, and motivation) of acting agents in the process of human-environment interaction. It assumes that although reflection can be an individual affair, it may also include collaboration with others. The model provides good insights into theorising reflection from a more modern and holistic view but has not yet been applied to entrepreneurship education and entrepreneurial learning more specifically.

I draw inspiration from Pepin's (2012, 2018) model as it has its roots in Dewey's theory of reflective thinking and acting and developed from entrepreneurship research. Furthermore, it resonates not only because it is based on entrepreneurial learning programmes studying secondary education learners, but also because the findings of this study corroborate it to some extent. However, although this model highlights the different forms of reflection that occur at each stage of an entrepreneurial project-based activity, and the cycle of reflection for the different events, it does not go deep enough to capture the complex, dynamic and holistic nature of reflection. For example, while recognising collective and conversational reflection in the implementation stage, it does not delve deeply enough into its intricacies. I also take a leaf from Jarvis and Parker's (2006) and Jarvis' (2012) human learning theory, and Hommel et al.'s (2023) model to develop a more comprehensive theory of reflection that can be applied to teaching and learning through entrepreneurial activities that are experiential, action-oriented, and involve learning by doing in authentic and collaborative settings.

Therefore, extending these models, I use the helix model to develop the quintuple helix of participatory reflection model shown in Figure 9 below, factoring in and improving on the limitations of previous models. The triple helix model has been used to investigate different subjects, in areas ranging from education in general (Colby et al., 2011; Gartner, 1988), to teaching and learning in business education (Longmore et al., 2018) and learning in entrepreneurship (Matlay & Mitra, 2002). The usefulness of the helix model, especially with more helices, lies in its ability to represent in a

metaphorical and pictorial form the sophistication and dynamics of several emergent contemporaneous and interrelated elements in the progression of transformation in a learning situation (Etzkowitz & Leydesdorff, 2000; Longmore et al., 2018). Therefore, in addition to Pepin's (2012, 2018) model of learning entrepreneurship incorporating reflection and the inquiry process, Hommel et al.'s (2023) model of collective reflection and the earlier works of theorists in entrepreneurial learning, phenomenology, and pragmatism, I also draw inspiration from Longmore et al. (2018) and the findings of the current study to theorise reflective learning in an amalgamated quintuple helix model.

8.3.2. The quintuple helix model of participatory reflection

8.3.2.1. Reflection as a function of stages of the entrepreneurial project

It has now been established that the MEP is a simulation of a real-world business. As a project, it has a planning phase, an implementation phase, and an end phase. Reflection in this type of entrepreneurial activity takes a different form at each of these stages of the project or programme, consisting of anticipatory reflection, reflection in action and reflection on action (Pepin, 2012, 2018). Before the commencement of the project, reflection occurs as a pre-action reflection. Pre-action reflection, also known as reflection for action or anticipatory reflection (Glaister & Gold, 2022; Pepin, 2012), at this stage seeks to define the goals, objectives and purposes of the project to determine the purposes that must be kept in view in Dewey's parlance and also help entrepreneurial learners anticipate the potential threats and opportunities that might be faced as coming from outside the business. It is anchored in the concept of continuity, where past experiences inform future experiences and learning results from reflecting on the connected experiences over time.

According to Boud (2001), anticipatory reflection consists of three main areas of focus: the learner, aspects of context, and learning strategies and skills. A focus on the learner entails careful consideration of what the learner brings into the experience in terms of their intellectual capabilities, agency, personality, and affective faculties. The goals, objectives, and expectations to develop knowledge and skills that learners bring into the experience are crucial for triggering the motivation to learn and transfer learning to future related contexts. Attention to aspects of the context entails analysing the impacts of their business environment on the enterprise and their ability to make necessary behavioural adjustments to optimise learning (Boud, 2001; Glaister & Gold, 2022). The last aspect of anticipatory reflection, focusing on skills and strategies, involves brainstorming possible scenarios and rehearsing strategies for dealing with them. This may be detailed to include plans and guides for action, and may be useful where learners do not have the benefit of practical knowledge

from past experiences, thus making learning more conscious and increasing the potential for transfer of learning (Glaister & Gold, 2022).

Although SWOT analysis may be a useful reflection for action in terms of looking at internal and contextual factors and strategising, a more tailor-made journal log designed for this purpose with relevant prompts may be more helpful, especially for adolescent learners (Boud, 2001). Coulson and Harvey (2013) emphasise that learning to reflect must take place before anticipatory reflection. This means learners must be taught how to reflect before they can practice reflective learning if they are to do it effectively and efficiently. Glaister and Gold (2022) seem to agree with this thinking, decrying that although anticipatory reflection is deemed as important theoretically, there has not been commensurate dedication to teaching it.

Reflection in action occurs during the implementation phase of the project and it is mostly triggered by emerging critical events in the form of crisis events and entrepreneurial opportunities (Pepin, 2012, 2018). Whereas I agree with Pepin (2012, 2018) that reflection here occurs through conversation, which he terms reflexive conversation, it is my studied view that limiting it to dialogue is too narrow. Alternatively, drawing from the situated social cognition theory, I prefer to call it *participatory reflection* because dialogue is only one aspect, while reflection is broadly an intersubjective, embodied, enactive, affective, and emergent process of participatory sense-making and action embedded in the lived world (De Jaegher & Di Paolo, 2008; Fuchs & De Jaegher, 2009). Phenomenologically, an intersubjective and participatory sense-making experience involves mutual incorporation "mediated through eye contact, facial expressions, voice, touch, gesture and other kinds of intentional action", resulting in more enriched body schemas and experiences for the autonomous interacting agents (Fuchs & De Jaegher, 2009, p. 472). It encompasses the transactive interplay between learners' perceptual experiences, emotions, cognition, and action, all occurring through a dynamic and systemic process of social interaction in response to critical incidents in the world (Candiotto, 2019). In the context of the MEP, reflection can be said to involve participatory sense-making as it entails interactive co-regulation and coordination of acting agents' actions, movements, and dialogue that lead to novel ways of understanding and responding to episodic experiences (crises and/or opportunities for action) that would not be possible if everyone worked alone (Candiotto, 2019; De Jaegher & Di Paolo, 2008).

The temporal linkages among the predecessor and successor events provide learning opportunities for transferring learning from past reflections or anticipatory reflection to novel practical

problems (Glaister & Gold, 2022). According to Pepin (2012, 2018) each critical incident (that is, crisis events or entrepreneurial opportunities) triggers acting agents to engage in the inquiry process to solve the emergent problem or exploit the opportunity for entrepreneurial action to achieve set goals or adaptive correction to keep the project on course. He conceptualises it as entrepreneurial learning as part of a cyclical process, where the problem or opportunity for action creates learning opportunities which are seized through the collaborative and cooperative inquiry process, resulting in drawing learning and judgement (see Figure 9 below). The cycle then continues to another incident until the end of the project, where the learner now reflects on the whole experience. This process results in the development of knowledge, skills, and intelligent ways of acting in different entrepreneurial situations.

Lastly, reflection on action takes a detached backward stance towards the whole experience, recapturing it, and mulling over it to analyse and evaluate it (Pepin, 2012, 2018). In the process, the major lessons are crystallised and consolidated for possible transfer to similar future contexts and attitudes, with mindsets cemented in entrepreneurial identity formation. This is because all of the entrepreneurial knowledge that is developed is integrated into the learners' personal biography (Jarvis & Parker, 2005; Jarvis, 2012). As much as this can take on a collaborative form, it can also be done individually through a reflective essay. This means that if a reflective writing approach is used, relevant reflection questions may be framed to facilitate and guide learners in this process instead, of just requiring a basic description of experiences. However, even without a formal structure, learners do reflect on their experiences of the project as a whole, and develop more solidified perspectives, views and attitudes about what they have learned and also in terms of self-identity. They decide whether entrepreneurship is worth pursuing as a career choice or not. This possibly explains why learners who have participated in entrepreneurial projects may develop negative attitudes and intentions about entrepreneurship, or have low intentions compared to those who have not participated in entrepreneurial projects (Bignotti & Le Roux, 2016; Dinis et al., 2013; do Paço et al., 2015; Testa & Frascheri, 2015). However, those who have already set their mind on entrepreneurship may, because of reflection, see their experiences and challenges as a necessary rite of passage that only strengthens their resolve and prepares them to anticipate the tumultuous nature of entrepreneurship as a given.

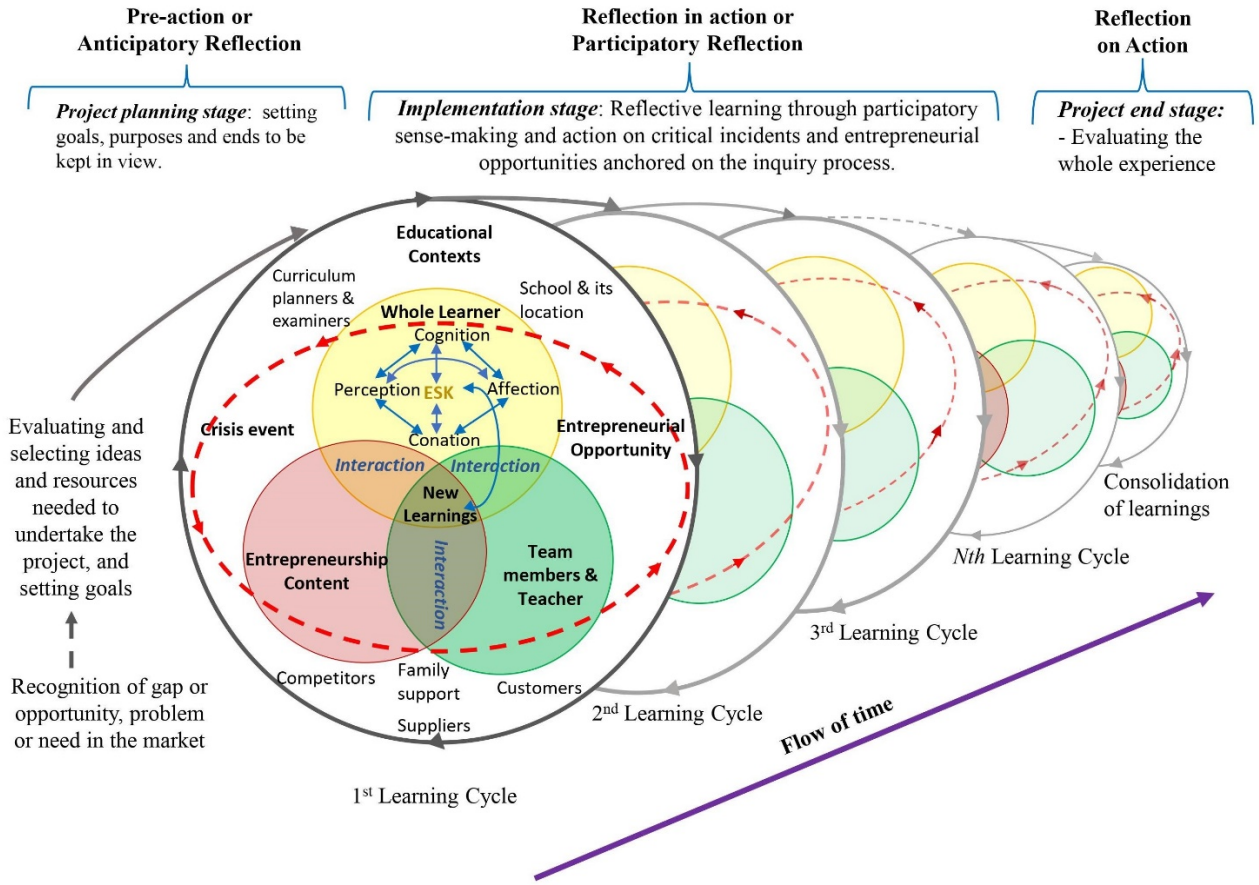


Figure 9: The quintuple helix model of participatory reflection

8.3.2.2. Critical incidents (crises and opportunities) as triggers of reflection

The previous section provides the broader temporal frame through which reflection occurs throughout the duration of the entrepreneurial project. In this section I focus on the intricacies of reflection during the operation of the whole MEP through critical incidents. By definition critical incidents are not necessarily negative in nature but may also be positive events that are assessed to be potentially significant, impactful and useful for the acting agent, causing them to be concerned about them, ponder on them and carefully consider them further (Béres, 2017; Fook & Gardner, 2007). Therefore, I use the term to refer to crisis or discontinuous events and entrepreneurial opportunities for action. The process view of entrepreneurship establishes that the entrepreneurial process is fluid, involving interplay among a series of events, material objects, actions of various actors, and market conditions that may either work at cross-purposes or cohere in broader patterns of directionality, like a stream flowing in the same direction (Hjorth et al., 2015; Selden & Fletcher, 2020).

Critical incidents or events are a defining factor of the entrepreneurial process, and their continuous emergence in part gives the enterprise its fluidity, as well as serving as important triggers for reflection. They may be influenced internally (from within the enterprise) or externally (outside of the enterprise). Internal factors may include group dynamics (Arpiainen et al., 2013; Watzek et al., 2022) and mistakes and failures of learners, allowing them to learn from these occurrences (Deakins & Freel, 1998; Pittaway & Cope, 2007; Pittaway et al., 2011; Shepherd, 2004). External influences are contextual factors and conditions that create either problematic situations to be solved or opportunities to be exploited gainfully, therefore qualifying as critical incidents (Arpiainen et al., 2013; Cope 2003, 2005; Järvi, 2015; Lackéus, 2014; Lackéus & Sävetun, 2019). In the model above I represent critical incidents with a red helix that through transactive interplay links the interactions between the individual learner, team members and teacher, and entrepreneurship content to environmental conditions as they are immersed in the mini-enterprise experience. Whereas crisis events are mostly disruptive and discontinue the natural flow experience, thereby triggering reflection in action (Pittaway & Thorpe, 2012), entrepreneurial opportunities are not so much problem-driven but come about as a prospect of positive events, triggering anticipatory reflection. Through either crisis events or opportunities for entrepreneurial action, critical incidents trigger intuitive reflective coping, where there is no laid down requirement for or structure of reflection. The temporal linkages among the predecessor and successor events provide learning opportunities and transfer learning from past reflections or anticipatory reflection to novel practical problems (Glaister & Gold, 2022). The oppositional direction of arrows between each critical incident and the learning cycle attempts to represent some conditions of resistance or discontinuity in the transactive interplay between the learners and the environment they operate in, where they must make necessary adaptive adjustments to stay afloat (Määttänen, 2015). The process of reflection is the means through which equilibrium is restored while at the same time transforming reflecting agents into more knowledgeable and experienced versions of themselves.

Critical incidents (crisis events and entrepreneurial opportunities) are mostly emotionally laden. It is therefore no wonder that Cope and Watts (2000) have called them emotional events. Some of the sources of critical incidents and emotional exposures are embedded in the learning environment where the MEP takes place, and include the new learning environment, observed dissonance between theory and practice, group dynamics, supplier failures and relations with customers (especially debtors), low sales, and security and control issues, to mention but a few (Arpiainen et al., 2013). Due to their negative nature, discontinuous events are more likely to trigger negative emotions, while the opportunities are more likely to cause positive emotions in acting agents. Phenomenologically these

emotions are intentionally directed towards events, objects, and even others within the context of an incident of interest, and reveal the agent's care structure and/or what they value the most.

In addition, the intentionality of emotions is also closely related to the fact that emotions are evaluative of emerging situations – hence crisis events are more likely to elicit negative emotions because the learner judges the situation as undesirable, bad or offensive, while opportunities are evaluated as good or potentially pregnant with positive outcomes, therefore eliciting positive emotions (Brady, 2013). Epistemic emotions further absorb learners' attention and interest, propelling them to engage in reflective thinking and acting to either solve a problematic situation or reflect to act in the case of anticipated entrepreneurial opportunities (Brady, 2013; Döring, 2003). This may propel learners to engage with entrepreneurship content to find solutions and implement them. Reflective thinking and acting triggered by critical incidents and opportunities, when successfully executed and desirable outcomes are obtained, imply that the new knowledge is integrated into the learners' existing knowledge, and such learning may be transferred to similar situations. This process results in the development of intelligent habits of doing, and from a pragmatist perspective, to know is to know what to do (Määttänen, 2015). Thus, critical incidents are the golden thread that ties together the interactional relations of the learner, other acting agents and content in their interplay with the educational contexts wherein they occur.

8.3.2.3. Whole-person individual learner links

Reflection serves the purpose of making sense of experiences to draw lessons from them. At the centre of it is an individual learner in the world who intends to learn from experience. As much as it can be an individual exercise and a collective exercise, it helps to first focus on the individual separately from the group, since in the end everyone builds their own knowledge and forms their own attitudes and identity because of the experiences they are exposed to. Reflection is commonly presented as almost exclusively an intellectual exercise. However, I argue that in reality reflective learning seems to be an exercise that involves the whole person, both mind and body, all embedded in the life-world (Bleakley, 1999; Hommel et al., 2023; Jordi, 2011; Kinsella, 2007a, 2007b). Their being in the world implies that their experience is embedded in specific contextual situations and is interpreted from that socio- and spatio-temporal perspective. Put simply, it involves the learners' cognitive faculties, affection (moods, emotions, and feelings), perceptions (and sensations), and conation (motivational and volitional aspects as encapsulated and represented in behaviour or actions) as they interact with their educational environment (Hommel et al., 2023).

According to Jarvis and Parker (2005) and Jarvis (2012) learners bring to an episodic experience their biography and their current sense-making mental structures or schemas. The learner's biography and schemas evolve and grow over time as new knowledge is accumulated and incorporated into what I have termed their *existing stock of knowledge* (ESK) in the model above. On occasion there is contradiction between new episodic experiences (critical incidents) in the external immediate environment and learners' biography and schemas. These dissonances cause learners not to take their actions for granted, as their biographical repertoire (or ESK) proves insufficient to deal with the emergent problematic situation, simultaneously causing the learner emotional feelings of uneasiness, anxiety or even stress (Jarvis, 2012; Jarvis & Parker, 2005).

It is this dissonance and disequilibrium that causes learners to intuitively engage in critical reflection to cope with the problematic situation and bring about equilibrium. Success in resolving the problematic situation either individually or through interactions with acting others (that is, mediated through social interaction with team members and the teacher's facilitation), and consultation of relevant entrepreneurship content transforms the learner's paradigm as a result of questioning their earlier assumptions, which were the foundations of their previously held knowledge, beliefs and interpretations (Coulson & Harvey, 2013; Higgins et al., 2013; Järvi, 2015; Longmore et al., 2018; Mezirow, 1997; Warhuus et al., 2021). This could be regarded as new learnings in the model. These new frames of reference, knowledge, and skills or practices are then either assimilated or accommodated into the learner's ESK, making them not only more knowledgeable but more experienced (Beard & Wilson, 2013; Jarvis, 2012; Jarvis & Parker, 2005).

As argued above, reflection is often triggered by critical incidents, but the learner is made aware of these situations through their perceptual faculties, either passively through bodily sensations (sight, touch, hearing, smell, taste) or through deliberate active engagement (Määttänen, 2015). To illustrate, learners could determine that there is a problem when it overtly reveals itself, such as hearing customers' complaints about a product that has gone bad, or from the unpleasant smell when suppliers make deliveries. These passive perceptual experiences are easy to understand and may trigger a reflective process. However, active perceptual experiences may need a little more explanation. Sometimes problematic situations and even opportunities do not stand out in an obvious way – they may require a keen observant eye and active engagement of the reflecting agent either prior to the reflective process or during reflection. For example, in a reflective exercise learners may have to actively examine records, and make calculations for discrepancies between forecasts and actual figures in a collective reflective meeting to discover where the problem lies. This occurs in situations where

relying on intuition alone or face value assessments may not be sufficient. This is enactive perceptual and cognitive experience that involves active investigation, analysis, evaluation and interpretation of data, and discussions with others to arrive at a more conclusive and informed understanding of the situation at hand in order to direct reflective thinking and acting. Furthermore, learners use their perceptual faculties and intellectual capabilities to evaluate appropriate entrepreneurship content that may be useful in dealing with discontinuous events.

Perceptual experiences are not only linked to cognition and actions in the reflective exercise but also to emotions (Brady, 2013). Emotions triggered by perceptual experiences may help the learner to act fast in cases where it might take time to gather all the facts and make a decision. Yet they also propel the learner (either individually or with other acting agents) to engage in reflective thinking about the evaluative situation and to take appropriate action (Brady, 2013; Döring, 2003). As in the case of cognitive schemes, emotions also form affective schemes that become stable modes of feelings over time, through the adaptive process of assimilation and accommodation in interaction with critical incidents and educational contexts (Illeris, 2007). Assimilation in this context happens unconsciously through the adoption of patterns of feelings and reactions to certain situations, while accommodative adaptations occur through conscious and transformation of affective modes through critical reflection, resulting in radical shifts in emotions about certain conditions and contexts in their lived world. An example here could be a change of attitude (either positively or negatively) about aspects of entrepreneurship or entrepreneurship in general as a result of an experience or cumulative experiences. Lastly, the extent to which learners can regulate their emotions plays an important role in how productive their collective reflection could be (Candiotto, 2019). Therefore, reflection involves the whole person in the transactive interplay with contextual critical incidents and interactions with acting others and the entrepreneurship content.

From a pragmatic perspective, action plays a pivotal role in learning because knowledge is centred on what learners can do or the events they can bring about because of applying their knowledge and skills to a given situation. When learners are faced with problematic situations, their emotional states in the form of interest and desire are kindled to transform the situation into a desirable one (Määttänen, 2015). Knowledge in this context is therefore forward-looking, in the sense that learners want to know what to do in the future to achieve their goals when placed in similar contexts. Conation in the mini-enterprise experience in general, and in reflection in particular is inextricably intertwined with embodiment, cognition, affection and, more importantly, temporality. Critical incidents create conditions of resistance that challenge the learners' motivational and volitional states over time. At

the beginning of the experience learners are often filled with excitement and thrilled to explore the project, and it may be easier for them to engage in reflection. However, over time the thrill and motivation wear out due to the stress, frustration, exhaustion from workload challenges and lack of time to balance the project with other competing educational interests and obligations. The motivation and will to participate in the project and even engage in reflection become seriously challenged as learners begin to work on the project in a mechanical and emotionally disengaged state just to fulfil the course requirements. This implies that conation or action plays an important role in reflection as perceptions, the mind, and emotions, while temporality permeates the whole experience, influencing the motivation and will to reflect and act. In sum, reflecting on experience is a whole-person endeavour that has transformative power on the agents. While remaining the same person, reflecting agents are transformed into different or more advanced and sophisticated versions of themselves that are more knowledgeable and skilled to solve problems creatively, and cope with pressures and stresses cognitively, emotionally and behaviourally.

8.3.2.4. Content links

Interactions between entrepreneurship content, the individual learner or other acting agents in the form of team members and the subject teachers within the contextual conditions of critical incidents play an invaluable role in reflection and the resultant new learnings (Longmore et al., 2018). Entrepreneurial learning that falls in the ambit of entrepreneurship education combines entrepreneurship content with the project-based entrepreneurial activity that is the mini-enterprise. It differs from enterprise learning or education and takes a broad conceptualisation of entrepreneurship as a mindset and generic competencies such as creativity, innovation, and self-confidence that can be acquired through learner-centred and open-ended teaching methods across all subject areas, but without an economic focus (Leffler, 2014; European Union, 2004, as cited in Ringarp, 2013). In entrepreneurship education, entrepreneurial activity is a vehicle for helping learners to acquire entrepreneurship knowledge and skills in an environment that marries theory with practice. Therefore, reflective thinking and acting practices in this context draw from entrepreneurship content taught before the commencement of the project. Learners use the content to develop their business plans and reflection entails comparing actual data from the operation of the business with forecasts in the business plan to evaluate performance; thus content plays an important role in anticipatory reflection prior to project commencement.

During operations, when their existing stock of knowledge (ESK) (Cope, 2005; Minniti & Bygrave, 2001) proves insufficient to solve episodic problematic situations, learners use the inquiry

process to interpret the problematic situation using the taught entrepreneurship content as the frame of reference, and may also consult educational materials such as books and their notes. Apparent contradictions and discrepancies between theory (entrepreneurship content) in the learners' ESK and practice are both a trigger of reflection and transformative learning as a result of either individual reflection or participatory reflection and action (Cope, 2005; Minniti & Bygrave, 2001). The new learnings are integrated (either through assimilation or accommodation) into learners' biographical selves (Jarvis, 2012; Longmore et al., 2018). This process can happen at an individual level (indicated by content and whole-learner interactions) and can also be a collaborative venture that fosters learning through interaction between the learner and other acting agents and content within the broader learning environment or contexts, resulting in the co-creation of new knowledge and novel ways of doing things (Longmore et al., 2018; Pittaway & Thorpe, 2012).

It is worth noting that the content here extends beyond textbook content. Many problematic situations that learners are faced with are so unique, 'messy' and ambiguous that neat textbook solutions do not apply to them. They fall within the ambit of what is termed "indeterminate zones of practice", where instrumentalist application of content to practice may be conflicting (Kinsella, 2007b, p. 104). These types of problems may require learners to be more creative and innovative in developing solutions outside of classic textbook content through their social interaction, research, inquiry, experimentation, and action. This is how knowledge is created through the active involvement of learners and not just being deposited into the learners' heads (Kinsella, 2007b; Määttänen, 2015). This makes experiential learning invaluable in equipping learners with tools for the creation of knowledge for themselves and for the transfer of knowledge to future related contexts.

8.3.2.5. Social interaction and teacher facilitation links

Entrepreneurial projects are by their very nature collaborative and cooperative. Therefore, as much as reflection can be an individual subjective exercise, learners are often forced to engage in participatory sense-making of the critical incidents and to interpret the incidents using their prior experience and taught entrepreneurship content (Järvi, 2015; Pepin, 2012, 2018). Participatory reflection is an intersubjective inquiry process anchored on social interaction. Learners in these settings are put in diverse teacher-created teams because if left to themselves, learners would choose to work with peers who are similar to themselves in terms of differentiating factors such as gender, ethnicity, ability, existing friendships, trust and so on (Warhuus et al., 2021). The advantage of teachers having diverse learners in each group is that it ensures that they are exposed to different ideas and that those from minority groups are not sidelined or assigned passive roles that limit their learning, with all

learners exposed to working with diverse and unfamiliar people, as is expected in workplace settings (Warhuus et al., 2021).

However, due to the thrown-ness of team membership, where learners do not choose their members, the quality of reflection depends to a large extent on the personal characteristics and attributes of team members and group dynamics after team formation. The personal attributes (diverse socio-economic backgrounds, behavioural characteristics, interests, and abilities) determine how social interaction occurs through group dynamics as they interact with emergent critical incidents in their educational contexts to make the necessary adjustments to keep the enterprise afloat. Group dynamics can be understood as "the temporal changes in the relationships between emotions and team learning over time" (Watzek et al., 2022, p. 2667). According to Tuckman's group development model, group dynamics unfold progressively through the stages of forming, storming, norming, and performing (Cresswell-Yeager, 2021). This means that at the early stages of working together groups face lots of conflict and less productivity, but this abates with time and they become more productive. In team learning where participants share knowledge, engage in collaborative sense-making and reflectively strategise to complete certain tasks, emergent states in the form of emotions arise during activities, and the emergent emotions either facilitate team learning or frustrate it in a self-reinforcing cycle over time (Decuyper et al., 2010; Watzek et al., 2022). Team members who have positive emotions towards each other are more likely to engage better in reflective learning activities than those who do not share such positive emotions (Brady, 2013; Candiotto, 2019). It therefore becomes important for learners to learn how to coregulate their emotions and practice emotional intelligence for them to engage in meaningful collective reflection and action as they deal with different critical incidents (Clarke, 2010; Illeris, 2007). With such an atmosphere peers will have a safe space where they can engage in collective reflective learning through the free exchange of insights and perspectives through discussion and critique (Clarke, 2010; Liu & Matthews, 2005; Moon, 2006, 2013).

To learn entrepreneurial content best in collaborative experiential activities and from their associated critical incidents, close interaction between learners and their teachers is imperative (Higgins et al., 2013; Warhuus et al., 2021). Teachers' roles are important for the supervision of the projects to ensure that they are organised and run well to engender entrepreneurial learning in line with curriculum requirements, and also to facilitate reflection. First, they have to facilitate reflection by educating learners on how to engage in reflection (Coulson & Harvey, 2013), especially since many learners struggle to engage in quality reflection as it does not come naturally to them (Hunter Lindqvist, 2017; Neck & Greene, 2011; Yeoh, 2017). Secondly, teachers have to create a safe classroom

environment for reflection, allocate time for reflection, and encourage learners to engage in quality reflection (Järvi, 2015). In the process, they can also scaffold reflection for struggling teams while ensuring they maintain a healthy balance between teacher control and learner control of the reflective process (Coulson & Harvey, 2013; Heron, 1992). Although prescriptive reflective frameworks are discouraged because of their potential to impede reflection, they also provide a useful structure for facilitation and scaffolding of reflection (Marshall et al., 2022). Providing a uniform structure ensures that all teams engage in reflection in a more systematic manner and potentially get the most out of the experience in terms of solving problems and critiquing or evaluating their own beliefs as a part of critical reflection.

8.3.2.6. Educational contexts

Educational contexts refer to the environment within which mini-enterprise experiences are embedded and mediated through different factors and conditions, including a myriad of critical incidents (in the form of discontinuous events and entrepreneurial opportunities for action) that occur as triggers of reflection. The different conditions and players within the learning environment set a trajectory of how the mini-enterprise experience and the reflective process will unfold as learners interact with the environment and make the necessary adjustments to survive. Some of the conditions are triggers of reflection, while others are impediments to effective reflection. To illustrate, some of the sources of triggers of reflection include customers and businesses that support the mini-enterprise through supplying the needed production materials. Failure on the part of the businesses triggers reflection by moving learners to find ways to deal with disruptions. This is one of the ways in which interactions with the outside world play a role in entrepreneurial learning as learners engage with the business world in solving authentic problems in ways that profit their enterprises, developing entrepreneurial knowledge, attitudes, and skills in the process (Lackéus, 2014; Lackéus & Sävetun, 2019). The failure of customers to honour their debt obligations, their complaints, and general demands form part of the material for learner reflection. Curriculum planners and examiners determine whether reflection should be part of the MEPsand how it must be carried out. They also determine the number of subjects and the type of subjects that each learner must take, and the resultant workload and time demands determine the feasibility or practicality of learners engaging in reflection.

Schools as part of the educational environment play a pivotal role in the MEP in general and by extension in reflective learning during the operation phase. Schools can develop relationships with the business world to support learners' enterprises, give learners permission to operate and use their resources, help with funding for start-ups, provide the market in the form of other learners and

members of staff, and also host different events that are opportunities for action and for entrepreneurial learners to engage in reflection for action to take advantage of them. Within the environment is also competition from other enterprises that triggers reflection, as each enterprise through reflection finds creative ways to survive and compete for a small market share. Family support and background seem to be used by learners as a solution to deal with low demand. In their reflections, learners always refer to their families and friends outside school to buy their products when sales are low and the business is exposed to risk, especially when trading perishable products. In summary, educational contexts represent the background in which the whole socially constructed experience, which is the MEP, is enacted and transformed into knowledge through interactions between learners, content, and critical incidents through reflection. It provides conditions that can either trigger or impede reflection.

8.3.2.7. Outcomes (entrepreneurial knowledge, mindset and identity)

Reflection is not an end in and of itself, but a means towards certain ends. Although at face value reflection may serve an instrumental purpose of dealing with disruptive problematic situations or reflecting for action to exploit entrepreneurial opportunities, it must transcend those mundane aspects by looking inwardly to personal frames of reference, conceptions, interpretations, and beliefs and question them in the light of experience. The outcome of this is more transformative learning, which not only changes the initial mental structures, conceptions, beliefs, and interpretations but also leads to more advanced and intelligent habits of action. This implies that the whole person is transformed in their knowledge, beliefs, ideas, and frames of reference about the experience (cognition), the way they feel about it (affection), and the way they will act or behave in future experiences (conation) (Kuratko et al., 2021; Kyrö, 2008; Kyrö et al., 2011). This understanding implies that learners develop entrepreneurial competencies that range from cognitive to non-cognitive competencies consisting of knowledge, skills, and attitudes (Lackéus, 2014, 2015; Lackéus & Sävetun, 2019; Moberg, 2014). Moberg (2014) found that the wholesome development of a learner in both cognitive and non-cognitive competencies seems more prevalent in entrepreneurship education rather than enterprise education, which gives an approach that combines entrepreneurship content and practice an upper hand in the development of entrepreneurial competencies.

From a pragmatic perspective, the object of knowledge is for an acting agent to master their actions and the consequences of their actions so that they know what to do in similar future experiences (Biesta & Burbules, 2003, Kivinen & Ristelä, 2003; Määttänen, 2015). Furthermore, knowledge is presumed to be in the present and stays true and relevant until new empirical evidence proves its insufficiency or falsity (Hägg & Kurczewska, 2021). Applied to entrepreneurship learners this implies

that the relevance of their experiences has an expiry date, and they ought to avoid complacency by continuously pursuing and accumulating new meaningful experiences and honing their ability to develop new knowledge and insights from them (Hägg & Kurczewska, 2022). Gadamer's hermeneutic phenomenology expands this thought. It holds that not all experiences are subjective and identical albeit being recursive because they entail the subject being influenced or moved by something outside of themselves (Béres, 2017; Davey, 2016). This results in recursive understanding where different and evolving understandings are accumulated rather than mere sedimentation of the same understandings. Therefore, an experienced learner is not necessarily one who has accumulated a wealth of knowledge that can be directly applied to all future situations, but they are evolving agents who are open to different types of novel experiences that can challenge their previous understandings and habits of action and transform their knowledge, practices, and ways of feeling through reflection (Béres, 2017; Davey, 2016). They become reflective practitioners who are able to engage in transformative lifelong learning as their enterprises evolve through maintaining the willingness, readiness, and ability to be continuously disrupted out of their zones of comfortability and complacency by new experiences and associated critical incidents (Béres, 2017).

8.4. Implications of the study

8.4.1. Theoretical implications

This study is a humble attempt to heed the call to investigate how reflection is practised in entrepreneurial activities. As much as entrepreneurship is understood to be a practical subject that supports the use of experiential teaching methods which are action-oriented and involve learning by doing, the subject of reflection in this respect has received limited attention, especially at the secondary education level. This study highlighted the importance of reflection in this learning setting, to the extent that even though not overtly or explicitly required of learners, they intuitively engage in it to cope with critical incidents and entrepreneurial opportunities.

In addition, it contributes to the broader attempt to understand how entrepreneurial learning occurs in entrepreneurial activities such as mini-companies. It is a direct shift from the static impact studies that dwelt more on the psychological traits of learners, such as entrepreneurial attitudes, subjective norms, self-efficacy and intentions, predicated on a positivist orientation. It takes as its ontological departure the *process-world* nature of the world of entrepreneurship, as characterised by change, uncertainty, instability, chaos, and the flow of interconnected events that involve embodiment, temporality, and relationality. It employed a pragmatist phenomenological methodology and

theoretical conceptualisation to delve deep into subjective and intersubjective experiences of learners, their cognition, emotions and actions as part of that reflective learning process. This implies alternative ways of researching entrepreneurship from a qualitative perspective as opposed to the more positivist approaches that have dominated entrepreneurship education research for a long time.

The quintuple helix model developed in the process of theorising reflection in entrepreneurial learning presents a new way of conceptualising reflection in a holistic manner. It brings together issues of the transactive interplay between learners and the primary experience as embedded in the educational context. It brings to the fore the understanding as potentially an individual venture, while also taking into consideration the intersubjective and participatory nature of group settings. These elements, although acknowledged, have not been easy to capture in other models of reflection (see, for example, Hommel et al., 2023). Furthermore, the model captures reflection as involving the whole person, in terms of perceptions, sensations, feelings and emotions, cognition, and action, and how new knowledge and skills are developed in new critical incidents and integrated into the learner's biography, resulting in the learner being more experienced and knowledgeable, with the whole person being transformed emotively, conatively, and cognitively (Jarvis, 2012). It extends models of reflection such as Pepin's (2012, 2018) by integrating the holistic aspects into the different forms of reflection at each stage of enterprise operation as well as into the critical incidents and entrepreneurial opportunities.

This study revealed how much emotions play an important role not only in the mini-enterprise experience in general, but also how it may serve an epistemological function in reflective learning. Emotions have been shown to play a triggering role in reflection by attracting acting agents' interest and attention to things they care the most about in the mini-enterprise, and also to marshal mental and bodily resources to find solutions to critical incidents and act on those solutions and entrepreneurial opportunities. Furthermore, learners develop patterns of feeling as they interact with different incidents and challenges, and these may eventually shape their overall feelings and attitudes about entrepreneurship.

8.4.2. Practical implications

The study reveals the need for review on how reflection is done in the MEP. First, for meaningful learning to occur, reflection must formally be made a part of the MEP prior to, during and post-operation.

There is a need for a more systematic format of reflection so that reflection may be easily operationalised, and learners are able to get the most out of their experiences before and during implementation. Any approach that is employed must include the aspect of dealing with emotions – either positive or negative – productively, so that they are not a hindrance to reflective learning, but a positive trigger.

The report on operating the mini-enterprise also needs to be looked into so that it is not merely a revisiting of experience (which is not reflective at all) or at best descriptive reflection, geared towards solving day-to-day problems, but a higher-level form of critical reflection that requires learners to evaluate their frames of reference, beliefs and values regarding entrepreneurship. As a culminating task, it should also allow learners to reflect more honestly and critically about entrepreneurship by drawing on their experiences.

Teachers have been shown to be doing well in the execution of their roles as supervisors of the MEP in its daily operations but fall short when it comes to facilitating reflective learning. Different teachers approach reflective situations differently, and at levels that are below par in some situations. The implication of this is that, firstly, they must create time for learners to engage in reflection about the performance of their enterprise and their experiences in general during class time, as this may be hard to do outside class, or learners may not find the motivation or time to do it. Secondly, there is a challenge in knowing how to facilitate and scaffold reflection. Besides not seeming well equipped, teachers struggle to balance teacher control or authoring and learner autonomy in facilitating reflection. Teacher education must, in addition to training business subject teachers about their own reflective practice, educate them on how to facilitate and scaffold reflection effectively.

The findings of the current study suggest that there is a need for the institutional curriculum to be revised. First, the requirement of junior secondary school learners to take two practical subjects in an attempt to reach vocationalisation of the academic curriculum has ramifications that need to be closely interrogated. The excessive workload demands exert stress, and cause exhaustion and anxiety in the learners, forcing them to miss parts of their lessons to work on the project, while others go truant as they suffocate under the load of projects that are required at the same time. This also creates an unfair situation for teachers of other subjects, whose teaching time gets compromised, and has the potential to result in a strained relationship with learners and teachers of vocational subjects. In addition, there is a need for the requirement of reflection to be included in the operation of the project more visibly. Even though their reflection is not graded, it is important to assist learners in engaging

with the project more productively. The last chapter of the portfolio, which is essentially a report on the learners' experiences, needs to be more reflective in nature rather than a mere revisiting and description of experiences.

8.5. Directions for future research

Whereas this study provides a good exploration of how reflection occurs in MEPs, it has also revealed that there are potent and promising research directions that can contribute to the growth of entrepreneurship education at the secondary education level, especially where group-based mini-companies are used as a pedagogical tool. Emotions have been shown to play an important role in the MEP, and more research is needed to expand current understanding of their epistemic roles and how learners can be taught to regulate their emotions within the process of participatory reflective coping. This would help ensure that emotions do not stand in the way of reflective learning in dealing with different critical experiences learners face, but are leveraged to facilitate learning.

More studies need to be carried out on how best teachers can facilitate reflection in experience-based and action-oriented entrepreneurial learning activities. The findings of this study show that the way in which reflection presently occurs is not sufficient, and teachers do not seem equipped to facilitate reflection effectively. This is especially important in collaborative projects that involve adolescents, who are still in the early stages of developing reflective judgement, and where critical incidents can be frustrating and discouraging. Entrepreneurship education cannot rely on intuitive reflective coping because it does not make learning from experiences more deliberate than what is assumed to occur pre-consciously by serendipity. This may require experimenting with different models and the development of new models that may help facilitate this process, in an endeavour to develop entrepreneurs who are reflective practitioners from a young age. Although this study gives a preliminary insight into teachers' roles in facilitating reflection from the learners' perspective, there is a need for a study that is exclusively focused on teachers' practices of helping learners to engage in reflection. This study has revealed that even though teachers may have been trained on how to reflect on their practice, it may not necessarily translate into knowing how to facilitate and scaffold reflection in entrepreneurial activities for their learners.

8.6. Conclusion

The current study sought to understand how learners participating in the MEP at junior secondary schools engage in reflection. It builds on the quest to understand the what, how, and why of learners' reflective learning practices in entrepreneurial learning, with a specific focus on lower secondary education, that has hitherto not received much attention (Elert et al., 2015; Testa & Frascheri, 2015). Taking advantage of the experiential and action-oriented nature of the mini-enterprise experience and how it closely simulates real-world enterprises by creating conditions as close as possible to those of practising entrepreneurs to foster entrepreneurial learning, it attempted to study reflection in entrepreneurial learning from a processual perspective. This is a deliberate shift from earlier studies that followed a deterministic approach and positivistic research methodologies that focused on researching psychological traits of learners deemed to be characteristic of entrepreneurs. This theoretical and methodological approach anchored on pragmatism-oriented hermeneutic phenomenology contributes towards helping us understand what works, how it works, and why it works in entrepreneurial activities used in entrepreneurship education.

The study makes a unique contribution to understanding reflective learning in MEPs by delineating learners' experiences of reflection, and the processes or approaches employed by learners to engage in collective reflection; in the light of the evidence, the literature and theoretical and conceptual framework explain critical incidents as triggers of reflection, the prominent role of emotional experiences in reflection, and the contribution as well as impediments of context-based factors to reflective learning. Furthermore, the study led to the development of the quintuple helix model of participatory reflection, which is a unique contribution to the theorisation of reflection in experience-based and action-oriented collaborative entrepreneurial projects from a holistic perspective.

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APPENDICES:

Appendix A: Data collection instruments

MINI-ENTERPRISE REFLECTIVE LOG

I. AWARENESS	
Description of the situation that caught your attention (good or bad): What happened?	**Description of feelings: How were you thinking or feeling?**
II. CRITICAL REFLECTION	
Analysis: What was good or bad about the experience?	**Evaluation:** What sense can you make about the experience? Bring ideas outside the experience.
III. NEW PERSPECTIVES / CONCLUSIONS: **What do you need to improve on in your business?**	
IV. ACTION PLANS: **How will you improve the situation?**	

Appendix B: MEP interview schedule for students

Introduction

My name is Mr Gosaitse E. Solomon, a PhD student at the University of Kwazulu-Natal (Edgewood College). I am undertaking an investigation on Business Studies learners' experiences on the mini-enterprise project. I kindly request your participation on this study as it will help identify the learning benefits of the ME to learners, challenges learners face when working on the project, as well as how the project is run. The findings will help to inform practices for making the experience more beneficial to learners. You are requested to be as honest and candid as possible. I also assure you of maintaining your anonymity and confidentiality. The gathered information will be used solely for the purpose of the study. Should you feel like dropping from the study at any time, you are at liberty to do so. Thank you.

Questions

1. What product or service did your business trade in and how did you arrive at that business idea?

2. What would you say are the skills and competencies that you developed as a result of participating in the mini-enterprise project?

3. What would you say are the main factors that helped you to learn the most from the mini-enterprise experience?

4. How has participation in the MEPaffected your other school related work your out of school life?

5. What role did working as a team play in the effective running of and learning from the mini-enterprise?

6. What outstanding incident (positive or negative) can you remember from your mini-enterprise experience, and how has it affected learning and practice?

7. Have you reflected on your experiences (be it successes or failures) as a team, and how has such reflection impacted the running of your business?

8. What impact, if any, has reflective writing on your learning from the mini-enterprise project?

9. How often in the running of your business have you referred back to your business plan or concepts taught in class better?

10. What role did your teacher play in the whole of the mini-enterprise experience?

11. How has participation in the mini-enterprise impacted you view of entrepreneurship as a possible life career choice?

12. Is there anything else you would like to share about your mini-enterprise experience?

Thank you for taking your valuable time to participate in this interview!

Appendix C: MEP interview schedule for teachers

Introduction

My name is Mr. Gosaitse E. Solomon, a PhD learner at the University of Kwazulu-Natal (Edgewood College). I am undertaking a research on Business Studies learners' experiences and their teachers on the mini-enterprise project. I kindly request your participation on this study as it will help provide information about the role of teachers in the supervision of the mini-enterprise project, especially as it relates to helping learners reflect on their experiences and learn from them. The findings will help to inform practices for making the experience more beneficial to learners. You are requested to be as honest and candid as possible. I also assure you of maintaining your anonymity and confidentiality. The gathered information will be used solely for the purpose of the study. Should you feel like dropping from the study at any time, you are at liberty to do so. Thank you.

Interview Questions

1. What are your roles and responsibilities as a teacher and supervisor of the mini-enterprise?

2. What would you say are the major key knowledge, skills competencies that learners benefit from the mini-enterprise projects?

3. What are some of the challenges or critical incidents that your learners have had to deal with in the running of their mini-companies?

4. What do you do in the case learners face problems or failures in the running of their businesses?

5. What do you do to make sure that learners take lessons from critical incidents?

6. What is your view on the learners' ability and maturity to handle pressures of the mini-enterprise project?

7. What is your view on learners' ability to engage in critical reflection and meaningful learning in their operation the mini-enterprise projects? In your view are they able to learn from past experiences, and also make connections between theory taught in class and its application in the mini-enterprise projects?

8. In your view, how much has your training prepared you to help learners engage in critical reflection or even scaffold instruction in the mini-enterprise experience for the meaningful learning of learners?

9. What are the strengths and weaknesses of the mini-enterprise project as an entrepreneurship teaching approach in its current form?

10. Is there anything else you would like to share about the supervision of the mini-enterprise project?

Thank you for taking your valuable time to participate in this interview

Appendix D: Study participants (teachers)

SCHOOL	NAME	SEX	AGE in Years	TEACHING EXPERIEN-CE [Years]	TEACHING SUBJECT	EDUCATIONAL QUALIFICATIONS
School A	Sunday	M	39	8	Commerce and Accounting	Diploma in Education, Diploma in Business Studies & Accounting
	Clayton	F	33	7	Commerce & Accounting, Commerce & Office Procedures	International Diploma in Business
School B	Moore	M	37	11	Commerce & Accounting, Commerce & Office Procedures	Diploma in Education, (Business)
	Victoria	F	34	11	Commerce & Accounting, Commerce & Office Procedures	Diploma in Education, Bachelor of Business & Entrepreneurship
	Charles	M	45	22	Commerce & Accounting, Commerce & Office Procedures	Diploma in Education, (Business)
School C	Miller	M	36	11	Commerce & Accounting, Commerce & Office Procedures	Diploma in Education, (Business)
	Boniso	F	48	16	Commerce & Accounting, Commerce & Office Procedures	Diploma in Education, Bachelor of Business Admin

Appendix E: Study participants (Former |Business Studies learners)

Serial No.	Learner	Gender	Age	Current Occupation	Role held in the MEP	Product Traded
1.	OSS	M	20	Bachelor of Education, Business (Year 2)	Sales person	Fat cakes, fries, and sweets,
2.	TMS	M	20	Business Intelligence & Data Analytics (year 3)	Treasurer	French fries, fat cakes, sweets
3.	OMS	F	20	Bachelor of Finance (Year 2)	General manager	Sweets and fresh chips
4.	AMS	M	21	BSc. Computer System Engineering (Year 2)	Sales person	Cream donuts
5.	BLS	M	20	Bachelor's degree in Insurance (Year 2)	Sales person	Sweets (Champions and Toffees)
6.	JMS	M	20	Bachelor of Science Engineering (Year 3)	General manager	Hot dogs
7.	KWS	F	20	Bachelor of Arts, Economics (Year 3)	Sales person	Chicken feet and Pop-corns
8.	MKS	F	20	Bachelor of Accountancy (Year 3)	Treasure or accountant	Pies, Knick knacks, and Melty Moments
9.	PSS	M	21	Bachelor of Entrepreneurship & Business Leadership (Year 3)	General manager	Pies, Cool Time, and Knick knacks
10.	RGS	M	19	Bachelor of Arts in Media Studies (Year 1)	Sales person	Hunger buster and coffee
11.	RTS	F	20	Bachelor of Education, Business (Year 2)	Sales person	Pop-corn
12.	SGS	M	19	Waiting to start Association of Accounting Technicians	Production manager	Hot dogs and French fries
13.	PTS	M	20	Bachelor's degree in Insurance (Year 2)	Sales person	Cream donuts

Appendix F: Originality and plagiarism report

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UNIVERSITY OF KWAZULU-NATAL

COLLEGE OF HUMANITIES

TITLE:
An Exploration of the Role of Reflective Practice in Entrepreneurial Learning through the Mini-enterprise Experience in Botswana Junior Secondary Schools

In Fulfilment of the Requirements for the Doctor of Philosophy in Social Sciences Education

GOSAITSE EZEKIEL SOLOMON
(Student Number: 219026116)

Supervisor: Prof. S. Maistry

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Appendix G: Permission to conduct research

TELEPHONE: (267)
3972454/3625000
FAX: (267) 3972915/3975899

Republic of Botswana

MINISTRY OF BASIC EDUCATION
Director, Regional Operations
South East
Private Bag 00343
GABORONE
BOTSWANA

REF: SER 1/15/2 XVI (163)

12 November 2019

Mr Gosaitse Ezekiel. Solomon
Private Bag 702
University of Botswana

Dear Sir/Madam,

PERMISSION TO CONDUCT A RESEARCH

Reference is made to your letter dated **28 October 2019** requesting to carry out research in **South East Region** is here by granted. The research will be carried out in Gaborone JSS, Bokamoso JSS, Bonnington JSS,Nanogang JSS, Maikano JSS, Marulamantsi JSS,Kgale Hill JSS, Marang JSS , Moselewapula JSS and Tlogatloga JSS schools in the South East Region from **12 November 2019 to 11 November 2020.**

Your research is titled **"AN EXPLORATION OF THE ROLE OF REFLECTIVE PRACTICE IN ENTREPRENURIAL LEARNING THROUH THE MINI-ENTERPRISE EXPERIENCE IN BOTSWANA JUNIOR SECONDARY SCHOOL"**. Permission is hereby granted for you to carry out your research as per your request.
NB: It is a requirement by the Ministry for a researcher to avail his/her final research document to the Regional Office.

Thank you.

Yours faithfully,

[redacted]

P.P **L.B. Toteng**

For/ Director, Regional Operations, South East Region

SAVINGRAM

[redacted]

FROM: Director, Regional Operations

South East Region

TEL: 3972454

FAX: 3972915/ 3975899

pp L.B. Toteng

For/ Director
07th October 2019

TO:
Gaborone West JSS
Bokamoso JSS
Bonnigton JSS
Nanogang JSS
Maikano JSS
Marulamantsi JSS
Kgale Hill JSS
Marang JSS
Moselewapula JSS
Tlogatloga JSS

REF: SER1/15/2XVI (162)

PERMISSION TO CONDUCT A RESEARCH

Mr Gosaitse E. Solomon have been granted permission to conduct research study in your school with effect from **12th November 2019** to **11th November 2020**.The research is on **"An Exploration of the role of reflective practice in entrepreneurial learning through the mini-enterprise experience in Botswana junior Secondary School."**

The researcher has been advised to directly and also thoroughly brief you on the research.

Thank you.

MoBE MINISTRY OF BASIC EDUCATION CONTACT CENTRE 16885 BOTSWANA 50 BOTSWANA

Appendix H: Extension of permit to conduct research

TELEPHONE: (267)
3972454/3625000
FAX: (267) 3972915/3975899

Republic of Botswana

MINISTRY OF BASIC EDUCATION
Director, Regional Operations
South East
Private Bag 00343
GABORONE
BOTSWANA

REF: SER 1/15/May 2022 (015)

04 May 2022

Gosaitse E. Solomon
Private Bag 702
Gaborone

Dear Sir/Madam

EXTENSION OF RESEARCH PROJECT

This serves to notify you about the agreement by the **Ministry of Basic Education (South East Region)** to extend your research exercise. The research will be carried out at **Maoka, Bokamoso, Bonnington, Nanogang, Maikano, Marulamantsi, Kgale Hill, Marang, Moselewapula and Tlogatloga Junior Secondary Schools** from the **4 May 2022 to 4 October 2022.**

The research is on "**An Exploration of the Role of the Reflective Practice in Entrepreneurial Learning through the Mini- Enterprise Experience in Botswana Junior Secondary Schools**". Permission is hereby granted for you to carry out your research as per your request. **However, all Covid- 19 Protocols should be strictly adhered to by the researcher.**

NB: Furthermore, you are requested to submit at least one hardcopy and an electronic copy of the report to the South East Region, Ministry of Basic Education within 3 months of completion of the study. Approval is for academic fulfillment only. Copies should be submitted to all other relevant authorities.

Thank you.

Yours faithfully

[redacted]

A. Z. Ernest

For/ Director, Regional Operations, South East Region

MoBE MINISTRY OF BASIC EDUCATION CONTACT CENTRE 16885 BOTSWANA

SAVINGRAM

[redacted]

FROM: Director, Regional Operations
South East Region

A.Z. Ernest

TEL: 3972454

FAX: 3972915/ 3975899

TO: **School Head**
Maoka JSS, Bokamoso JSS, Bonnington JSS, Nanogang JSS, Maikano JSS, Marulamantsi JSS, Kgale Hill JSS, Marang JSS, Moselewapula JSS, Tlogatlogsa JSS

REF: SER1/15/ May 2022 (016)

04 May 2022

PERMISSION EXTENSION TO CONDUCT A RESEARCH

Gosaitse E. Solomon is a student from **University of Botswana** who has been granted permission to conduct research study in your school. The research is on **"An Exploration of the Role of the Reflective Practice in Entrepreneurial Learning through the Mini- Enterprise Experience in Botswana Junior Secondary Schools "**.

The researcher has been advised to contact you directly and also thoroughly brief you on the research. **However, all Covid-19 Protocols should be strictly adhered to by the researcher.**

Thank you.

MoBE MINISTRY OF BASIC EDUCATION CONTACT CENTRE 16885 BOTSWANA

Appendix I: Gate-keepers permission sample

TELEPHONE: 3915116
FAX: 3161702

REPUBLIC OF BOTSWANA

MINISTRY OF BASIC EDUCATION
BONNINGTON C.J.S.S
PRIVATE BAG 00454
GABORONE

28th February 2020

PERMISSION TO CONDUCT A RESEARCH – MR GOSAITSE EZEKIEL SOLOMON

Your letter referenced 17th February 2020 refers. Permission is hereby granted for you to conduct a research for "AN EXPLORATION OF THE ROLE OF REFLECTIVE PRACTICE IN ENTREPRENURIAL LEARNING THROUGH THE MINI-ENTERPRISE EXPERIENCE IN BOTSWANA JUNIOR SECONDARY SCHOOLS" as per your request.

Thank you.

Yours faithfully

[redacted]

H. Ledimo
Deputy School Head

BONNINGTON J.S.S
DEPUTY SCHOOLHEAD
28 FEB 2020
TEL: 3915116
FAX: 3161702
P/BAG 00454 GABORONE

Appendix J: Initial ethics clearance certificate

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

06 April 2020

Mr Gosaitse Ezekiel Solomon (219026116)
School Of Education
Edgewood Campus

Dear Mr Solomon,

Protocol reference number: HSSREC/00001194/2020
Project title: An Exploration of the Role of Reflective Practice in Entrepreneurial Learning through the Mini Enterprise Experience in Botswana Junior Secondary Schools
Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 17 March 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 06 April 2021.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Appendix K: Ethics clearance renewal approval certificate

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

09 May 2022

Gosaitse Ezekiel Solomon (219026116)
School Of Education
Edgewood Campus

Dear GE Solomon,

Protocol reference number: HSSREC/00001194/2020
Project title: An Exploration of the Role of Reflective Practice in Entrepreneurial Learning through the Mini Enterprise Experience in Botswana Junior Secondary Schools

Approval Notification – Recertification Application

Your request for Recertification dated 04 May 2022 was received.

This letter confirms that you have been granted Recertification Approval for a period of one year from the date of this letter. This approval is based strictly on the research protocol submitted and approved in 2020.

Any alteration s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study must be reviewed and approved through the amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Appendix L: Letter of professional language editing

Leverne Gething, M.Phil. *cum laude*
PO Box 1155, Milnerton 7435; cell [redacted]
e-mail: leverne@eject.co.za

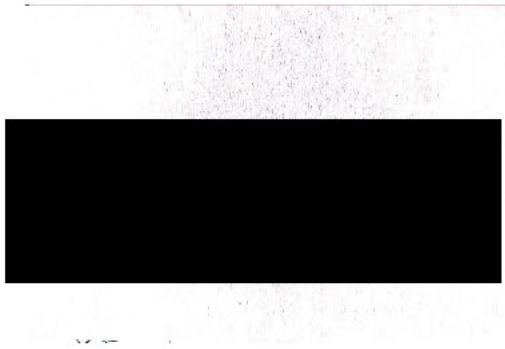
18 February 2025

Declaration of editing of PhD thesis:
An Exploration of the Role of Reflective Practice in Entrepreneurial Learning through the Mini-enterprise Experience in Botswana Junior Secondary Schools

I hereby declare that I carried out language editing of the above on behalf of Gosaitse Ezekiel Solomon.

I am a professional writer and editor with many years of experience (e.g. 5 years on *SA Medical Journal*, 10 years heading the corporate communication division at the SA Medical Research Council), who specialises in Science and Technology editing – but am adept at editing in many different subject areas. I have edited a great deal of work, including academic papers and theses, for various academic journals, universities, and publishers.

I am a full member of the South African Freelancers' Association as well as of the Professional Editors' Association.



Yours sincerely LEVERNE GETHING leverne@eject.co.za