EXPLORING FACTORS THAT AFFECT THE TEACHING AND LEARNING OF WOODWORK AND CARPENTRY IN FORM V INVOLVING PRE-VOCATIONAL STUDENTS AT A HIGH SCHOOL IN SWAZILAND: AN ETHNOGRAPHIC CASE-STUDY

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DECLARATION

I declare that this research proposal is my original work and it has not been presented for award of degree in this or any other university.

Signature…… Date……

RECOMMENDATION

This research proposal has been submitted with my approval as the University supervisor

Signature ……Date ……

DEDICATION

This research is dedicated to my father Mr Lovuka James Hlophe and mother Eleanor Sibongile Hlophe (nee Vilakati) for their inspirations, blessings and enormous love. This project is also dedicated to my wife Siphiwe Zulu, my sons Mandlenkosi, Siyabonga, and Musa for their special support.

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ABSTRACT

This study sought to explore factors that affect the teaching and learning of Woodwork and Carpentry as a pre-vocational subject involving Form V students at a selected rural high school in Swaziland. The researcher adopted a qualitative approach and employed an ethnographic single case study design. The theory of classroom teaching as developed by Mitzel (1969) guided this study. The location of the study was a rural high school offering pre-vocational subjects. Purposive sampling was used to select one rural high school, selected educators, and eleven Form V participants. Semi-structured interviews, a focus group discussion, observations and document analysis were used to collect the data that were thematically analyzed. The results showed that various factors negatively affected the teaching and learning of Woodwork and Carpentry such as a lack of adequate teaching and learning resources, inadequately qualified teachers, a lack of proper infrastructure, poor and limited funding, poor parental/guardian cooperation, and limited industrial participation and government support to sustain adequate educational outcomes for this subject. Based on the findings, it is recommended that a strategy to forge partnerships with private and public concerns be established to improve funding for the Woodwork and Carpentry subject. Moreover, industrial attachments that involve both teachers and students should be considered; sufficient instructional resources such as consumable materials, reference books, tools and machinery should be provided; and appropriately qualified teachers should be employed. Finally, the teaching and learning of this subject should be supervised and monitored by qualified officials on a regular basis.

Key Words: Woodwork and Carpentry, TVET, pre-vocational subject, teaching and learning.

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LIST OF ACRONYMS AND ABBREVIATIONS

CSP – Cultural Systems Paradigm

ERS - Economic Recovery Strategy

ECOS – Examinations Council of Swaziland

FAR - Fiscal Adjustment Roadmap

HIV/AIDS – Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome

M Ed – Masters in Education

NDS – National Development Strategy

PRSAP – Poverty Reduction Strategy and Action Plan

SAEMA – Shama Sub-Metro of Shama Ahanta East Metropolitan Assembly

TVET - Technical Vocational Education and Training

UNESCO - United Nations Educational, Scientific and Cultural Organisation

VET – Vocational Education and Training

WC – Woodwork and Carpentry

Woodwork and Carpentry – one of the subjects offered in the Pre-Vocational programme

Pre-Vocational Education – Technical Vocational Education and Training taking place at school level

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 Introduction and Background to the Study

Various studies have been conducted on the teaching and learning of pre-vocational subjects locally, regionally and internationally, but not many have studied pre-vocational technical subjects in Swaziland. This study focused on the factors affecting the teaching and learning of Woodwork and Carpentry involving Form V pre-vocational students at a selected school in Swaziland. There is a drive in many developing countries to include practical subjects in their secondary school curriculum in an effort to address unemployment challenges. This is also the case in Swaziland, which has made significant progress in the education sector since the year 1968 when the country became independent from the British colony. The system of education during the colonial era was characterized by the production of graduates aspiring for white collar careers. When the country became independent, the need for local people to engage in blue collar careers emerged due to the implementation of a localization policy that intended to capacitate local Swazi people to take up jobs that had initially been occupied by expatriates. This meant that Swaziland needed to strengthen her TVET sector, therefore, educational and other policies that would meet the localization of personnel in Business and Industry were drafted. Some of these policies included Imbokodvo Manifesto of 1972 and the Education Review Commission Reports of 1975 and 1985. However, despite all these policies, the education system in Swaziland has continued to suffer from such ills as inadequately trained teachers, poor quality of

education, constant challenges due to the global demand for competitiveness, poor means of meeting technological demands, poor poverty reduction/eradication strategies, and continual challenges that are caused by diseases such as HIV/AIDS, and challenges in equity and participation (MoET, 2010). Thus TVET in Swaziland is still operating in a context that is characterized by challenges such as poor financing and poor regulation and coordination, because although a TVET policy is now in place, there is still no framework that is equivalent to the South African National Qualifications Authority Framework. This oversight leads to challenges such as a lack of qualification equivalence and the non-recognition of prior learning. Such negative factors impact the delivery of all forms of TVET in Swaziland. However, the Industrial and Vocational Training Act of 1982 is the most compelling legislative framework that as it provides for industrial apprenticeship and the establishment of the Industrial and Vocational Training Board (Akoojee, Gewer, & McGrath, 2005; World Bank, 2010).

Swaziland as a country committed herself to achieving the United Nations Millennium Development Goals and Vision 2022 by developing and implementing a Poverty Reduction Strategy and Action Plan (2006) that was meant to operationalise the National Development Strategy (1999). The development of this strategy also included amendments to the education system in Swaziland that had hitherto been following a supply kind of curriculum. This meant that the system produced graduates that were not necessarily in demanded for available jobs in the market. In an effort to correct this imbalance, the policy of the Swaziland Ministry of Economic Planning and Development (2006, p. 64) states that, in order to reduce poverty among the poor:

> "…there is need to enrich the education curriculum with vocational or skills development and remove the bias towards academic or white collar jobs. Government should implement policies aimed at enhancing prospects for self-employment especially among the poor."

In order to operationalise this policy, a skills development and training policy whose main aim was, "The provision of a market-driven quality technical and vocational education and training skills development in the context of a National Qualifications Framework through competency based education and training, cognizant of prior learning for all, inclusive of the socio-economically disadvantaged, unemployed, special target groups, and incorporating gender sensitivity," as MoET (2010, p. 8) reports.

This policy was aimed at addressing social and economic development challenges. In line with this policy, the MoET diversified the curriculum to include a pre-vocational education programme that would enable school leavers to be equipped with entrepreneurial skills. The definition of TVET in this study assumes the UNESCO's (2011) definition, where the term is described as the provision of skills, knowledge, attitudes and values (in addition to general education) that are needed for the world of work (see also, Afeti, 2007; Classens, 2008; Kingombe, 2012; Mureithi, n.d.). This implies that pre-vocational education capacitates students who are still in high school with the skills, knowledge, attitudes and values that are needed for the world of work. In this study, I have used the terms TVET and pre-vocational interchangeably.

The teaching of Woodwork and Carpentry as a pre-vocational subject is also important to the Swazi society for the production of products such as furniture, house and office partitioning, and house roofing and shuttering for the construction of buildings. The implementation of the pre-vocational programme was a result of the aspirations of the Swazi government as stated in national policy documents for the Ministry of Education (NERCOM, 1985; Skills for the Future, 1990). Establishing the pre-vocational programme was meant to diversify the scholl education system so that students enrolled in the programme could develop transferable skills that would make them to engage in personal enterprises, continue with their education to in institutions of higher education and training, and acquire employability skills for gainful employment (MoET, 1998; 1999). In preparation for the implementation of the pre-vocational programme in Swaziland, 72 practicing teachers were recruited and provided with in-service training for a period of approximately one year to initiate the implementation of this programme. Tools, equipment and machinery were also supplied to each of the sixteen schools. However, local and international studies have revealed that TVET programmes often meet some challenges such as lack of funding and financial support, inadequate infrastructure, limited tools and equipment, poorly trained teachers, and obsolete equipment (Classens, 2008; Khumalo, 2017; Puyate, 2008; Kiadese, 2011; Thobega, Subair & Rammolai, 2011; Gwembire & Katsaruware, 2013).

1.2 Rationale for and Significance of the Study

This research was a result of my personal and professional interest in the Woodwork and Carpentry subject. This interest emanates from my personal and professional involvement with this subject at various levels that includes secondary high school teaching, training teacher

trainees for the subject, and designing teaching and learning school materials as a curriculum designer. After high school, I went to the Swaziland College of Technology to be trained as a secondary school teacher in Woodwork, Metalwork and Technical Drawings. It was after some years of teaching that I was awarded a scholarship to further my studies in these subjects and I obtained a degree from the University of Malawi. After teaching these subjects in high schools in Swaziland, I was then transferred to the Swaziland College of Technology to work as a lecturer. I prepared teachers in pre-vocational and design and technology subjects at high school level. Throughout these experiences, I observed the manner in which Woodwork and Carpentry was taught and managed in schools. In both Swaziland and Malawi, I witnessed instances of the poor implementation of teaching strategies in these subjects at high school level. At this point it is noteworthy that the pre-vocational programme in Swaziland has been operating since 2004.

Moreover, my interest in understanding the challenges associated with the teaching and learning of the subject was prompted by my own career, as a curriculum designer for these subjects at the National Curriculum Centre. At the National Curriculum Centre I was required to prepare teaching material and develop class management support material, guidelines, and learning and evaluation strategies. These activities strengthened my understanding of teaching and learning processes and the challenges involved in delivering these subjects to high school students. Therefore, a scholarly examination of the negative and positive factors that impact the teaching and learning of Woodwork and Carpentry was deemed an important issue for academic research.

This study, that focused on TVET, is considered important because the findings, once they have been appropriately disseminated, may not only be utilised to improve the employability skills of young people, but they may also be incorporated in policies, strategies and classroom practices to equip these young people with enhanced entrepreneurial skills. Even though the study findings may not be generalized across all schools, the identification and documentation of the factors affecting teaching and learning in Woodwork and Carpentry as a subject will provide TVET policy makers, curriculum designers, implementers and administrators with guidelines for the development of a framework for effective planning and policy formulation in order to improve the teaching of this pre-vocational subject in Swaziland. Despite the several studies that have been conducted on factors affecting the teaching of TVET subjects in general (Roberts, 2005; MoET, 1990; MoET, 2010; UNESCO/UNEVOC, 2015), none of these project specifically touched on factors affecting pre-vocational subjects in Swaziland such as Woodwork and Carpentry. This study was meant to bridge the gaps that have been left untouched in this regard. If the recommendations of this study are adopted and implemented, they could be used to design interventions to bridge the gaps that have been a cause for concern in terms of the teaching and learning of Woodwork and Carpentry in Swaziland at high school level.

1.3 Statement of the Problem

Woodwork and Carpentry is an optional subject in one of the strands that can be chosen by students under the technical studies programme field at the sixteen selected high schools in Swaziland. I experienced that pre-vocational teachers of Woodwork and Carpentry, on several occasions during meetings and workshops, expressed various concerns regarding the teaching

and learning of this subject. The concerns included lack of in-service training for pre-vocational subject teachers − especially in terms of the operational requirements of certain machines − a lack of tool boxes and start-up capital for pre-vocational graduates when they leave school in order for them to start their own businesses, and poor maintenance and repair strategies for school equipment and machinery. The Swaziland TVET (2011) policy for skills development corroborates my observations, as it reports that graduates of the pre-vocational programme encounter various challenges that impact their success in the labour market. These challenges include lack of financial support and lack of recognition of the programme by institutions of further education; thus many graduates do not have access to further formal education and training opportunities (2011, p. 24). Pre-vocational education at secondary schools in Swaziland was relevant as a study topic because it is perceived as an important vehicle to employment-based training. The introduction of pre-vocational subjects is considered one of the major reforms of the secondary school curriculum in many developing countries, including Swaziland. In all my experience of teaching Woodwork and Carpentry, I have not encountered any information pertaining to the factors that are associated with the implementation of this subject, particularly with regard to the school under study. It was against this background that this study examined the factors that affect teaching and learning of Woodwork and Carpentry in Form V at the selected secondary school in Swaziland.

1.4 The Research Aim and Objectives

The main aim of this research was examine factors affecting the teaching and learning of Form V students in Woodwork and Carpentry as a pre-vocational subject.

To achieve this aim, the following objectives had to be achieved:

- Conduct an extensive literature review to determine best practices in pre-vocational school education, with particular reference to Woodwork and Carpentry;
- Determine the challenges that pre-vocational students face when studying Woodwork and Carpentry at high school level;
- Determine the challenges that educators face when they teach Woodwork and Carpentry at high school level.

1.5 Research Question

In order to achieve the aim and objectives of this study, it was given direction and impetus by this question:

- What factors affect the teaching and learning of Form V students of Woodwork and Carpentry as a pre-vocational subject?

1.6 Methodology

A qualitative research study was deemed the most suitable to achieve the desired outcomes. This approach allowed the study to explore in-depth accounts of factors affecting the impartation of skills in Woodwork and Carpentry as a pre-vocational subject to Form V, taking cognisance of the context in which it was taught. This study was guided by the doctrine of an interpretive paradigm as Creswell (2014) suggests that qualitative studies requires one to go into the participants' natural setting in order to experience the environment in which they created their reality as a first-hand experience. This paradigm resonated well with the aim and objectives of

the study, as my intention was to understand the factors affecting the teaching and learning of Woodwork and Carpentry as experienced by educators and Form V students in the school under study. The use of ethnography in this study was important because it captured the meaning that teachers and students attached to the teaching and learning of the subject. An ethnographic study approach allowed me to examine such factors as the manner in which the participants behaved with one another in their daily school activities. As an ethnographer, I abided by the advice of Henning (2004), who argue that such researchers must spent time at the research site where the participants are engaged in their daily tasks and conversations and so did I. according to Henning (2004), this is done so that a rich description of the experiences and perspectives of the participants is obtained. In keeping with the principles of ethnography, I used three methods to collect data, that is, observation, interviews, and document analysis. These data gathering methods allowed for the triangulation of the data to ensure that the principles of trustworthiness were adhered to.

1.7 Organisation of the Study

This study is divided into five chapters. Chapter one commences with the introduction to and the background of the study. The rationale for and the importance of the study, the problem statement, research objective and question, and the methodology that was used to execute the study are presented. The chapter is concluded with a synopsis of the organization of the study report and a brief summary.

Chapter Two presents information pertaining to the topic under investigation based on an extensive literature review. The discourse commences with an analysis of the international state of TVET/pre-vocational/vocational education. Various TVET systems, the skills provided by TVET curricula, required TVET teacher competencies, and funding of pre-vocational/vocational education are taken under the loop. This is followed by an overview of education in Swaziland with specific focus on an analysis of policies and regulations related to TVET/pre-vocational education in Swaziland. Literature related to the state of TVET education in Swaziland. Woodwork and Carpentry as a pre-vocational subject in the school curriculum in Swaziland was perused and the findings are discussed. I conclude the review by discussing perspectives on various factors affecting the teaching and learning of pre-vocational subjects in schools. The chapter is concluded with reference to the theories that were employed as the theoretical framework that underpinned the study.

Chapter three describes the research methodology that was employed. It focuses on the research design, the sampling procedures and the compilation of the study sample, the data generation instruments, procedures for generating data, and the data analysis techniques. In addition, ethical considerations and the trustworthiness of the data are discussed.

Chapter four presents the analyses of the data and the findings that were generated by these analyses. The findings suggest that various institutional and macro-policy factors negatively impacted the teaching and learning of Woodwork and Carpentry in the school under study.

Chapter five presents the overview of the study, summary of the research findings as well as the main conclusions and recommendations. The factors that impact Woodwork and Carpentry are outlined and recommendations for eradicating negative factors that impact effective outcomes in the teaching of Woodwork and Carpentry are presented. I also offer some suggested recommendations for further research in the field under investigation.

CHAPTER 2

LITERATURE REVIEW OF PRE-VOCATIONAL EDUCATION IN SWAZILAND

2.1 Introduction

The literature that I reviewed was related to factors affecting the teaching and learning in Woodwork and Carpentry as a pre-vocational subject. I adopted review guidelines as suggested by Galvan (1999), who states that when one is doing a literature review, the literature must be identified, analysed, criticised, synthesised, and documented. The sources that I used for conducting this review comprised primary (empirical) and secondary sources. These sources included research papers, published books, selected journal articles, newspaper publications, and various online search engines that put global findings and evaluations at my fingertips.

In this chapter, I commence with a review of literature on the state of TVET and international practices. The context and state of education in Swaziland is then reviewed. The focus is on the structure of the school TVET system, TVET regulations, state of pre-vocational education and Woodwork and Carpentry as a pre-vocational subject in the school curriculum in Swaziland. The chapter then examines factors that affect the teaching and learning of Woodwork and Carpentry in secondary schools. The last part of this chapter makes reference to the theoretical framework that underpinned the study to illuminate the teaching and learning of pre-vocational subjects in

rural schools from a theoretical perspective. I then conclude with a summary of what I have covered and what to expect in the next chapter.

2.2 The International State of Pre-Vocational/Vocational Education

Globally, the implementation of a TVET curriculum is viewed as the redeemer of unemployment and the best development strategy for all nations (African Union, 2007; World Bank, 2010). In this context, TVET is viewed as competences that are relevant for the world of work, transferability and assurances for the acquisition of skills, decent work opportunities and lifelong learning skills in the world of work (Godwin, 1990; Gwembire & Katsaruware, 2013). Various systems have been adopted by countries internationally for the implementation TVET. I also discuss the skills provided by TVET and pre-vocational education as well as the global perspective on the funding of such programmes. Teachers are key players in the achievement of a successful TVET in any nation, hence their competencies have great impact on the teaching and learning of TVET subjects (Woyo, 2013).

2.2.1 TVET systems

According to Eichhorst, Rodrigues-Planas, Schmidl and Zimmermann (2012) and Arfo (2015), TVET systems worldwide can be classified into three distinct categories, namely the liberal market, a state-regulated bureaucratic system, and a dual system. The provision and implementation of TVET vary according to philosophy, vision and policies of each country (Ibid.).

In liberal market systems, industries volunteer to pay for workers' training and apprenticeships. In this system, government finances the necessary research on occupational, skills' demands, establishment of skills councils, and national qualifications frameworks (Fawcett, Sawi & Allison, 2014; Sellin, 2002). According to Arfo (2014), this system has advantages that include responsiveness to market demands and low cost of training. It is a model that is commonly practised in Great Britain and Australia (Fawcett et al., 2014).

Secondly, in a state-regulated bureaucratic system, TVET is defined, provided and financed by the national education system and is usually characterized by theoretical curricula and on-the-job training for students (Fawcett et al., 2014). This system is common in countries such as France, Italy, Sweden and Finland (Arfo, 2014).

Thirdly, the dual system is a combination of school-based education with firm-based training and informal training (Eichhorst et al., 2012; Arfo, 2014). Germany, Australia, Switzerland, Denmark and Norway are some of the countries that are popularly known to be using this kind of system (Fawcett et al., 2014; CEDFOP, 2010; Eichhorst et al., 2012; Arfo, 2014). The state of TVET and pre-vocational education varies from country to country. Pre-vocational education in the kingdom of Swaziland adheres to the second system, as the curriculum is defined by the government and there is no curriculum industry council. However, this has resulted in inadequate on-the-job training for students (Arfo, 2014; Fawcet et al., 2014).

2.2.2 Skills provided by TVET curricula

A product that is appropriate to the TVET sector is one that has undergone a labour market responsive curriculum with employability (Council, 2014) and transferable skills (Salleh & Liyushiana, 2014) that integrate core and sustainable development skills (ILO, 2015; Majumdar, 2006). According to Salleh and Liyushiana (2014), labour market responsive skills are those skills that include self-management, planning and organizing, communication, working with others, problem solving, initiative and enterprise, applying numeracy/design/technology skills, and learning to learn. Mureithi (n. d., p. 4) reports that most African economies are facing a decline in job creation in the formal sector, while the informal sector is increasingly the source of employment. According to Mureithi (n. d.) and UNESCO – UNEVOC (2014), this situation can only be curbed by offering TVET skills that are directed towards rural development. They further assert that if TVET is to be improved, it is necessary to understand the teaching and learning methods that render it effective. Mureithi (n. d.) suggests that the acquisition of skills in TVET that will solve situational problems will help in curbing rural to urban migration. Moreover, skills development for self-employment will help to control and address unemployment challenges. Indeed, TVET is about providing practical skills and technical expertise in terms of particular chosen vocational tracks. In summary, a TVET curriculum should engender skills that can meet labour market needs and that can also be transferable. Apart from practical skills, a TVET curriculum should also impart soft (core) skills (Salleh & Liyushiana, 2014).

2.2.3 TVET teacher competences

In the part above, the skills that should be provided by a TVET curriculum have been stated. This led to a question of what is a curriculum? A curriculum according to Ayonmike (2014) is a composite that brings together the learner, the teacher, teaching and learning methodologies, anticipated and unanticipated experiences, and the outputs and outcomes that are possible within a learning institution In consideration of this definition, a TVET curriculum should be implemented by competent teachers who use appropriate instructional subject pedagogy in order to produce a product (student) that is appropriately qualified to enter the TVET sector. The teacher who teaches a subject in a pre-vocational curriculum is expected to be appropriately qualified and capacitated if he/she wishes to produce students that possess the skills to obtain desirable jobs or who wish to change jobs (Payton, 2017). As previously highlighted, there is need to produce TVET teachers that are capable of delivering a labour market responsive curriculum (Salleh & Liyushiana, 2014). Technological advances, economic and labour changes, and demographic and social changes are other key drivers of the need to have TVET teachers who are exposed to the world of work.

The literature revealed several gaps in the delivery of quality TVET curricula. According to the African Union (2007), curriculum delivery in this field depends on the competence level of TVET teachers as a labour market responsive curriculum demands teachers with relevant TVET expertise (Gamble 2003). Concurring with this assertion, CEDEFOP (1990) posits that TVET teacher competence tends to be affected by factors such as being far from the work place and also not being conversant with the latest industrial technology. Internationally, Galvan, Field,

Kuczera, Musset and Windisch (2015), who conducted OECD reviews on vocational education and training, found that, although countries such as Canada, United States and United Kingdom had comprehensive high school systems, their TVET competences were limited when compared to countries such as Austria, Denmark, Germany, Switzerland and Netherlands, who had distinct vocational tracks (2015). In Germany for example, the TVET education system provides a dual system whereby training takes place in the employment sector and training institutions (Bozoyan & Lehnfeld, 2014), which enables students to acquire job-related competences.

The international practice of training and recruiting TVET teachers depends on each country's teacher education policies (European Union, 2015). However, according to the European Union (2015), there is evidence that countries show their intention to conform to international standards and cooperation in achieving teacher education aims. For example, Tanzania and South Africa have developed national qualifications frameworks that create credit accumulation and transfer (2015). It is these frameworks that form the basis for all curriculum materials for teaching and learning. The African Union (2007) emphasizes the need to provide relevant industrial experience for TVET teachers. The Union further asserts that qualified teachers with industry-based experience must be motivated to offer part-time teaching in TVET schools. This motivation must augmented with incentives that attract instructors from industry where they get better salaries.

In a nutshell, TVET teachers should be armed with skills such as the ability to deliver a labour responsive curriculum, being conversant with the latest industrial technologies, and possess relevant industrial experience.

2.2.4 Funding pre-vocational/vocational education

Countries use different strategies to finance TVET education that include public financing, enterprise financing, public private partnerships (PPP), and donor assistance (UNESCO, 1996). Funding for pre-vocational/vocational education has been cited as a challenge in many countries, especially in countries in Africa (UNESCO, 1996; AU, 2007; Kingombe, 2012). Lack of funding results in the lack of other resources that are necessary for the implementation of TVET. According to Kingombe (2012), lack of funding is a hindrance to meeting the objectives of self-employment and productivity for the informal sector. Public financing is the practice of funding TVET through funds from revenue collection. It is a practice which assumes that the ultimate responsibility for development lies with the state. Countries that practise this type of TVET financing include Pakistan, India and Thailand (UNESCO, 1996) as well as Mali and Gabon (Kingombe, 2012).

The enterprise model of TVET financing requires that a company conducts its own labour force TVET directly and bears the costs of training. This type of TVET financing model includes a single employer financing type and is commonly practised in countries such as Japan and Korea (UNESCO, 1996). It is a system whereby employers prefer to recruit school leavers with general education qualifications and then provide them with continuous training within a company. The

use of a payroll tax is another system that falls under the enterprise model. In this system governments levy a special tax on enterprises (business and industry) for offering compulsory technical training to apprentices. It is practised in different forms by countries such as Brazil, Colombia, Peru, Venezuela, the United Kingdom, and France (UNESCO, 1996). Tax rebates and credit schemes are also another form of the enterprise model where a portion of the payroll tax is returned to firms as a subsidy for offering training. It is practised in Singapore, Tunisia, Nigeria and Zimbabwe in different forms (UNESCO, 1996). TVET financing in Nigeria is also a shared responsibility amongst the public, private partnerships (PPP) and donor agencies (Kingombe, 2012).

The third form of TVET financing involves the public and the private sectors that provide TVET training through fees that are paid by individual participants or that are procured from fellowships, grants and loans that are provided by firms. All these are ways of supplementing tax rebates (UNESCO, 1996). Other forms of practicing PPP engagement include the sale of training and non-training services, co-financing agreements, using the German dual system, production for profit, using the apprenticeship approach, paid educational leave, and involvement of non-governmental and voluntary organizations (UNESCO, 1996).

The fourth and final method of TVET financing is where international donors are involved in setting up infrastructure, providing facilities, training staff, and implementing instructional systems (UNESCO, 1996). For example, private institutions in Swaziland finance their own TVET training systems while receiving no benefits from government or getting any government

support in the form of teachers' salaries (MoET, 2010). Thus the government of Swaziland funds its own TVET institutions; however, this does not occur at a satisfactory level as all funds are centrally controlled.

2.3 Overview of Education in Swaziland

According to the Education and Training Sector Policy of 2011 (MoET, 2011), the main education goal of in Swaziland is to provide relevant, quality and affordable education and training opportunities for the entire populace of the Swazi people in order to develop all positive aspects of life for self-reliance, social and economic development, and global competitiveness (MoET, 2011, p. 10). Education in Swaziland is classified as formal general education and training (GET) adult and non-formal education and life-long learning, and informal education and training. This study focused on the formal part of the general education and training band.

Formal general education and training (GET) in Swaziland as explained by the World Bank (2010) report respectively comprises seven, three, and two years of primary, junior secondary and senior secondary education. This is in line with Swaziland's adoption of a 10-year basic education programme as part of the SADC protocol on education. Children in Swaziland begin their primary education at 6 years of age and this phase lasts for seven years until they sit for the Swaziland Primary Certificate at the age of 13 or 14 years to mark the end of their primary school education. Secondary education begins at the age of 13 years and lasts for up to five years, comprising a first cycle of three years and a second one of two years. The general education and training system in Swaziland can also be categorized into levels. These levels are:

Early Child-hood, Care and Development; Basic Education; Secondary Education; TVET; and Tertiary and Higher Education, and Non-Formal and Continuing Education. Figure 2.1 below shows how the education sub-sectors are linked to the education system:

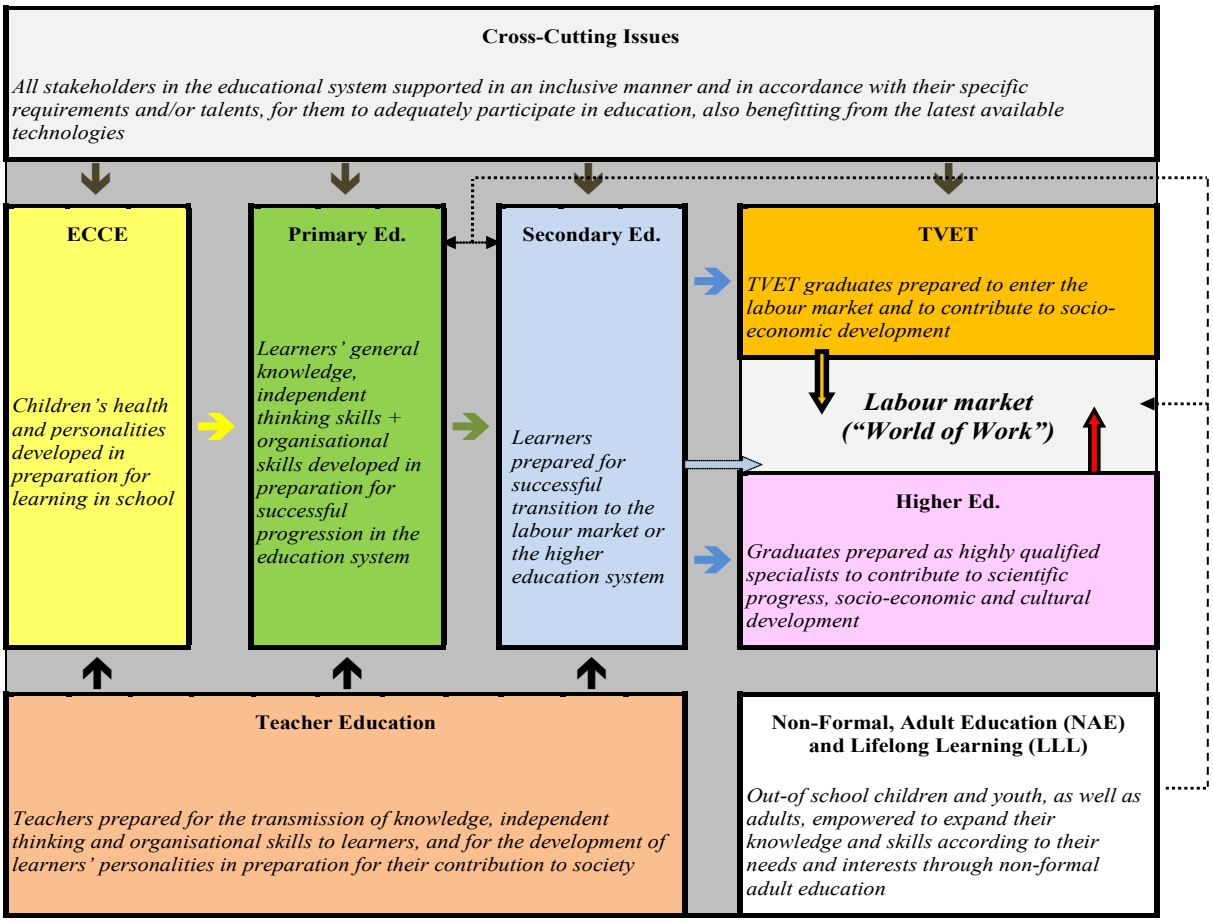

Figure 2.1: Structure of the education system in Swaziland (Source: Ministry of Education and Training, 2011)

The Technical and Vocational Education and Training band is generally offered by technical colleges and vocational skills centres. TVET at school level is also offered in the form of pre-vocational education. The main objectives of the latter are to produce school leavers who can be self-employed, are employable, and can further their education. This framework was informed

by the general view of offering TVET as an answer to unemployment and the development of all citizens (MoET, 2010; 2017). In Swaziland, Woodwork and Carpentry is offered as a subject in the pre-vocational education programme.

2.3.1 TVET Regulations in Swaziland

The TVET regulation in Swaziland has not been a smooth one for many years as noted by the World Bank (2010). According to this World Bank, Swaziland realised that it lacked a national policy that would guide the TVET system in order to avoid relying on a number of documents that date as far back as the 1980s and that contain some policy elements on TVET. Swaziland then developed a national TVET policy in 2010.

However, regardless of the fact that Swaziland has a TVET policy, there is no coherent legislative framework has been put in place in the country. Given the lack of a coherent TVET system, the quality of TVET is difficult to ensure as there are no national TVET curricula, no operational national occupational standards, and no defined skills requirements for specific occupations. Consequently, this has resulted in challenges in comparing the quality of TVET institutions and programmes as the programmes offered by the institutions tend to vary in duration, content, assessment and certification.

The literature review revealed that, as a result of the gaps that were identified by the World Bank (2010), the country is reforming the TVET sector as reported by UNESCO-UNEVOC (2015).

These reforms include the Vocational Act that has been drafted and is awaiting approval by the relevant authorities. According to Khumalo (2017), the Higher Education Act (2013) is in place, but what is outstanding is the establishment of a Swaziland Higher Education Council that should regulate the establishment and registration of tertiary institutions (Khumalo, 2017).

2.3.2 The state of pre-vocational education in Swaziland

Swaziland, although the smallest country on mainland Africa after the Gambia, has one of the continent's highest per capita income levels and this has ranked the country as a 'middle income' economy (Mathews & Garztecki, 2001). In an endeavour to respond to the public's concern about the relevance and quality of the students that were produced by the school system, a pre-vocational education programme was introduced in 16 selected high schools. This initiative was in response to public outcry about the inefficient education system (MoET, 1985 & 1990).

The pre-vocational programme was designed to offer six subjects, namely Agriculture, Home Economics, Technical Studies, Business Studies, Entrepreneurship, and Information Technology. Initially, tools, equipment and consumable materials that would be used in the delivery of the curriculum were purchased and supplied to these schools. A total of 72 practicing teachers were recruited and in-serviced to deliver the content of this curriculum (MoET, 1998).

Currently, a changing education context demands that practicing pre-vocational teachers should also change their work roles in line with 21st century drivers of change such as the digital world

and globalization. There are also external drivers that impact their vocational role such as government policies, funding models and market competition. Increasing expectations (or responsiveness) and emphasis on the currency of teachers' knowledge are also some examples of internal change drivers (UNESCO, 2006; Harrex, 2011). However, pre-vocational graduates' aspiration of starting their own small businesses in Swaziland has sadly remained a dream due to the lack of access to seed money (i.e., capital). It was in this context that I felt compelled to conduct this study to determine the factors that affect the teaching and learning of Form V students who took Woodwork and Carpentry as a pre-vocational subject at a selected rural high school.

Financing TVET worldwide has always been a challenge in many countries, especially in developing contexts (UNESCO, 1996; Kingombe, 2012). In Swaziland, the financing of education comes from two sources: the contribution by private institutions (parents, private organizations, and a donor community) and the public contribution by the government (UNICEF, 2015). The World Bank (2010) argues that TVET institutions in Swaziland heavily dependent on the state for their financial needs despite their potential to raise funds. The World Bank also states that the lack of funds in government owned TVET institutions often results in furniture and equipment shortages which, in turn, results in student protests. A recent report by the World Bank (2014) also affirms that TVET institutions in Swaziland are financed through income from tuition fees and government subsidies for trainer salaries.

In essence, the lack of funding for TVET provision in Swaziland has contributed to current issues that affect the status of the TVET system in this country. The challenges that are experienced include: a TVET system that annually serves only 6 881 trainees while approximately 14 000 individuals' needs remain unmet annually; a lack of an information system that provides guidance to providers, students and employers; a lack of a sustainable system due to insufficient funding that is between 2-3% of the total of Business and Industry funding for skills development in Swaziland; the need for alignment to labour market needs; a lack of a national quality assurance framework; various inefficiencies such as great variations in institutional size and trainee-trainer ratios among TVET institutions; and a lack of a quality assurance system (World Bank, 2014).

2.4 Woodwork and Carpentry as a Pre-Vocational Subject in the School Curriculum in Swaziland

It is important at this juncture to explain the importance of the Woodwork and Carpentry subject in the pre-vocational education programme in Swaziland. This programme was introduced into the school system in Swaziland by the MoET in 1998 in response to a number of issues and challenges that had been identified as being the most important aspect for future school's outcome. Therefore, this programme was designed to deal with a number of issues and challenges in order to bring about the needed changes in the school system. According to the MoET (1999), the major issues and challenges that were to be addressed by the pre-vocational programme included the fact that the current school system was inefficient, the drop-out and repeat rates for primary and secondary school students were exceptionally high, and not ready

for the labour market needs. Moreover, premature school leaving affected the level of the knowledge and skills acquired by students both quantitatively and qualitatively. The majority of students did not reach an educational level where they had acquired transferable skills for the labour market. In fact, only one in four Swazis were able to find employment in the formal sector and high school products that did lacked basic skills for entry into further education programmes were lacking in skills that are needed by Business and Industry. Hence, there was a need to train high school students for entrepreneurship skills such as starting their own businesses in carpentry and woodwork.

The solution to curb the rate of premature school leavers was to provide more practical skills training at secondary school level so that a greater number of students would be prepared for employment in either the formal or informal labour sectors. It was envisaged that this approach would reduce costs to the system and increase the overall efficiency and effectiveness of the education system. Swaziland's population growth rate, which was estimated at 3.7% at the time, was one of the highest in the world and this was causing youth unemployment challenges. Therefore, preparing high school leavers to enter the workforce directly or to prepare them for self-employment became a matter of urgency.

The carpentry component of woodwork skills was first taught in Swaziland in 1946 at the then Swaziland Training Institute, now known as the Swaziland College of Technology. This was in response to the need to provide skilled labour for employment, mainly for young Swazi allied forces who had just returned from serving in World War II (Roberts, 2005). The teaching and

learning of the then Woodwork and Carpentry subjects at school level during the missionary era could not be properly traced in Swaziland as Booth (2001) points out that, although the missionaries wanted to introduce practical subjects, they were more concerned with their religious agenda. On the other hand, Roberts (2005) states that, prior to the year 1946, there was no vocational education in Swaziland. However, according to Booth, the Phelps Stokes report strongly recommended the introduction of practical subjects for the indigenous people and this was in their best interest in most cases.

Woodwork as a subject in the school system in Swaziland has always been taught as an optional subject at secondary school level soon after independence in 1968. This subject was taught under the Technical Studies subject area that comprised Woodwork, Metalwork and Technical Drawing. Today this subject forms one component that includes plastics and metals studies of what is called 'resistant materials' under the Design and Technology group of subjects. This programme, which was inherited from Cambridge in the United Kingdom, continued to have no impact on addressing the needs of school leavers and equipping them with some skills for employment or self-employment. Therefore, when the pre-vocational education programme was introduced as a panacea for meeting the goals of the school TVET, the Woodwork curriculum content had to be re-enforced in order to incorporate an employment aspect, whether for self-employment or wage employment. The name of this subject was then changed from 'Woodwork' to 'Woodwork and Carpentry'. This title is only applicable to the pre-vocational programme that is offered in the sixteen pre-vocational schools referred to earlier. According to the Swaziland National Curriculum Centre (1999), students opting for the pre-vocational programme do a total of six subjects; that is, they choose one subject among Agriculture, Home Economics, Technical

and Business; plus two core subjects namely Entrepreneurship and Information Technology; plus four academic core subjects namely Mathematics, Science, English Language and SiSwati.

Students who select Woodwork and Carpentry gain important competencies that are needed by employers in the formal wage sector or for the employment of staff. Employability skills are those skills that are viewed by employers as important attributes for employees (MoET, 1999). These competencies include cognitive, psychomotor, affective, initiative, and problem solving skills. Apart from using these skills for employment or self-employment, career prospects in this subject include using these skills when pursuing further technical training in institutions like first write out then acronym (SCOT) and write out (VOCTIM), where they could pursue Diplomas in Civil Engineering and Building Studies and the attainment of a Vocational Instructor Diploma or a Secondary Diploma in Design and Technology.

2.5 Factors that Affect the Teaching - Learning of Pre-Vocational Subjects

Various factors impact the teaching and learning of vocational subjects at school level in general. These factors include misconceptions about pre-vocational education; lack of instructional materials and facilities; lack of suitably qualified teachers; limited funding; lack of industrial attachment (Ramdass & Kruger, 2005, Adedeji, Okemakinde, & Ssempebwa, 2011; Kiadese, 2011; Gwembire & Katsaruware, 2013).

The literature also highlights misconceptions about pre-vocational education among parents, students and even policy makers as they tend to regard pre-vocational subjects as suitable for

those who lack the intellectual capacity to continue with the academic track (Arfo, 2015; Dube, 2014). Misconceptions such as believing that TVET subjects are meant for the less academically inclined and those with learning disabilities have also been witnessed by UNESCO – UNEVOC (2013). This perception may have been influenced by the belief that, in the South African context, TVET subjects are reserved for students with physical disabilities (Pillay, 2013). In addition, Afeti (2007) and Kehoe (2007) state that vocational education and training has been viewed as a career path for the academically less gifted students. This view is supported by Pillay, who states that it is in contrast with the view of the African Union (2007) that argues that parents and guardians should stop thinking that TVET is for those who are not passing the academic subjects. This view is in line with an argument by Kathure and Mbijjiwe (2014), who assert that TVET enjoys low prestige in the eyes of the general public and parents as they consider it to be an option for students who perform poorly in the general education track.

It is inarguable that pre-vocational subjects will continue to be clouded by misconceptions unless a level of common understanding is reached amongst stakeholders. Misozi, Edziwa, Jumo and Chakamba (2013) and Mapolisa and Tshabalala (2013) argue that society has a negative attitude towards the teaching and learning of practical subjects such as Woodwork and Carpentry, to the extent that they use derogatory language when referring to these subjects. Conversely, the African Union has a clear conception of the importance of TVET to ease the burden of youth unemployment that is affecting all young people (Tripney & Humbrodos, 2013; Kuiper, 2017).

The policy that introduced the pre-vocational education programme in Swaziland was formulated in light of the needs of the Swazi people as outlined in MoET's (1985; 1990) policy documents. Various questions are raised concerning these policy documents, such as: *Is this policy well understood by pre-vocational teachers, students, and administrators who are supposed to*

implement it?; and: *How conducive is the environment under which this policy must be implemented?*

Poor resources, equipment and facilities are also mentioned as factors that negatively affect the implementation of these subjects. Literature also suggests that the implementation of the pre-vocational programme is affected by poor school infrastructure and poorly equipped workshops and laboratories (see for example, Kiadese, 2011; Makgato, 2013). This concern was is noted by Classens (2008) who states that lack of funding from government to repair, upgrade or replace broken or obsolete equipment is a hindrance to the effective deliverance of the program to the students. Similar factors were evident in the findings of a study conducted by Gwembire and Katsaruware (2013), who argue that the unavailability of relevant teaching material and limited knowledge of their usage directly affect teaching and learning activities in pre-vocational subjects. Kanyongo (2005) argues that the availability of resources does not necessarily mean maximizing the utilisation of these resources, but resource utilisation can be improved through proper planning of what is to be taught (curriculum) and how it should be taught (teaching pedagogy). According to Makarfi (2014), teachers' pedagogical content should include knowledge on how to use available instructional resources.

The employment and utilisation of poorly qualified teachers are identified in the literature as factors that affect the teaching and learning of pre-vocational subjects (Huang, 2006) and that this is a matter of concern. Bukit (2012) states that, for a TVET programme to be of quality, the teachers/trainers must be appropriately qualified. This argument was prompted by the fact that

untrained and inexperienced teachers with no vocational qualifications had been employed, and this fact was coupled with a lack of relevant teaching resources, overloaded time-tables, negative attitudes of principals, and a lack of industrial attachment. All these factors negatively affected the performance of students (Choi, Misko, Kang & Phan, 2001; Barry, 2010). Earlier, Classens (2008) observed that there was no plan in place to train new teachers for pre-vocational education in Swaziland and argued that the provision of professional development training for current teachers would assure that education of a high quality would be offered to students.

The literature also identifies failure on the part of the government to provide financial resources in a timely manner to meaningfully impact teaching and learning (Puyate, 2008). Kingombe (2012) also points out that a lack of funding results in a lack of other resources that are necessary for the implementation of TVET, and further argues that it is a hindrance to the effective implementation of pre-vocational programmes in schools.

The lack of initiatives to attach students and teachers to industry seems to be another factor that negatively impacts the teaching and learning of Woodwork and Carpentry. Barnett and Ryan (2005) argue that the practicalities of implementing vocational learning in schools and worksites remain a major obstacle, yet this barrier to effective teaching and learning is poorly appreciated by policy-makers and system-level managers. They conclude that implementation challenges are associated with failure to access industry-experienced teachers and industrial equivalent equipment and facilities; limited or no access to a sufficient number of worksites for work placement; and a lack of timetabling work experience for students. A lack of fees is also

identified as a key barrier to student development. They also argue that successful programs require dedicated coordinators, who are lacking in the system.

In summary, the literature revealed various factors that affect the teaching and learning of pre-vocational subjects such as a general negative and derogatory attitude towards practical subjects, poorly qualified teachers who have a lack of pedagogical subject content know-how; inadequate teaching and learning resources; and a lack of infrastructure management skills among teachers (Puyate, 2008; Mapolisa & Tshabalala, 2013). Some factors were shown to be beyond a school's control such as a lack of financial support by the government to fund TVET programmes and no policy that encourages TVET schools to attach to relevant industrial enterprises (Woyo, 2013).

2.6 Theoretical Framework

This study was guided by Mitzel's (1969) theory that illuminates classroom practices associated with the teaching and learning of pre-vocational subjects. According to Mitzel (1969), teaching must take into account three variables: teacher and students, their interactions, and the product of those interactions (Warner, Arnold, Jones & Myers, 2006). Because my study was concerned with the factors that affect the teaching and learning of Woodwork and Carpentry, this was a most appropriate model. Similar studies that also used this model include: Ikeoji, Awukubike and Disi (2007); Msigala (2010); Moriba and Edwards (2013); Waithira (2013); and King'aru (2014).

The model was adopted and expanded by Dunkin and Biddle (1974), who summarised it into four thematic areas: presage, context, process, and product variables. The presage thematic area can include the teacher's personality, preparedness, general characteristics, background, competencies and inadequacies (Smith et al., 2004). The context thematic area addresses the student characteristics and the classroom environment, whereas the process thematic area shows the interaction or interrelationship between the teacher and the student. The product thematic area is associated with the effects of instruction (Ikeoji et al., 2007). Mitzel's model recognizes the presage thematic area as fundamental in understanding classroom problems and challenges as it is underpinned by the experiences of the teacher that tend to affect the classroom environment (i.e., the context), the interaction between the teacher and the students (process), and the effects of the instruction (product). Figure 2.2 below illustrates these thematic areas:

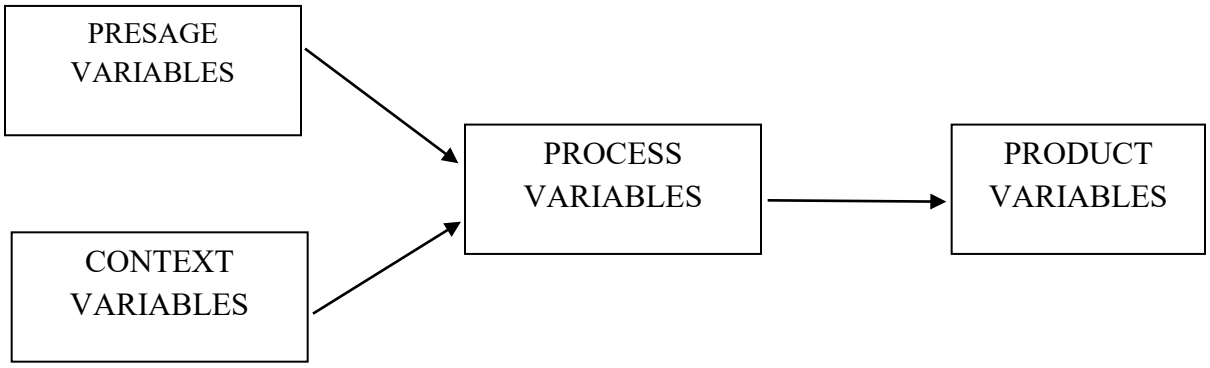

Figure 2.2: Model for studying factors that affect teaching and learning (Adapted from Ikeoji, Awukubike & Disi, 2007)

Presage variables such as teacher formative and training experiences as well as teacher attributes are concerned with the characteristics of teachers that may influence the teaching process (Warner, Arnold, Jones & Meyers, 2006). Context variables are concerned with the conditions to which the teachers must adjust and include the characteristics of the environment about which teachers, school administrators and teacher-educators can do very little. Process variables include the actual activities that teachers and students engage in while teaching is taking place in the classroom. Product variables focus on the outcomes of teaching; specifically on the changes that occur in the students (Warner et al., 2006).

This study was underpinned by the concept of presage variables as posited by Mitzel's model because it aimed to explore the factors that affect the teaching and learning of Woodwork and Carpentry as a school subject. It was therefore necessary to identify the variables associated with the teaching and learning of Woodwork and Carpentry. Thus, by gaining a better understanding of these variables and their interactions, it was assumed that recommendations could be made to improve the teaching and learning processes pertaining to this subject. This assumption was based on the findings of studies such as those of Ikeoji et al., (2007); Msigala (2010); Waithira (2013), and King'aru (2014), who all suggest that Mitzel's model recognizes presage variables as fundamental in understanding classroom problems and challenges that are impacted by the experiences of the teacher. This means that the experiences of the classroom teacher tend to affect the classroom environment (the context), the nature of the interaction between the teacher and the students (the process), and the effects of the instruction (the product) (Ikeoji et al., 2007).

2.7 Summary

This chapter presented a review of literature related to factors that affect the teaching and learning of pre-vocational/vocational subjects at secondary schools in general. It was revealed that various institutional and macro-policy related factors affect the teaching and learning of pre-vocational subjects in particular. It was also uncovered that some strategies may be useful in improving the teaching and learning of these subjects. While reviewing the literature, I exposed some gaps in this field that must be attended to, such as a lack of a coherent legislative framework to guide the operations of TVET in Swaziland, and the lack of a formalized structure for business and industry participation in all types of TVET operations in Swaziland. This study sought to fill these gaps by addressing the challenges facing the teaching of Woodwork and Carpentry in secondary schools.

CHAPTER 3

RESEARCH METHODS AND APPROACH TO THE STUDY

3.1 Introduction

In Chapter two I presented my findings of the reviewed literature related to the factors that affect the teaching and learning of Woodwork and Carpentry in schools. This review provided me with a summary of the major studies that were conducted in this field as advised by Creswell (2014). It was important to review literature related to the study topic because the findings that were uncovered informed me of suitable research methods and an appropriate paradigm for my study. This chapter will highlight the research methodology and approach that were used in the execution of this project. Chapter three is thus an important chapter because it elucidates the working plan that was employed for this research (Creswell, 2014). The research paradigm, the ethnographic case study approach, the research method, the sample and sampling process, the data collection instruments, data analysis, the research site, the profile of the participants, the data sources and collection procedures, trustworthiness, ethical considerations, and the limitations of the study are presented and discussed.

3.2 Research Paradigm

A paradigm is a set of assumptions about the nature of what is being studied, how it can be understood, and what the nature of inquiry is (Hammersley, 2013). A research paradigm guides the process of inquiry and forms the basis for the practice of science by directing the research

towards appropriate research methods and methodologies depending on the nature of the phenomenon being studied (Henning, 2004). This study was located within the interpretive paradigm. Using and interpretive paradigm, researchers study phenomena in their natural setting. The phenomenon that was studied was the factors that affect the teaching and learning of Woodwork and Carpentry as a school subject, while the natural setting was the school where the teaching and learning of Woodwork and Carpentry occurred. Thus an attempt was made to make sense of, or to interpret, the phenomenon under study in terms of the meanings people brought to it through a naturalistic perspective and by interpretatively understanding human experiences (Phothongsunan, 2010). This implies that the interpretive paradigm was employed to understand the meaning or reasons behind the behaviours and attitudes of role-players involved in the teaching and learning of Carpentry and Woodwork as a pre-vocational subject at school level.

The teaching and learning of Woodwork and Carpentry as a pre-vocational subject was thus explored from the perspective of the meaning attached to their experiences as presented and narrated by the study participants and the observations of the researcher. Cohen, Manion and Morrison (2011) reiterate that the interpretive paradigm enables one to comprehend the personal experiences of people. The ontological belief in an interpretive paradigm is that those who are involved in the research process construct knowledge socially and individually and that they are thus informed by multiple realities (Henning, Van Rensburg & Smit, 2004). This paradigm was relevant to this study as it allowed the participants to reveal what factors affected the teaching and learning of the subject in light of their experiences that were related to the school and the education system. Moreover, the interpretive approach allowed the researcher to avoid bias and thus to be objective when his professional judgments and perspectives had to be considered in

the interpretation of the data. The paradigm resonated well with this study as my intention was to find meaning within relevant social interactions.

3.3 Research Approach

As was stated earlier, my intention was to understand the factors that affected the teaching and learning of Woodwork and Carpentry as a pre-vocational subject in a rural school. To understand these factors, a qualitative research approach was deemed the most appropriate. Qualitative research is described by Banu (2011, p. 31) as "an investigation that emphasizes quality rather than quantity". According to Sethusha (2012), in qualitative research the aim is to discover and understand how people construct meaning from the way in which they perceive their lives.

Using this approach, I had to gather data in a naturalistic setting as my study was situated within the interpretive paradigm, which relied on constructionist thinking (Hammersley, 2013). This allowed me to closely examine the different meanings and interpretations the participants attached to the topic under study and to gain their in-depth insight into teaching and learning practices associated with Woodwork and Carpentry in their school. This approach thus allowed me to closely observe the practices and experiences of the research participants and to develop in-depth accounts of these and the contexts in which they operated. This approach was particularly applicable in studying the rural context of the school with its various complexities involving social, economic and political positions (Cohen et al., 2011).

Qualitative research is premised on the notion that research is not only about observing and measuring, but also about collecting data from different sources and making sense of those data (Creswell, 2014). It further supports the notion that making sense of data could only be possible if participants' thoughts and feelings, as well as the significance of the context, are taken into consideration through methods of data collection and data analysis. As such, this approach was useful in this study as I tried to understand how students and teachers gave meaning to and expressed their understanding of the factors that affected the teaching and learning of Woodwork and Carpentry as a pre-vocational subject, and to illuminate the strategies that were used to mitigate such factors in the rural context where they worked and studied.

3.4 Ethnographic Case Study Design

A research design is a plan, structure and strategy of investigation proposed for obtaining answers to research questions (Achieng, 2010). This involves the researcher's plan of action that will give direction during the research, indicate who or what is involved, and where and when the study will take place (Du Plooy, 2009). It also connects data collection and analysis events to the research questions that are being addressed (Thaanyane, 2010). Informed by the interpretive paradigm and the qualitative research approach, this study utilised an ethnographic case study design. An ethnographic design is defined by Creswell (2012) as "a qualitative research procedure for describing, analysing and interpreting a culture-sharing group's shared patterns of behaviour, beliefs, and language that develop over time" (p. 242). I chose an ethnographic research design because I wanted to gain knowledge and understanding of a particular culture-sharing group. The case study research design thus elucidated in-depth understanding of the

phenomenon within the research setting that was bound by clear boundaries. The study may be defined as ethnographic because it looked at people's practices and interactions in their everyday context. It was thus a case study because it was an intensive, holistic description and analysis of the factors affecting teaching and learning of Woodwork and Carpentry.

This kind of design was the most appropriate one for my study because it enabled me to gather data in a realistic or naturalistic setting where the participants acted naturally and where I could focus on both verbal and non-verbal behaviours (Sangasubana, 2011). The ethnographic case study design was also useful because the study's main concern was to understand what was happening in a specific context (Neale, Thapa & Boyce, 2006). Although not limited to exploratory studies, the case study design was a good strategy for this exploratory research (Yin, 2009). It enabled me to explore the real-life factors that affected the teaching and learning of Woodwork and Carpentry as a pre-vocational subject in a rural setting at the high school under study.

In brief, the ethnographic process allowed me to get close to the students and teachers and to observe what was happening in the school on an ongoing basis within a certain period of time. It allowed me to give meaning to and understand the participants' social meanings and activities in the rural setting. I was able to get close to the participants, collect in-depth data within a natural setting and give thick descriptions after my visit (Sangasubana, 2011). To do this, I employed a relatively open-ended approach in order to investigate how these people viewed the situations they faced, how they regarded one another, and also how they saw themselves in this context

(Hammersley & Atkinson, 2007). Therefore, the ethnographic approach had the benefit of allowing me to combine data gathered through semi-structured interviews, observations and document analysis and this resulted in high research trustworthiness.

3.5 Sampling

I used a qualitative approach that followed an ethnographic single case. As a pre-vocational curriculum designer, I used my knowledge of these pre-vocational schools to purposively choose one rural high school from a population of sixteen high schools. I chose this school because it was strategically placed and it would be easy for me to access it as it was close to my place of work. The reason for using purposive sampling was that, according to Cohen et al. (2011), this method of sampling allows qualitative researchers to hand-pick sites and samples that satisfy their judgments.

3.5.1 The Sample and sampling procedures

According to Miles and Huberman (1994, cited in Curtis, Gesler, Smith & Washburn, 2000), a sample should be based on the conceptual framework and the research questions addressed by the research in order to generate rich information on the type of phenomenon that is studied. The sample consisted of four male teachers and all eleven male Form V students who were studying Woodwork and Carpentry in the selected school. The teachers consisted of one subject teacher, the Principal, the Deputy Principal and one Head of Department under whose guidance Woodwork and Carpentry was taught. Therefore, four teachers and eleven students were

voluntarily involved in the study. The inclusion of the Deputy Principal was due to his teaching responsibilities in addition to his administrative tasks. The Principal was also considered a teacher because he would interact with both the teachers and students. He met the teachers on a monthly basis to discuss their successes and challenges as they implemented the pre-vocational curriculum. The Principal also met with the students on a weekly basis to encourage and supervise the process of teaching and learning and to discuss the challenges the students and teachers had with regards to the subject content and the practical projects. It was also his mandate to encourage students to select this subject as one of the subjects in their curriculum. Moreover, the Mitzel model that I used to analyze the data prompted the involvement of these teachers because they were all stakeholders in the presage, context and process stages where the students were shaped and molded.

Because the study was an ethnographic one that was located in a rural school, I had to be careful how I selected my research site. This required a subjective selection of a school with relevant participants and one that would be near to my worksite in order to reduce travelling costs as I was a self-sponsored researcher. One school was thus purposively sampled from a population of sixteen schools. Purposive sampling is a form of non-probability sampling according to which respondents are selected based on the particular knowledge they already hold about a certain population (Cresswell, 2014). An attempt was thus made to ensure that "certain types of individuals or persons displaying certain attributes were included in the study" (Berg, 1989, p. 179). This method allowed me to obtain rich information about the factors affecting the teaching phenomenon under study by means of an ethnographic single case study. I therefore purposively

selected Nkanku High School[1] with students and teachers that would be able to provide the required data that would answer the research questions.

This school was selected as it was the only school in the vicinity of my place of work that offered this subject. The school is located in a rural area and was easily accessible which minimized travelling costs while maximizing my prolonged and intensive study of factors affecting the teaching and learning of Woodwork and Carpentry. When the data were collected, this school had a total of 45 male and female teachers and about 720 male and female students. The study purposively used four male teachers and eleven male students who were the only students who had selected Woodwork and Carpentry as a subject. Thus, in total, fifteen participants volunteered to participate in the study.

In practice, the teachers played different roles with regard to the teaching and learning of this subject as they comprised one subject teacher, one Head of Department (HoD), one Deputy Principal, and one Principal. All were involved in the teaching of the Woodwork and Carpentry subject in one way or another. Their experiences in this activity were crucial in my efforts to obtain relevant data for this study. The head of the pre-vocational department, the Deputy Principal and the Principal told me exactly how the teaching and learning processes of this subject were addressed from an administrative point of view, while the subject teacher gave first-hand information on classroom practices.

[1] This is a pseudonym and not a real name

The reason I involved students in my study was that the key focus was based on factors that positively or negatively affected the teaching and learning of Woodwork and Carpentry as a subject. They were the ones who were primarily exposed to both teaching and learning practices and therefore they could tell their stories and explain exactly how they felt and how they were being taught. Also, informed by the conceptual framework and the Mitzel (1969) model of teaching, the students were involved in the process as product variables. In the same manner, Kural (2006) studied students' perceptions of Physics and Mathematics teachers' effectiveness.

3.7 Research Site and Profile of Participants

Because this was an ethnographic study, a clear description of the school and its rural locale is crucial as it provides a foundation for understanding the findings of this study. Information about the context of the research site and the profile of the participants was necessary as a backdrop to understanding the nature of the factors that were deemed to influence the teaching and learning of Woodwork and Carpentry in this school. The section below presents the context of the research site and the profile of the participants.

3.7.1 Context of the research site

Nkanku high school was contextually located in terms of its geographical position, economic status, educational levels, historical background, current physical infrastructure, number of teachers and students, subjects offered, and its general performance. The school started as a

community school with the first group of students admitted in 1982. The school belonged to a number of chiefdoms that formed the *Inkhundla* area, hence it was centrally located to discourage it from belonging to a particular chiefdom. It was built by the people themselves with some government assistance. Feeder schools[2] are the surrounding primary schools, which were about six at the time. The first cohort of students completed their junior secondary phase here in 1984 and had to proceed with their senior secondary phase in other schools away from this area. The only practical subject that was taught in this school was Agriculture, which was introduced in 1985. The school remained at junior secondary level until 1989 when the first Form IV students were enrolled to introduce the senior secondary level. Other practical subjects such as Home Economics and Business Studies were introduced in 2002 as pre-vocational subjects. The school is situated in the Manzini region of Swaziland and is about 37 kilometres from the nearest city. A gravel road of about five kilometers leads to the school after leaving the tarred road. There are a few grocery shops and a few church buildings in the vicinity of the school.

The reason why I chose one school was that one school would be suitable for this ethnographic study of the culture of a group of people for a prolonged period of time in order to fully understand them (Sangasubana, 2011). It is one of four other schools that are regionally located in this region of Swaziland and where Woodwork and Carpentry was taught as a subject at the time of the study. This school is located in a rural setting with many disadvantages compared to urban schools. Only sixteen high schools in the country offer pre-vocational subjects of which Woodwork and Carpentry is one of four elective subjects, namely Woodwork and Carpentry,

[2] In the Swaziland context, feeder schools are primary schools whose students go to a particular high school to further their education

Building Construction, Mechanical Building, and Drafting. There are four such schools in each of the four regions of Swaziland and they are located in urban, semi-urban and rural settings.

According to Angrosino (2007), ethnographers search for predictable patterns in lived human experiences by carefully observing and participating in the lives of those under study, and therefore I chose a school in a rural setting. The Form V participants from this school had adequate experience in Woodwork and Carpentry and it was envisaged that they would contribute rich and thick data that would enable me to analyze and provide answers to the research questions.

The educational profile of the community in the area was generally low with only a few graduates living in the vicinity of the school. The physical buildings of the school were found to be of a high standard as government had contributed to building classrooms that met school facility standards in Swaziland. When I visited the school, the subjects that were offered catered for both practical and academic subjects such as core and elective ones. These included: History, Geography, the Sciences, Mathematics, English Second Language, Religious Education, siSwati, and practical subjects such as Agriculture, Technical Studies, Home Economics and Business Studies that are either conventional or pre-vocational subjects. The performance of this school when compared to other pre-vocational schools was found to be similar, as is reflected in Table 3.1 below:

Table 3.1: Performance of pre-vocational schools in 2015

Code of School	No. of Candidates	Grade C and Above (%)	Grade D – E (%)
1.	10	86.66	13.33
2.	25	76.71	23.28
3.	34	48	47.00
4.	43	46.82	46.03
5. Nkanku High School	22	45.45	51.51
6.	6	41.17	52.94
7.	9	40.74	59.25
8.	7	38.09	52.38
9.	74	36.36	58.18
10.	12	36.11	55.55
11.	25	34.78	46.37
12.	23	30.30	65.15
13.	24	27.77	61.11
14.	37	18.51	69.44
15.	13	17.94	76.92
16.	22	14.51	69.35
Total	**386**	**38.94**	**53.52**

Source Sukati, 2016, p. 10.

At the time of data collection in 2016, the performance of the sixteen schools in Woodwork and Carpentry was on average 53.52% which reflected an average performance. In 2015, Nkanku's performance range was relatively similar to that of the other fifteen schools. When considering the context of the school under study, its performance in Woodwork and Carpentry over the past five years as reflected in the table below was average. Despite the small numbers of students taking the subject, the performance seems to be consistently on average as the majority of the students were getting below average grades (average being in the 50% range). It is argued that teaching a lower number of students should not have produced pass grades lower than a 'C' grade in the Woodwork and Carpentry subject. Examining the factors affecting the teaching and learning of Woodwork and Carpentry was therefore deemed a necessity to determine possible reasons for this undesirable state of affairs.

3.7.2 Profile of the participants

Eleven students who were studying Woodwork and Carpentry as a subject were included in the study after authorization and after they had volunteered to be involved. It was important for me to solicit their views on how they were learning this subject. However, the school had a population of about 720 students comprising an equal proportion of male and female students. Despite this equal proportion, no female students had elected this subject in the year of my study. The study also included four male teachers who played different roles with regard to the teaching and learning of this subject. These teachers comprised one subject teacher, one Head of Department, one Deputy Principal, and one Principal who were all involved in the teaching of Woodwork and Carpentry in one way or the other. Their experiences in this subject were crucial

in obtaining data that would be relevant for this study. The subject teacher would give first-hand information as he was directly involved in classroom practices. The table below presents the profile of the participants:

Table 3.3: Profile of the participants

Category of Participant	Age Range (in years)	Gender Type	Teaching Qualifications	No. of Participants	Teaching/Administrative Experience
Students	18 - 22	Male	Not Applicable	11	Not Applicable
Subject teacher	41-50	Male	Diploma in Design and Technology Education.	1	6 months
Deputy Principal		Male	• B. Ed in Design & Technology • Diploma in Design and Technology Education. • Post Grad. Diploma in IT & Entrepreneurship	1	22 years
Head of Department (pre-vocational)	41 - 50	Male	• B. Com in EP • Dip. In Com. Ed. • Grad. Cert. in IT & EP.	1	19 years
Principal (Administrator)	41 - 50	Male	B. Ed (Honours)	1	25 years
		Total Number of Participants		15	

3.8 Data Generation and Analysis Procedures

Informed by the principles of ethnography, I needed to spend an extended period of time in the setting where the participants carried out their daily tasks and had their daily conversations. I did so in order to be able to eventually render thick descriptions of the topic under investigation (Henning, 2004). In order to document and interpret their distinctive way of school life, the fieldwork of this study was conducted over a period of twelve months. As an ethnographer, I had to use a variety of sources to draw data from my participants. I collected the data overtly or covertly from the people's daily lives for an extended period of time; watching what was happening, listening to what was said, asking questions through formal and informal interviews, and collecting documents in order to peruse and collect relevant data as suggested by Hammersley and Atkinson (2007). I spent four weeks collecting the data by visiting the school at least twice a week before spending another week at my workplace sorting and analysing the collected data. Creswell (2009) suggests that collected qualitative data should be analysed continuously as they are collected. I then repeated this process in another round of four weeks when I continuously collected the data and I used an extra week sorting and analysing the data. During my second four weeks of data collection, I also used this time to validate the data that I had collected during the first four weeks. I used the last two weeks to further collect any new data and after I had satisfied myself that no new data were forthcoming, I decided that it was time to officially terminate the data collection process.

This study was located within the interpretive paradigm which called for contextualising the experiences related to the phenomenon under study. Informed by Achieng (2010), data for this

study were generated using a variety of data collection methods namely observations, semi-structured interviews, unstructured conversations, a focus group discussion, and document analysis, which are described in detail in the sections that follow. The data recording tools that were used comprised field notes, photos, and authorized audio recordings of both informal and semi-structured interviews.

3.8.1 Semi-Structured Interviews

I chose to interview the participants of my ethnographic case study because I wished to probe their thoughts and feelings and explore events that were not observable in order to construct meaning (Seidman, 2006). I used formal (semi-structured interviews) (see appendix A) with teachers and informal (conversational) interviews, as well as a focus group discussion (see appendix C) with the students to elicit the authentic perspectives of the participants. According to Creswell (2012), open-ended interviews can elicit information that would otherwise be difficult to obtain and they allow participants to create options for responding.

After having obtained the approval of the University of KwaZulu-Natal (HSSREC Research Office), I initially visited the school and met each participating teacher in person. I introduced myself and explained my purpose and the data collection procedure. I conducted informal interviews (which I refer to in this report as conversations) with students and teachers. I conversed informally with the students during their practical sessions. I also had informal conversations with the teachers during recess. These informal interviews were used to follow up on issues that had emerged during my observations and formal interviews. Hand written field

notes of the informal conversations were recorded in a notebook. The field notes comprised descriptions of the interactions observed as well as quotes. When this was not possible, key words were noted regarding what was taking place and these were later expanded at the first opportunity (usually when I was alone or directly after a conversation had taken place).

The formal interviews occurred in the form of semi-structured interviews with the four participating teachers (See Appendix 1 for the interview guide). I requested that a face-to-face interview be conducted with each participant at a time and location of his choosing. Each participant was interviewed independent of the other interviewees. The formal interviews were guided by semi-structured interview guides (for teachers and students) with open-ended items as well as a field note book. A voice recorder was used and transcriptions were later made. I had to seek permission from the participants before I could make any recordings.

The interview guide was not a structured schedule or protocol. Rather, it was a list of general areas to be covered with each informant. In the interview situation, I decided how to phrase the questions and when to ask them (Seidman, 2006). These interviews lasted less than an hour each and were conducted over three different sessions per participant. I chose to use semi-structured interviews because they allowed me to create an atmosphere in which my participants talked freely and were clearly understood. They allowed me to ask questions that encouraged them to open up about their perceptions, attitudes, thoughts and feelings. They also allowed me flexibility as I was free to probe deeper to elicit information regarding their interests and concerns (Cohen, Manion & Morrison, 2011; Creswell, 2014).

3.8.2 Observations

Although I had no pre-planned observation schedule, I was guided by a participant observation guide (see appendix B) as suggested by Reeves, Kuper and Hodges (2008). I recorded my observations in a note book. The guide consisted of nine observational dimensions, namely the physical layout of the school, departmental staff meetings, related activities that occurred, physical things that were present, single actions people engaged in, activities that people conducted, sequencing of events that occurred, things that people were trying to accomplish, and emotions felt and expressed. This guide helped me to know what to look for when I recorded the field notes. As a participant observer, which is the heart of ethnographic research (Henning, 2004), my role was to engage myself with the various activities of the school. However, I remained conscious not to interfere and thus distort the principle of trustworthiness (Shenton, 2004; Tickle, 2017). I thus built good rapport and trust with the students over time and, as far as possible, unobtrusively 'blended' in with their environment.

The impact of my presence might otherwise have had a distorting effect but this possibility was mitigated by my observer rather that participant status. The trust that was built resulted in the Deputy Principal (who also served as an additional subject teacher) requesting me to supervise a practical lesson class while he was involved with administrative work. This gave me the opportunity to record my observations unnoticed by my participants. More specifically, I observed any factors that might have affected the teaching and learning of Woodwork and Carpentry at the time. These factors included contextual and environmental factors, what happened during lesson time, and how time was spent in the teaching of the subject under study.

3.8.3 Document analysis

Document analysis was another way of verifying the qualifications or disqualifications of the data that I had obtained using other methods of data collection, and this strengthened the triangulation procedure (Creswell, 2014). The perusal of documents also helped me to better understand the school activities that negatively or positively affected the teaching and learning of the subject. Therefore, document analysis was important because it provided valuable information that helped me to cross check the data I had obtained from the other data collection methods. This analysis process helped me to increase the convergent, concurrent and construct validity of the research and it thus enhanced the trustworthiness of the data and the analysis process (Patsalides, 2011). The documents that were perused included: teachers' preparation books, scheme books, students' practical projects and class-work, and the minutes of departmental (subject) staff meetings.

3.8.4 Focus group discussion

The number of learner participants warranted a focus group discussion. Krueger (2002) suggests that five to ten participants may be used in a focus group discussion, hence I engaged the students in an authorized focus group discussion to collect additional data from them. This was a well-planned activity in which I was the moderator who was assisted by one of my work colleagues. The participants were assigned numbers on card tacks that were placed in front of their desks for easy identification and as a way of obscuring their identities. The focus group discussion lasted for not more than 45 minutes. Each participant was free to speak of his

perceptions while the assistant moderator recorded their reactions. The consent of the participants had been obtained by means of a signed consent form.

3.8.5 Data analysis procedure

I used thematic analysis to analyze the data. Braun and Clarke (2006) and Creswell (2012) describe thematic analysis as a qualitative analytic method for identifying, analyzing and reporting patterns (themes) within the data. Thematic analysis was a suitable method as my study was qualitative in nature. I used transcripts from the interviews, the focus group discussion, and the field notes based on my observations, the document analysis, and the informal conversations to identify patterns. I then stratified these patterns into themes for presentation and evaluation.

3.9 Trustworthiness

Trustworthiness in qualitative research simply means how valid and reliable the results of a research study are. According to Shenton (2004), positivists often question the trustworthiness of qualitative research and assert that it is perhaps due to their concepts that cannot be applied to their naturalistic work. However, Shenton (2004) and Ary et al. (2010) suggest that trustworthiness can be achieved by adhering to the following criteria: credibility, confirmability and transferability. As a way of judging or measuring the trustworthiness of this research as an ethnographic case study in the form of qualitative research, I had to abide by the above three criteria as suggested by Shenton (2004). First, in addressing credibility, I had to present a picture of the phenomenon under scrutiny by adhering to all ethical requirements and presenting a plan

of action for conducting this research. Secondly, sufficient details of the field-work content are presented in this study report which renders this study transferable to other similar situations for those who may wish emulate it. Lastly, as a way of achieving confirmability, I compiled all data and data gathering instruments to be stored under the supervision of my supervisor at the University of KwaZulu-Natal for any references that might be needed to confirm the results of my findings.

The interpretive researcher is encouraged to use a variety of data sources and/or analysis methods in order to strive for trustworthiness (Morojele, 2014). The trustworthiness of my data was assured by adhering to two criteria: first, I used triangulation through the use of multiple methods of data collection that included observations, semi-structured and focus group interviews, and document review. Secondly, I ensured that feedback from the participants was continually sought during the fieldwork phase and by means of several post-fieldwork visits to the school to seek clarity and verification and to ascertain the meaning of statements and behaviour.

I adhered to the principle of triangulation (structural corroboration) by using multiple methods of data collection (Golafshani, 2003; Creswell, 2009; Ary et al., 2010). This was in line with the thinking of Nguyen (2015), who argues that, by engaging in multiple methods such as observation, interviews and recordings, a more valid, reliable and diverse construction of realities is achieved. The data sources that I used included teachers and students to increase the likelihood that the phenomenon under study will be understood from various points of view. I

thus compared the data that were collected by means of one procedure or instrument with the data that were collected using a different procedure or instrument. I also sought feedback from the participants on a continuous basis for clarity and verification in order to confirm the meanings that the data analysis process attached to their statements and their observed behaviours. This was done during and after the fieldwork visits and by asking the participants to review and critique my field notes and recordings for accuracy and meaning (Ary et al., 2010).

3.10 Ethical Considerations

To comply with ethical issues it was necessary to adhere to certain ethical standards as is required for any research study (Ary et al., 2010). Because my research involved human beings, I adhered to the following requirements:

3.10.1 Gaining access

Accessing research sites can be a challenge for fieldworkers (Wanat, 2008). As an ethnographer, it was necessary for me to gain access to my research site and this required careful planning of all procedures. I had to seek permission from gatekeepers namely Ministry of Education and Training authorities in Swaziland (see appendix E and F), the security man or woman at the school gate, the principal of the school, and all the participants of my study that I mentioned earlier on. A gatekeeper is defined by Bryld, Kamau and Sinigallia (2013) as "a person or thing that controls access to something, or that monitors, selects, and can withhold information…" (2013, p. 10). The first step was to seek clearance from the relevant gatekeepers in order to

conduct this research at the identified research site. I also applied for the ethical clearance to conduct the study from the University of KwaZulu-Natal and it was granted (see appendix G).

3.10.2 Participants' Consent

Consent means that people being researched must be free to give information in an unconstrained manner and make decisions on the basis of detailed and accurate information about it (Yates, 2004). Consent, as defined by Bricki and Green (2016), means that the human beings being researched must freely agree to participate without being coerced or unfairly pressurised (2016). It was thus necessary to obtain the participants' consent (see appendix F), and because my study involved students under 18, I also needed to obtain their parents'/guardians' consent. The consent forms that I had designed were only signed after I had thoroughly explained issues such as why they had been selected to participate in the research, that participation would be voluntary, and that they were free to withdraw at any time without negative or undesirable consequences. The school and participants would also not receive any material gains for participating in this research. I did not force the participants to disclose anything they did not want to reveal and I asked the permission of the participants each time I wished to use an audio recorder or any voice or picture capturing device. It was after they had fully understood the explanations about the need for their consent that they signed the consent forms (Henning, 2004).

3.10.3 Confidentiality and anonymity

According to Bricki and Green (2016), confidentiality means that the identities of the participants being researched must be protected at all times and not be left lying around in

notebooks or unprotected computer files. In this study, I involved human beings and, as with any research project, it was necessary for me to maintain ethical standards as a primary concern. According to Openjura (2008), anonymity means that the rights, dignity and identities of those human beings being researched must be protected. In order to ensure anonymity and confidentiality, I explained to all the participants that their responses would be treated with strict confidentially and that they should not fear to respond to each question in a manner that would reflect their own personal opinion. Pseudonyms would be used throughout the research and in the appendices. Furthermore, the information would only be used for research purposes.

3.10.4 Data storage

Bricki and Green (2016) suggest that any information that might reveal participants' identities should not be left lying around in notebooks and unprotected computer files, and I adhered to this suggestion. Knuth, Johnson and Hauser (2015) also advise that research data should be stored in discipline-specific locations such as universities (Karick, 2014). Therefore, following these suggestions, all the data were left in storage at the University of KwaZulu-Natal, locked up in a cupboard under the guardianship of my supervisor for a maximum period of five years. Thereafter, the raw materials will be destroyed by burning or shredding, and all files and audio-tapes will be deleted and destroyed at the end of the required period.

3.11 Limitations of the Study

According to Simon and Goes (2013), limitations are matters and occurrences that arise in a study that are beyond a researcher's control but that impact a study nevertheless. However, limitations can also be controlled by the researcher in order to direct the scope of the study (Fischer, 2008; Creswell, 2014). Participants in this study were limited to one subject teacher, one principal, one deputy principal and one head of subject (Woodwork and Carpentry) from one high school in a rural setting. For this reason, the results of this study are not necessarily generalizable to other situations but can give a clue of possible outcomes in similar situations (Creswell, 2014).

The use of only one approach, namely a qualitative method, was deemed a limitation but was appropriate for an ethnographic study of this nature. The relatively small scope of the study could thus be deemed a limitation. Similar studies could involve more schools for the findings to be generalizable.

Moreover, the data were of a general nature and were limited to the teaching and learning of Woodwork and Carpentry involving only eleven Form V students. This was purposely done because of the nature of the study design, and it was not meant to cover causal factors (Simon & Goes, 2013). Parents and other traditional practical subjects such as Design and Technology, Business Studies, Home Economics and Agriculture Studies were excluded from this study. Given more time, similar ethnographic studies could also involve parents and policy makers to explore additional factors that were beyond the scope of this study.

3.12 Summary

This chapter presented the methodology that was used in the execution of this research project. I described the research design, the target population, gave a description of the sample and the sampling procedures, and presented a description of the research site and the research instruments. I also explained the process of data collection and data analysis and described how trustworthiness was achieved. The ethical considerations that were adhered to and a brief discussion of the limitations of the study concluded this chapter.

In the next chapter I shall discuss the findings that are presented under main and sub-themes that emerged from the data.

CHAPTER 4

ANALYSIS AND DISCUSSION OF THE FINDINGS

4.1 Introduction

The purpose of my study was to explore factors that affect the teaching and learning of Woodwork and Carpentry as one among several pre-vocational subjects. The perceptions and experiences of relevant teachers and students at Nkanku high school were elicited in the quest to obtain data that would address the research questions. The main question that guided the study was: What are the factors that affect the teaching and learning of Woodwork and Carpentry for Form V students in secondary schools? In this chapter, I present the findings as they emerged from the data. These findings represent the views of the participants and my observations and various factors impacting the teaching and learning of Woodwork and Carpentry as perceived by teachers and Form V students are illuminated. Data were generated from the participants by means of focus group discussions, semi-structured interviews, unstructured conversations, observations, and document analysis. The findings are presented according to themes that elucidate institutional and macro-policy factors. It is worth noting that the factors as revealed by my findings were of a negative nature. However, if certain recommendations flowing from the findings are considered, this negativity may be reversed, resulting in positive factors.

4.2 Institutional Factors

The participants' views about the institutional factors that affected the teaching and learning of Woodwork and Carpentry as a pre-vocational subject in their school were organized into sub-themes. These are: low status awarded to Woodwork and Carpentry; lack of up to date teacher qualifications; lack of pedagogical subject content; pressure for curriculum coverage; lack of adequate teaching and learning support resources; and poorly managed infrastructure.

4.2.1 Status of the Woodwork and Carpentry subject

The participants identified the low status of Woodwork and Carpentry in the school curriculum as a factor that impacted negatively on the teaching and learning of the subject in the school. The main reasons cited by the participants for this low status of the subject were low social acceptability; parents' preference of academic subjects over pre-vocational subjects; and the quality (academic capabilities) of students electing Woodwork and Carpentry as a subject.

4.2.1.1 Social status of Woodwork and Carpentry

The majority of the participants highlighted that there was low social acceptance of Woodwork and Carpentry in the school which affected the teaching and learning of the subject. The participants observed that public attitude towards pre-vocational subjects and skills were derogatory and thus a major reason why the subject had low social acceptability. The participants were of the view that Woodwork and Carpentry was relegated to a low status subject in the

school because of views that were expressed by students and teachers in particular. The subject teacher explained the devaluing of Woodwork and Carpentry as follows:

> *The subject in the school is not treated nicely as it is assumed to be just about cutting wood. Even with us as teachers who are teaching the subject, colleagues sometimes think we do not carry the same workload as they do.*

According to the teachers, their commitment to the teaching of Woodwork and Carpentry was derided and this occurred as a result of the poor acceptability of the subject. These teachers seemed to associate being committed to teaching with the value of the subject as perceived by the school community. The fact that the teachers themselves did not view Woodwork and Carpentry as a subject that is equal in status to other school subjects most likely had a negative impact on teaching and learning. When teachers are scorned, they lose confidence and enthusiasm to teach, which in turn affects teaching and learning of the subject. Expressions that devaluated Woodwork and Carpentry might have led these teachers to feel under-valued which, in turn, may have resulted in their lack of commitment to teaching the subject.

The literature revealed that one of the reasons for the low status accorded to Woodwork and Carpentry is that it is a pre-vocational subject that is regarded as a 'soft' option because it is not a pure academic subject. In the minds of teachers and other students who do not take Woodwork and Carpentry, a principal determinant of a subject's perceived value is whether it is an academic subject and can lead to high profile careers or not. The relegation of pre-vocational subjects such as Woodwork and Carpentry to a low status is hardly avoidable and negatively affects students in

their learning of the subject. This is also noted by Gwembire and Katsaruware (2013), who state that negative attitudes adversely impact students' performance in a subject. The impact of negative comments about the low status of Woodwork and Carpentry was confirmed by the Woodwork and Carpentry teacher who said:

> *Students from the traditional academic side undermine the students who are taking the pre-vocational subjects and make them feel inferior and thus the students who are doing pre-vocational subjects, Woodwork and Carpentry in particular, end up concentrating on the academic subjects in their curriculum because they don't want to be labelled as weak students.*

It was stated that Woodwork and Carpentry was chosen by students who were generally not doing well in 'academic' subjects such as Mathematics and Science. The Deputy Principal explained:

> *The students taking Woodwork and Carpentry are mostly the weaker students who are not academically strong and we move them to pre-vocational subjects.*

It was surprising to learn that even teachers perceived Woodwork and Carpentry as a subject that is reserved for students who are deemed not to be intelligent enough to take other more academic subjects. Some teachers were of the view that students should take academic subjects that would lead to professions that have a socially high status. As a result of schools not prioritising Woodwork and Carpentry, parents tend to regard it as unimportant, and students in turn become demotivated to commit to the subject. Teachers and parents, and by implication and association the community, thus seemed to view practical (pre-vocational) subjects with a negative attitude

due to the inherited colonial influence of promoting white collar jobs (UNESCO – UNEVOC, 2013).

This same view was shared by students as they explained the negative perceptions of the school community about Woodwork and Carpentry. The students were of the view that the low status of Woodwork and Carpentry was the reason why the students who took the subject were devalued and marginalized. Some students expressed their concerns as follows:

> *When you take Woodwork and Carpentry you are always looked down upon by both teachers and students because it is part of the pre-vocational programme.* (P5).

Another student also commented in the same vein:

> *Teachers and other students always pass negative comments about taking this subject and say it is not a real subject but just woodworking and is for low achievers who cannot master complex academic content.* (P 7).

A similar concern was expressed by another student:

> *My friends always laughed at me when I chose Woodwork and Carpentry in Form IV, and kept discouraging me saying that Woodwork and Carpentry was too low as it had to do with manual work. (P2).*

This demotivation was corroborated by another student who stated:

> *Other teachers regard us as poor performers and think we are fit only to do this subject* (P6).

Students felt demotivated because of the negative comments they received about opting for Woodwork and Carpentry. They thus seemed to lack the commitment to achieve high standards in this subject, as was demonstrated by the tabled results in a previous chapter. By implication, students in the academic stream were disparaging of those who took Woodwork and Carpentry and this illustrated the low social acceptability of the subject. It was evident that the student participants felt discouraged and demotivated about Woodwork and Carpentry which affected their ability to achieve well. Lack of motivation was thus found to be a factor that influenced the teaching and learning of the subject. The students reported that, even though they tried to commit themselves to this subject, they felt demotivated to learn the subject because the subject was looked down upon by various subject teachers.

The teachers also mentioned that they had lost the morale for teaching because they were scorned by their colleagues about teaching Woodwork and Carpentry. For example, the subject teacher lamented:

I feel demotivated because of the negative comments we always get from other teachers.

According to Jones and Jennifer (2000, as cited by Rehman & Haider, 2013, p. 127), motivation is defined as "psychological forces that determine the direction of a person's behaviour, a person's level of effort, and a person's level of persistence in the face of obstacles". In this regard, Rehman and Haider (2013) also conclude that, without motivation, learning is not possible.

The low status accorded to subjects of vocational orientation, as noted by Dube (2014) in the case of Tourism in South African secondary schools, has a negative impact on the teaching and learning of the subject. This implies that negative attitudes towards vocational subjects, including Woodwork and Carpentry, adversely impact students' learning. Similarly, Woodwork and Carpentry seemed to suffer such relegation to low status as a result of the negative attitude of various stakeholders that it impacted the successful implementation of the subject in the curriculum. The negative comments by both teachers and students suggest that they did not acknowledge Woodwork and Carpentry as important for a career choice, which is in line with Afeti's (2007) comment that schools and other stakeholders tend to value the subjects that they regard as important, particularly academic subjects, and marginalise vocational subjects such as Woodwork and Carpentry. This occurs despite the fact that Woodwork and Carpentry could create opportunities for entrepreneurship in communities that will value these services (Kuiper, 2017).

4.2.1.2 Status of parental support

Of interest was the fact that students raised the issue of their parents' perception of Woodwork and Carpentry. The stated that lack of parental support was one of the factors influencing the teaching and learning of Woodwork and Carpentry in this school. The participants reported that parents were biased and entertained negative perceptions regarding this subject choice of their children. Lebata and Mudau (2014) opine that the family into which a child is born exerts a profound influence on the child's career, because his occupational life is conditioned by his education which depends, to a considerable extent, on the family. The views and attitudes of

parents about Woodwork and Carpentry thus impacted negatively on the teaching and learning of this subject. The Head of Department stated:

> *I felt bad when one student who was doing well in Woodwork and Carpentry was scolded by the parent when they came to view the results because he had passed Woodwork and Carpentry and failed science.*

According to the teachers, the parents were not always happy when they realised that their children had performed well in Woodwork and Carpentry as they did not value this subject and rather wanted the learner to achieve in academic subjects. Some parents seemed to assume that when children took Woodwork and Carpentry they just cut timber as they would at home with no scientific or theoretical aspects underpinning their skills and knowledge. This could be a reason why society considers practical subjects inferior in status. Azubuike (2011) states that negative parental influence on a student's interests in a pre-vocational subject results in the student developing a negative attitude towards the study of such a vocational/technical subject, and that the student thus does not perform well. Such an attitude implies that the perception exists that pre-vocational subjects are designed 'for somebody else's child' and are primarily meant for children with low intellectual capacity. This was also evident in this study as one student lamented:

> *My father always says that I can't waste time by studying Woodwork and Carpentry which is a useless subject instead of concentrating on academic subjects which are more important, so I don't always study Woodwork and Carpentry at home.* (P 4).

The issue of students and parents preferring traditional academic education over the more practical and vocational curriculum was also observed by Maravanyika (2011). This view by

parents as expressed in the participants' responses discouraged the students who then lacked interest in achieving well in Woodwork and Carpentry. The teachers also observed that parents were not enthusiastic about their children taking Woodwork and Carpentry as a subject at school. The subject teacher stated:

> *Very few parents allow their children to take Woodwork and Carpentry as a means to achieving their academic ambition and thus they do not focus all their energies on learning the subject. This also affects our very own teaching.*

The participants revealed that parents reacted negatively when they elected Woodwork and Carpentry because the general perception in the community was that students should prepare themselves for white collar jobs that require Mathematics and Science, because that is where most well-paying jobs were to be found. This thinking could result from the fact that the society in Swaziland finds it difficult to perceive practical subjects as a route to success in the same way as the academic subject route. The practical subjects are not given the same recognition as academic subjects by the parents. It is only logical that the low levels of literacy in this community could result in limited understanding of the scientific aspects of Woodwork and Carpentry and thus influence the teaching and learning of the subject in the school. This problem does not only exist in Swaziland, as Dermie, Lewis and MacLean (2006) opine that lack of parental support among Somali students in the United Kingdom contributed to the poor academic performance of this group of students.

4.2.1.3 Low self-image of students who take Woodwork and Carpentry as a subject

Another factor that seemed to affect negative perceptions of Woodwork and Carpentry was the low self-image of the students who took Woodwork and Carpentry as a subject. The findings revealed that these students generally had low self-confidence. This could be due to factors such as lack of parental support due to their negative perceptions about Woodwork and Carpentry. The derogatory attitude among members of society may thus have influenced the confidence of students taking the subject. One student stated:

> *I do not spend much time studying Woodwork and Carpentry. Most of the work I do in class because I feel embarrassed when other students and even my brothers at home pass comments like: 'Oh…you are cutting wood…'* (P9).

This loss of confidence that was inflicted on these students by other students, teachers and the parents of the students who took Woodwork and Carpentry translated into a fear of studying the subject with confidence, and this may have affected both teaching and learning outcomes.

Further to that, students' motivation to excel in Woodwork and Carpentry was seemingly affected by the fact that they were viewed as poor performers with limited learning abilities. Because my research did not focus on performance results, this finding could be an area for further research. The findings revealed that the school tended not to prioritise Woodwork and Carpentry when the students selected their subjects and this suggests that low academic performance and marks were used as a guideline to direct students who did not show academic aptitude to elect pre-vocational subjects rather than academic ones. According to one student, their perception of and their focus on the subject were affected by disparaging comments by

teachers and other students who labelled them as poor performers. One student participant commented:

> *Other teachers and students regard us as poor performers because we are opting for a pre-vocational subject.* (P3).

Another student asserted:

> *I loved this subject but now I am shy to talk about it in public because it sounds as if it is not good enough to be a subject and is for slow students. This makes me to focus on other subjects and then I don't do very well in Woodwork and Carpentry.* (P11).

Most of the students who took Woodwork and Carpentry in Form V admitted that they felt embarrassed about this subject because they were labelled as slow students. This finding is supported by the African Union (2007) who also complains that practical subjects suffer from poor public perceptions as they are perceived to be fit only for the less academically gifted students and are viewed as a dead-end if a student wishes to enter higher education. In this regard, Mapolisa and Tshabalala (2013) conclude that the teaching of practical subjects should not be used to label students according to their ability levels, but that students of diverse abilities should be encouraged to select them. The students in this study clearly felt discouraged by the attitude of teachers who tended not to recommend students that are high performers to take Woodwork and Carpentry. The perception that pre-vocational subjects were regarded as suitable only for poor performing students was also noted by the teachers who were teaching pre-vocational subjects. The Woodwork and Carpentry teacher explained:

The colleagues in this school view the pre-vocational subjects as being less academically coping and therefore they were less inclined to support the students who take them.

This concern was shared by management as the Head of Department of the pre-vocational subjects commented as follows:

It is bad that the practical subjects are frowned at by teachers and students in this school because they are perceived as subjects for the less able students. Some teachers that I know of in this school discourage students from enrolling for Woodwork and Carpentry because they fear that they would lose good students in the academic subjects.

It is clear from these comments that there was insufficient encouragement of more able students to select Woodwork and Carpentry. It seems a travesty that, regardless of the skills and knowledge that these students acquire Woodwork and Carpentry in Swaziland continues to be regarded as inferior compared to other subjects in the curriculum (Roberts, 2005; MoET, 2011). This is not restricted to schools in Swaziland, as evidence was found by Puyate (2008) in Nigeria that revealed that practically oriented subjects were not accorded the recognition that they deserved in the realm of educational activities. It is therefore inarguable that the teaching and learning of Woodwork and Carpentry is affected by the low self-esteem among and the loss of confidence by students who feel compelled to take this subject in the belief that they are 'not good enough' to cope in academic subjects.

The problem is exacerbated by the fact that students only start Woodwork and Carpentry as an elective subject in Form IV, which is at senior secondary school level. The pre-vocational

curriculum in Swaziland only starts in Form IV and is not offered at junior secondary level. This was revealed when the Deputy Principal, who was one of the subject teachers, said:

> *The pre-vocational subjects should start in Form I so that students who come to Form IV have a sound knowledge of the subjects.*

The students thus only encountered this subject for the first time as late as Form IV. This suggests that they missed out on the basic knowledge, skills and aptitudes that are necessary to appreciate this subject. Close perusal of the responses by both students and teachers undeniably revealed that factors mentioned above negatively impacted the teaching and learning processes of Woodwork and Carpentry in the secondary school under study. Clearly, students develop negative attitudes towards practical subjects as they seemed afraid of being branded failures. Kehoe (2007) concurs that the practical subject route is encouraged among those who show that they are unlikely to succeed in the more 'academic' subject in the academic band. One reason that seemed to exacerbate the divide between Woodwork and Carpentry students and those who took academic subjects was that the students were required to work together in core subjects. According to Classens (2008), such divisions engender negative attitudes towards the students doing practical subjects.

4.2.2 Teacher qualifications and pedagogical content knowledge

The findings revealed that the qualifications and pedagogical content knowledge of teachers had a great bearing on the effectiveness of the teaching and learning processes. The lack of appropriately qualified and experienced Woodwork and Carpentry subject teachers in this school seemed to be

one of the factors that affected the teaching and learning process negatively. A lack of pedagogical content knowledge might be caused by inadequate teacher training.

This finding corroborated a finding by Makgato (2013), who argues that effective teaching and learning do not completely depend on the availability of resources but on the competency of the teacher as well. He states that even if new resources are provided, but if the teacher does not know how to use the resources, the resources can end up lying idle and being of no use to anyone. Makgato concludes that effective learning is the result of teachers with appropriate knowledge, skills and attitude. One of the Woodwork and Carpentry subject teachers in this school admitted that he was not properly qualified to teach this subject at pre-vocational level. This teacher said:

> *I have a Diploma in Design and Technology, which is not relevant to pre-vocational education.*

Ironically, the findings suggest that a teacher who is trained in a particular TVET subject may automatically be able to teach another subject as well. However, the teacher who was available to teach Woodwork and Carpentry at this school had not been trained in the content or pedagogy of the subject he was expected to teach. This finding concurred with a finding by Classens (2008) who, in a similar study on the pre-vocational programme in Swaziland, revealed that pre-vocational teachers were concerned about their lack of training in the teaching of pre-vocational subjects. Based on a study on the management of woodwork workshops in schools in Nigeria, Chinonso (2014) suggests that woodwork workshops should be managed by trained experts for effective teaching and learning. Chinonso (2014) further posits that there is a need to investigate

the skills and competence levels of technical teachers. I support this argument, for when I further probed the teachers, I discovered that the subject teacher was uninformed regarding the topics on the carpentry aspect of the subject, and he thus needed to be assisted by an appropriately qualified teacher who also served as the deputy principal of the school. The subject teacher was open and frank about his lack of subject content knowledge, especially the carpentry section. The teaching of Woodwork and Carpentry as a pre-vocational subject requires the appointment of competent teachers, which was not the case at this school. According to Nkwanyana and Peter (2011), a curriculum that offers skills-based subjects needs to be implemented by well-trained teachers who possess particular knowledge on how such subjects need to be assessed. However, it was found that the school utilised the best trained teacher in a management position while an inappropriately trained and poorly skilled teacher was expected to deal with classroom challenges.

The appointment of well-trained teachers will help to reduce factors that may negatively affect the teaching and learning of pre-vocational subjects. When the qualifications of the teachers and the number of teacher-student contact hours were perused by looking at the department's time table, it was found that the deputy principal, who was better qualified to teach Woodwork and Carpentry than the actual class teacher, had less contact time with the students because of the added responsibility of assisting the principal. This teacher had initially been trained to teach Woodwork and Carpentry and he possessed the philosophical and pedagogical knowledge of the subject to the extent that he was able to advance himself to obtain a Bachelor's degree. However, because he only taught a small portion of the subject content, the students were adversely

affected because the lower qualified teacher could not equip them with the necessary knowledge and skills.

Regarding teachers' exposure to industry, the findings revealed that the subject teacher himself lacked industrial exposure. This fact was evident in the discussions and was captured in the minutes of a departmental meeting on 23 November 2015 when the following was recorded under 'Budget':

> *Educational trip to industry.*

However, another entry reported that the trip did not take place:

> *The trip to Nelspruit Timber did not materialize as there was no money paid for the trip.* (Departmental meeting minutes, 16 June 2016).

The extracts above showed that a planned trip to expose the students to industry did not take place due to financial constraints. In this regard, Barnet and Ryan (2005) acknowledge that workplace experience is not easily accessible for school students, although this is common practice in some countries. The above finding suggests that the students' acquisition of practical knowledge and experience was negatively affected due to the employment of an inexperienced and unqualified teacher with no vocational qualifications. Moreover, this situation was exacerbated as there was no industrial attachment that assisted the teacher and students to gain practical exposure (Gwembire & Katsaruware, 2013),

In conclusion, this finding was in line with the Swaziland TVET policy document that bemoans the fact that there is no National Qualifications Framework body that is responsible for

regulating teachers' and instructors' qualifications in this country. The absence of such a body in Swaziland means that the country is far from meeting the demands of the African Union, namely that of harmonizing TVET teacher qualifications across the African continent (African Union, 2007). This finding pertaining to poorly qualified TVET teachers was also in line with the literature, as Puyate (2008) and Bukit (2012) argue that providing qualified, trained and motivated teachers is key to effective teaching and learning provision of quality TVET. A similar observation is also expressed by Makarfi (2014), who laments the lack of teacher expertise and knowledge to utilise available resources.

4.2.3 Limited curriculum coverage

Pressure to complete the curriculum in the available time was found to be another factor that influenced the teaching and learning of Woodwork and Carpentry in this school. The pressure that was evident could be associated with factors such as overloaded curriculum content and insufficient time allocation for teaching Woodwork and Carpentry.

4.2.3.1 Length of Curriculum Content

I found that the curriculum of Woodwork and Carpentry was overloaded with content that needed more teaching time than was allocated on the time schedule. During the interviews and based on the document analysis, it was revealed that both teachers and students were required to come for lessons on school holidays and weekends. For example, the department's minutes of meeting stated: *"Teachers needed to sacrifice weekends and holidays*"; and the deputy principal also said, *"They even come on weekends. Sometimes they work after hours".* As far back as

2008, Classens (2008) argued that the pre-vocational curriculum for Swaziland was overloaded and packaged into large chunks of content that should be learned in a short space of time. This has apparently not changed and my study showed that it had an effect on the teaching and learning of Woodwork and Carpentry in the school. All the participants felt the pressure of an overloaded curriculum and they were critical of the fast pace that had to be maintained in order to complete the syllabus. For example, the Deputy Principal stated:

> *Syllabuses should be finished in June to give time for the practical examinations which start in July. For that reason we have to rush through key issues in order to meet this deadline and prepare students for the exams.*

It was apparent that both the teaching and learning processes of Woodwork and Carpentry were impacted by looming external examinations as the teachers were teaching this subject so that the students could pass, instead of concentrating on imparting knowledge, skills and attitudes. The students also expressed their concerns regarding their poor performance in Woodwork and Carpentry. One learner stated:

> *The teachers have to teach us so much in one period because there is a lot of work that we need to cover for our external exams.*

Another student concurred:

> *I can't afford to learn all the theory that was taught because there is more to cover and the time is limited, and when I focus on this subject my friends would laugh at me for being serious about Woodwork and Carpentry.*

These comments revealed that curriculum implementation was affected by the need to cover the curriculum in order to satisfy external examination requirements. This anomaly is also noted by Mufanechiya (2011) who uses the analogy of the tail wagging the dog instead of the dog wagging the tail. She argues that national examinations grossly affect, influence and dictate the way that the curriculum is implemented. She therefore recommends that a two-way evaluation system be put in place, where the students' school grade is combined with the national examination mark to come up with a final overall result. The pressure for curriculum coverage could be the result of the reduction in the number of years that pre-vocational programmes are offered in schools. According to the MoET (1999; 1985), the scope of the curriculum is to stretch across Form I to Form V; however, the duration was reduced to run from Form IV to Form V covering the same scope. Consequently, teachers have to cover a large amount of work in order to finish a five-year curriculum in two years. This inarguably impacts the teaching and learning of Woodwork and Carpentry negatively.

4.2.3.2 Teaching time allocated to Woodwork and Carpentry

The limited time allocated to Woodwork and Carpentry was found to be another factor that affected the teaching and learning of this subject. The teachers felt that they were teaching under pressure to cover the syllabus for examination purposes rather than for effective learning. Both the teachers and students expressed their concern in this regard. These views are reflected in the following extracts:

> *We don't have enough time to do all that we want to do.* (Learner P2).

The Head of Department stated:

The time given is not sufficient since this is a practical subject which requires more time for theory and time for practical.

These views of the students and teachers were corroborated when I perused relevant documents. An excerpt from the minute book revealed the following:

Teachers expressed that the teaching time for Woodwork and Carpentry is not enough and were requesting one/two additional periods.

This finding concurred with the findings of Thobega, Subair and Rammolai (2011), who argue that one of the reasons for time shortage is the fact that the curriculum is congested with a lot of subjects that have been added over time without more time added to the school calendar. In the school under study the shortage of time for teaching meant that both the teachers and the students had to come on weekends in order to ensure syllabus coverage. The Head of Department said:

They do not miss classes, they even come on weekends. Sometimes they work after hours.

This was corroborated by the Deputy Principal:

...by coming on Saturdays and holidays to do entrepreneurial projects.

Interestingly enough, the Principal (who did not actually teach the subject in the classroom) was the only one who thought that the subject had enough teaching and learning time. He responded as follows:

It's more than enough; the syllabus is always finished on time.

However, the Principal knew very well that this subject was using improvised time on top of the allocated school time as the students had to come for lessons even on weekends, which was a practice of which as principal was fully aware.

4.2.4 Adequacy of teaching and learning resources/support material

Support materials in schools include facilities, textbooks, visuals and learning space as well as other capabilities that constitute a place where students learn. Uche (2002) points out that much research evidence has brought to limelight the relationship between the physical environment where learning takes place and the amount of learning that can take place. The aids that teachers use in order to teach a lesson could be referred to as instructional materials or learning and teaching support material/resources. According to Onuoha-Chidiebere (2011), teachers use different kinds of support material or resources in the teaching and learning process in order to make the process more effective and productive. It is therefore noteworthy that, at first glance, the school seemed to be well resourced. However, during my extended stay at this school I was able to observe the actual situation from an insider's point of view. The shelves in the store-rooms showed that some tools were missing. I also noted two wood-turning lathes; however, one showed no sign of being used, which was indicative of the underutilisation of resources.

In the workshop there were six woodwork and carpentry work benches. Each workbench had four woodwork vices, one attached to each corner of the workbench so that each workbench could be used by four students. This means the workshop had a capacity for twenty-four students but was used by only eleven students. Each workbench had a tool rack space underneath that had not been used. There were a number of items that were found on top of the workbenches which means that they had been left there and had not been returned to their proper places of safe keeping. The floor was covered with wood shavings and scrap pieces of wood that had been left there for some days. I also noticed that there were four pin boards that had been proportionately

well placed on the four walls of the workshop. However, there were no charts or any notices or warning information on the pin boards. In this regard, Adedeji, Okemakinde and Ssempebwa (2011) argue that inadequate utilisation of resources greatly affects students' academic performance. Puyate (2008) and Bukit (2012) argue that the provision of sufficient instructional material such as books, proper funding and qualified, trained and motivated teachers is a key factor in the provision of effective learning and quality TVET. It should be noted that both Puyate and Bukit refer to qualified, trained and motivated teachers. Makarfi (2014) also asserts that instructional material should be adequate, and laments the fact that his study found that these tools had not been looked after by teachers and students because of a lack of expertise and knowledge. However, it should also be common knowledge that expensive tools should be taken care of and that workshops should be spotlessly clean in the interest of hygiene and safety; thus not much training is required to keep a workshop safe and tidy.

Regarding the use of expensive machinery in the teaching of woodwork and carpentry skills, I observed that the combination planer/surfacer machine was non-functional and that it was too weak and only suitable for light duty planning, whereas this level required heavy duty planning as well. My observations were confirmed by the teachers and students who claimed that there was a lack of teaching and learning resources for the subject. During my engagement with teachers in informal conversations, they claimed that they had reported non-functional machines for years, but they had been told there was no budget to fix the machines. Non-functional and inadequate machinery obviously affected learning. A student in the focus group discussion made the following comment:

Sometimes we share machinery because there are very few that are working and it slows down the pace of learning in our practical class. (Learner P3).

Another student stated:

Machines like the router and the drills are not enough and we end up sharing the few or we have and take turns to use them while others only observe and this makes us not to learn the skills. (Learner P5).

Insufficient equipment for practicals affected the students' learning, which is a finding that was consistent with the findings of earlier studies that also revealed that inadequate infrastructure and equipment was a key factor that impacted pre-vocational subjects (Puyate, 2008; Wanjau, Muiruri & Ayodo, 2012; Bukit, 2012). This finding suggests that the teachers did not possess the required skills to protect and maintain workshop equipment for effective use in woodwork and carpentry projects.

4.2.5 Management of infrastructure

As alluded to in previous sections, the school infrastructure included a workshop where woodwork and carpentry skills needed to be applied. The workshop appeared modern and was well ventilated with nine big windows and two roof air vents. It was of a standard size that is normally provided for school workshops in Swaziland. However, the roof had an echo reduction system. The workshop was equipped with a storeroom for consumable materials such as paints. A second storeroom housed a large compressor and various small tools on shelves, and a third storeroom housed portable power tools and a few shelved tools such as spanners. There was a

cubicle that was meant to be the teacher's office but it was not used and all sorts of things were stored in it, such as a cardboard box with saw dust, an unfinished drawer, a 2 m x ½ m x 4 mm glass pane, and one big wooden spoon. In the main workshop, a hand basin with running water was attached to the wall, but it was in a filthy condition and covered in old paint scales.

I observed that there was a lot of mismanagement of the tools, machinery and equipment. For instance, the photograph below was taken on 5 May 2016 at 13h55, when I observed the workshop and found that, apart from inadequate resources, those resources that were available were not used and managed effectively. For example, the water tap and basin were filthy and unhygienic. Figure 4.1 is an attempt to present a visual image of what I found.

Figure 4.1: Condition of basin in the Woodwork and Carpentry workshop

This finding implies that the availability of resources did not necessarily maximize the utilisation of these resources, but that resource utilisation was impeded by poor management. This finding corroborated a finding by Makgato (2013), who asserts that the availability of resources does not

necessarily mean that these resources are used to capacity. For instance, the workshop under study had been built to accommodate twenty-four students at a time, but only eleven Form V students utilised the facilities at a time.

In essence, the workshop was underutilised, there was a mismatch of resources, and there were insufficient tools and equipment for the practical tasks that had to be performed by the students. Poor workshop management and cleanliness were evident in this workshop and this was due to a lack of knowledge and training on the side of the subject teacher who was predominantly responsible for the workshop. The literature concludes that teachers should be trained and empowered to manage and effectively use all available resources (Classens, 2008; Makgato, 2013; Chinonso, 2014; Makarfi, 2014), but this was not the case in this school as the responsible teacher lacked proper management skills to utilise the available resources in the workshop. Similar studies have revealed that the inappropriate management of resources and infrastructure is a factor that affects the teaching and learning of practical subjects in schools (see for example, Ramdas & Kruger, 2005; Puyate, 2008; Adedeji, Okimakinde & Ssempebwa, 2011; Kiadese, 2011; Gwembire & Katsaruware, 2013).

4.3 Macro-Policy Factors

The findings of this study suggest that factors external to the school also tended to have an effect on the teaching and learning of Woodwork and Carpentry as a subject. The participants linked the influence of macro-policy factors to two aspects: limited government funding for pre-vocational subjects, and lack of industrial participation and attachment.

4.3.1 Government funding for Woodwork and Carpentry as a pre-vocational subject

This study posits that limited government funding of Woodwork and Carpentry as a pre-vocational subject affected the teaching and learning of this subject in the school under study. It is evident that pre-vocational programmes require intensive funding if they are to yield the desired result of productive, creative and innovative students who will be relevant to the industry. When the participants were asked if there were any factors outside the school that affected their engagement with Woodwork and Carpentry, most of them felt that there was no financial support from the government. The teachers, including those in management (the Head of Department and the Deputy Principal) highlighted that limited government funding was one of the biggest challenges they had to face. The Principal stated:

> *Most of our challenges revolve around lack of funding from the Government that adds nothing.*

The Deputy Principal shared this view:

> *Getting funds to run the day-to-day tasks of Woodwork and Carpentry is a big issue because there are no funds that are allocated by the government for the day-to-day running of the pre-vocational subjects.*

The participants acknowledged that the government had provided initial support for the provision of machinery, tools and equipment. However, there was no plan in place to maintain and sustain the equipment. The subject teacher had this to say:

The government bought us the tools and equipment but does not maintain it and the school does not have enough money to repair broken machines. Students end up missing some of the practicals because of broken machines.

Lack of resources to adequately fund the education system is not peculiar to Swaziland and Nkanku in particular, as it is also highlighted by Kanyongo (2005) whose study was located in Zimbabwe. The findings of the current study revealed that most of the equipment was not functional and needed to be repaired. This suggests that a lack of funding from government to repair, upgrade or replace broken or obsolete equipment was a hindrance to the effective teaching and learning of Woodwork and Carpentry. Running the subject became difficult, especially for the Principal of the school.

Practical subjects are not adequately budgeted for as expensive equipment breaks often when least expected. The participants seemed to be concerned about the high costs involved in running the woodwork and carpentry workshop, but paradoxically neither the teachers nor the students made much effort to maintain the equipment in a pristine condition. The condition of the basin is a case in point. According to Arinaitwe (2011), TVET is expensive and even the government cannot afford to equip training institutions and maintain the equipment.

Further to that, the participants revealed that Woodwork and Carpentry was failing to draw academically strong students, which they ascribed to the lack of funding by the government. In this regard, Kehoe (2007) argues that what were once thriving Woodwork and Metalwork departments in schools have declined due to inadequate funding. This was the case with the

school under study where a lack of adequate funding was found to be one of the factors that affected the teaching and learning of Woodwork and Carpentry. The image of the subject appeared to be tarnished which resulted in a decline in the number of students who opted to take this subject. Only eleven students had enrolled for this subject at Form V level at the time of data collection, and anecdotal and statistical evidence revealed that the situation had not been any better in previous years. Low government commitment to this subject thus directly impacted the teaching and learning of the subject in the school.

However, the adage that if one wants to ensure the development of a community one does not give them fish, but one teaches them to catch fish may perhaps be true in this situation. Perhaps the time has come for schools to launch projects that are run by teachers and students of pre-vocational subjects to generate some of the funds required for the maintenance of equipment and tools, if this is at all possible. Pre-vocational subjects are underpinned by an entrepreneurial motive, and if this is not encouraged and the profits witnessed and enjoyed, this mandate is negated.

4.3.2 Industrial participation

One of the external factors that affected the teaching and learning of Woodwork and Carpentry was a lack of industrial participation. Collaboration between industries and education institutions is an issue that was identified as a major concern by this study. During the focus group discussion, one of the students offered the following comment:

We wish to engage in industrial visits to see a lot related to what we learn but we have not had the opportunity to go.

During a conversation with the Deputy Principal, he made the following comment:

The best way to learn trade, in my opinion, is to work alongside an experienced worker in a workshop. Students can acquire valuable skills in schools but in workshops they will learn all those skills in more practical and real-world surroundings. This is not happening because we do not have industries willing to take our students.

However, it was clear that management lacked initiatives to encourage industrial participation in the school's Woodwork and Carpentry programme. The literature suggests that schools as TVET institutions need to strengthen links with industries to improve networking between academia and industries in order to create a better understanding of each other's needs and to identify how they can be met through industry-related programs (Raihan, 2014). The findings revealed that the school believed in participating with industry in work-integrated learning projects and that it actually attempted to embark on a visit to an industry, but this fell through due to a lack of funds.

One respondent cited a variety of challenges linked to occupational programmes, such as *a lack of partnerships with industry for work placement opportunities for students,* while another mentioned the *lack of infrastructure.* The subject teacher also lamented this state of affairs when he stated:

For now we do not have a programme in place for industry visits. We only plan once-off trips which usually do not materialise due to financial constraints. [We need to] allow the students to have work experience through attachments.

The fact that the school had no formal plan in place for work integrated learning and a plan for industry participation had serious implications, such as not following pre-vocational education stakeholders' aspirations of involving business and industry through the formation of business and industry advisory panels as stated in the Pre-vocational Education Needs Report (Ministry of Education and Training, 1998). However, it must be noted that Choi, Misko, Kang and Phan (2001), who researched on the Korean and Australian VET with regard to linking VET to industry, suggest that industry participation in VET remains important, although the economic status of any country plays a major role.

4.4 Summary

The findings that emerged from the analyses of the data revealed that the objectives of the study were reached and thus the aim of the study was achieved. It was found that a variety of factors affected the teaching and learning of Woodwork and Carpentry as a subject in the school under study, and these finding were generally corroborated by other researchers' findings as was revealed in the literature. The study found that the teaching and learning of Woodwork and Carpentry in this school was affected by institutional as well as macro-policy factors. The institutional factors included the low status of Woodwork and Carpentry as a subject in the high school curriculum; inappropriate qualification of the subject teacher; a lack of pedagogical subject content knowledge; pressure for curriculum coverage; lack of adequate teaching and learning support resources; and a poorly managed infrastructure.

These findings corroborated those of Puyate (2008) in particular as this researcher also conducted a study on the constraints that impacted the effective implementation of vocational education and found that there was dearth of professional and qualified teachers for the teaching of vocational/technical subjects; inadequate infrastructure and equipment in schools; insufficient instructional materials and books in schools; and that schools were generally poorly financed. The negative issues associated with the teaching and learning of Woodwork and Carpentry also pertained to macro-policy factors such as limited financial support for this subject by the government of Swaziland and a lack of industrial participation in work integrated learning programmes.

CHAPTER 5

CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1 Introduction

The purpose of this study was to examine the factors affecting the teaching and learning of woodwork and carpentry as a pre-vocational subject in Form V. The study was constructed according to a case study design as it focused on one secondary school as a unit of analysis. In Chapter four I analyzed the data thematically and presented my interpretations and discussions of the findings that emerged from these data. I commence by presenting a synthesis and overview of the study. I then highlight the main findings that emerged from the data and explain how these findings responded to the research questions. I also explain how this study will contribute to the pool of scholarly knowledge and how it will create understanding of the phenomenon under study. The chapter concludes with the implications that emerged from the study and offers some recommendations for future research.

5.2 Overview of the study

The introduction of a TVET curriculum and pre-vocational subjects such as Woodwork and Carpentry in secondary schools in Swaziland was based on the assumption that it would empower students with entrepreneurial and other skills required for employment and that it would contribute to developing the local tourism industry and economy (MoET, 1985; MoET, 1998; MoET, 2010). The main goal of education in Swaziland is to provide relevant, quality and

affordable education and training opportunities for the entire populace of the Kingdom of Swaziland in order to develop all positive aspects of life for self-reliance, social and economic development and global competitiveness (Ministry of Education and Training, 2011). However, despite the good intentions of this initiative, the teaching of this subject seemed to have had little impact on solving the needs of school leavers who come out of the school, as many still lack the skills for employment or self-employment.

The literature suggests that both international and national TVET programmes are affected by similar challenges such as a lack of finances; low prestige in the eyes of the general public and parents who consider such subjects an option for students who perform poorly in the general education band; a lack of resources; a shortage of furniture, equipment and facilities; inappropriately qualified teachers; limited or no funding; and a lack of industrial attachment (Ramdass & Kruger, 2005; Adedeji, Okemakinde, & Ssempebwa, 2011; Kiadese, 2011; Gwembire & Katsaruware, 2013; Kathure & Mbijjiwe, 2014; Khumalo, 2017). Despite their potential to raise funds, TVET institutions in Swaziland are over dependent on the government for their financing, which is a factor that has contributed to current issues that affect the status of the TVET system in Swaziland (World Bank, 2014). Another issue, particularly in Woodwork and Carpentry, is an extensive curriculum with limited time for completion within the allocated time.

A theoretical framework that specifically addresses the exploration of classroom teaching and learning was developed by Mitzel (1969). This theory, which was later expanded by Dunkin and

Biddle (1974), informed the data collection and analysis processes of the study. This theory posits that teaching must take into account the following variables: teachers and students, their interactions, and the product of those interactions (Mitzel, 1969). Dunkin and Biddle (1974) categorized these variables into four groups: presage, context, process, and product variables. This study thus adopted Dunkin and Biddle's (1974) model in its investigation of the factors that impact the teaching and learning of Woodwork and Carpentry of agriculture in secondary schools in the Manzini region in Swaziland. The study thus used Mitzel's theory, as adapted by Dunkin and Biddle, to understand how and why macro policy and micro institutional factors influenced the teaching and learning of Woodwork and Carpentry in Form V.

To generate the required data, I used a qualitative ethnographic design which allowed me to approach the research from multiple sources and methods. Using a multi-method approach, I observed various activities mostly within the classroom and workshop. I further observed the school context and facilities. I used semi-structured individual interviews with the participants (the Principal, Deputy Principal, Head of Prevocational department, subject teachers and students). The interviews and observations were augmented by analyzing relevant school documents. The participants were selected using purposive sampling. The data were recorded by means of an audio recorder and field notes and were analyzed thematically. Ethnography as a research method allowed me to generate in-depth data that were utilised to elicit interpretations and assertions about the factors affecting the teaching and learning of Woodwork and Carpentry in Form V.

5.3 Summary of the Findings

In my quest to discover what factors affected the teaching and learning of Woodwork and Carpentry in Form V in a secondary school in Swaziland, I found that both institutional and macro-policy factors impacted the teaching and learning processes of this subject. The institutional factors included: the low status accorded to Woodwork and Carpentry as a high school subject; an inappropriately qualified subject teacher; a lack of pedagogical subject content knowledge; pressure for curriculum coverage and limited time to do so; a lack of teaching and learning resources; and a poorly managed infrastructure.

These findings corroborated the findings of other research studies such as those by Idehen and Oshodin (2008) and Okobia and Egharevba (2010), who also noted that inadequate time allocation, lack of qualified teachers, lack of relevant textbooks, pamphlets and posters were factors central to poor teaching and learning in secondary schools.

Findings pertaining to macro-policy factors included: limited financial support for this subject by the government of Swaziland and a lack of industrial participation in work integrated learning. This finding corroborated the findings of Woyo (2013), who recommend that Technical and Vocational Education and Training institutions should forge synergies with industry in order to enhance their competencies. This strategy could be helpful in combining theory and practical work in Woodwork and Carpentry using a mentorship programme and exposing both teachers and students to the practical applications of woodwork and carpentry skills.

5.4 Discussion of the findings

The findings revealed that the teaching and learning of Woodwork and Carpentry in Nkanku secondary school in Manzini, Swaziland, was affected by a multiplicity of factors. The school-based factors in particular affected the teaching and learning of this subject in multiple ways, ranging from the level at which it may be selected as a subject in the curriculum by individual students, the perception of its low status in the school and community, pressure exerted on teachers and students to complete its comprehensive curriculum in a limited time period, to inadequate teacher qualification/training resulting in limited pedagogical content knowledge.

In addition, the macro-policy factors affecting the teaching and learning of Woodwork and Carpentry were identified as minimal funding from the government and lack of school-industry partnerships. Using the theoretical model of Mitzel (1969) as augmented by Dunkin and Biddle (1974), this study argues that the presage variables were fundamental in understanding the factors that affected the teaching and learning of Woodwork in Form V in the school under study. In response to the research questions, the data that were analyzed using this model revealed findings that elucidated the factors impacting the teaching and learning of Woodwork in Form V in the participating school. These factors are presented in Figure 5.1 below:

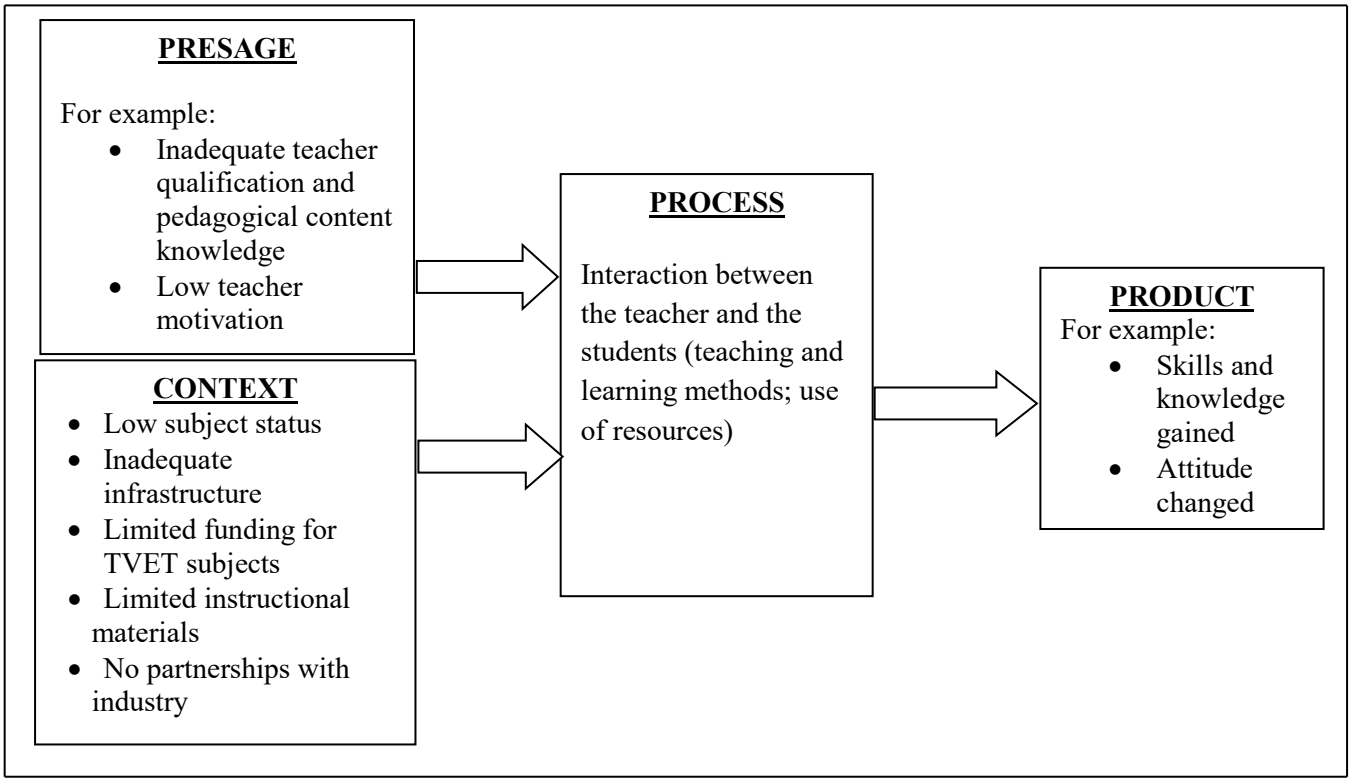

Figure 5.1: Factors affecting the teaching and learning of Woodwork and Carpentry according to the Mitzel (1969) model as adapted by Dunkin and Biddle (1974)

These findings seem to suggest why the attitude of most parents, students and teachers towards Woodwork and Carpentry continues to be negative. The emphasis on prestige and the concomitant low social acceptability of the subject inarguably contribute towards the negative attitude of students towards the subject. This in line with Gwembire and Katsaruware (2013), who state that negative attitudes adversely impact students' performance in pre-vocational subjects. The problem persists that students and parents prefer a traditional academic education over a more practical and vocational orientated curriculum, particularly in schools where they are taught together with more academically inclined students (Maravanyika, 2011). This implies

that, in order to eradicate these negative attitudes towards pre-vocational subjects, there should be careful planning and a desire to improve the country's model of pre-vocational education.

The findings corroborate well with Giva (2006), who also found that teachers are poorly equipped to deal with some of the challenges that the system poses, such as the reality of large class sizes, the unavailability of didactic materials, and gender disparities. The latter finding was not corroborated by the current study as only male students had been involved in the investigation. However, what was clear was that the participants strongly agreed that curriculum overload for the allocated time to teach the subject affected the teaching and learning of Woodwork and Carpentry in the school. It is argued that the grossly inadequate resources and workshop equipment in the school under study rendered the teaching and learning of Woodwork and Carpentry more theoretical than practical.

This finding illuminates a disconcerting paradox as the primary intention of pre-vocational subjects is to equip students not only with theoretical, but particularly with practical and entrepreneurial skills for the world of work. The observation of a lack of entrepreneurial incentives was also disconcerting, as no evidence of efforts to engage the students in even limited woodwork and carpentry entrepreneurial projects was visible. This exposed a lack of training and insight not only on the side of the subject teacher, but of management as well. Surely the Deputy Principal, who was better qualified, could have encouraged and provided in-service training to ensure that the subject teacher fulfilled this mandate.

These findings are in line with those of Giva (2006), who also found that teachers were poorly equipped and lacked support an initiative to deal with the challenges that the system poses, such as the unavailability of teaching and learning materials. Teaching and learning resources should be used to enhance effective learning (Kisirikoi & Malusu, 2008), and in the pre-vocational band this learning includes the acquisition of entrepreneurial skills. Depending on the availability of resources and equipment, the implementation of the curriculum is either enhanced or inhibited (Kingombe, 2012). It then follows that the inadequacy of facilities, equipment and materials influences the implementation of pre-vocational subjects in schools, as was the case in the school under study.

The findings of the current study have some implications for the improvement of the teaching and learning of Woodwork and Carpentry, and these implications were derived from the participants' insightful reflections on and understanding of their position and status as teachers and students of this subject. One fact that emerged was that the participants were conscious of the importance of this subject for self-employment and job creation, but that they were demotivated in the face of so many challenges that impacted their enjoyment and appreciation of the subject. It is only natural that if one's peers, teachers and parents view one's subject choice in a derogatory manner, one will lose interest and plod along rather than spread one's wings and soar. Hence the creation of a positive context and preset for this subject is crucial to ensure that it will equip and motivate these students to deliver only their best. In essence, the findings imply that there is a dire need to regularly inspect and, if found lacking, to improve the facilities for the teaching and learning of Woodwork and Carpentry in all schools. Adequate provision of

resources and well qualified Woodwork and Carpentry teachers are crucial in enhancing the teaching and learning of the subject.

5.6 Limitations of this study

This study was limited to a small sample of participants from one high school in a rural setting where data were collected from one subject teacher, one principal, one deputy principal and one head of subject and eleven Woodwork and Carpentry students. However, selecting only one school for this study enabled me to study the phenomenon as a snapshot rather than a tapestry that presents a picture of the entire population.

The data that were collected were of a general nature and were limited to the teaching and learning of Woodwork and Carpentry involving only Form V students in the chosen high school. For this reason, the perceptions of the teachers and students in this study are not representative of the population of all schools in Swaziland, but can only represent a case of the population. Parents, students and teachers of other practical subjects such as Design and Technology, Business Studies, Home Economics and Agriculture Studies were excluded from this study.

The methodological limitations were such that the sample was limited to one subject teacher, one principal, one deputy principal and one head of department for this subject (Woodwork and Carpentry) from one high school in a rural setting. It is acknowledge that if parents had been included in this study, a much broader perspective would have been illuminated.

This was an ethnographic study that aimed to generate in-depth information from a relatively small sample and thus the findings cannot be generalized. Moreover, the study examined the challenges of only one pre-vocational subject. The inclusion of other subjects could have given a different perspective of this phenomenon.

Another limitation was that, although I used probing during the interviews to obtain more detail on some aspects, the nature of the collected data was too open. The use of a mixed methods research design could have enhanced this study, but this methodology was not possible due time constraints and the small sample size. However, the rich data that I collected helped me to interpret the perceptions and activities of the participants.

5.7 Challenges experienced in the execution of the Study

One challenge was time constraints as this study was conducted during my working time. I had to repeatedly request permission from my employers which became annoying for them as they were not used to the nature of ethnographic studies. Moreover, my participants were also not familiar with this kind of study and they did not understand my prolonged presence in their school. However, I exercised patience which helped me to obtain the required data.

This study was conducted in the hope of identifying and documenting factors that impact the teaching and learning of Woodwork and Carpentry as a pre-vocational subject. Despite the limitations mentioned above, it is my contention that, if the findings are appropriately

disseminated by means of for example workshops and journal articles, this study will help to shed light on the factors that affect the teaching and learning of Woodwork and Carpentry. Armed with this information, policy makers, curriculum designers, implementers and administrators may use the findings for effective planning and policy formulation in order to improve the delivery of Woodwork and Carpentry in secondary schools as and when needed.

5.8 Implications

In light of the findings and the conclusions drawn, this study has several implications for education policy, practice and further research.

5.8.1 Implications for policy development

Even though the Swaziland Ministry of Economic Planning and Development Policy (2006) sets a foundation for the introducing of a pre-vocational education programme in selected schools, there is still a need for interventions to ensure the actual implementation of the policy at school level. Therefore, those involved in the monitoring of the implementation of this policy will have to understand the capacity of school communities regarding the implementation of pre-vocational education. For example, proper funding structures and procedures for procurement and the maintenance of equipment for a sustainable pre-vocational programme should become matters for urgent implementation rather than policy alone.

5.8.2 Implications for practice

A lack of industrial attachments that involve teachers and students of Woodwork and Carpentry is a serious oversight that should be addressed. Thus partnerships between specific schools and industries should be encouraged through the enforcement of the social learning theory whereby students learn by observing, imitating and modeling. The provision of sufficient resources such as textbooks, relevant and sufficient machinery and tools, and properly qualified teachers should be addressed as a matter of urgency. Moreover, those officials who are involved in the supervision and monitoring of this subject at school level should be technically aware of the expectations of the teaching and learning of this subject in order to notice any anomalies that may need to be corrected, such as workshop cleanliness and proper stock inventory keeping.

5.8.3 Implications for research

In consideration of the study limitations arising from the issues that were beyond the scope of this study, further research should be conducted to determine the impact of these issues in efforts to improve the teaching and learning of this subject. A study to establish the causes of low enrolment in this subject should be undertaken. The outcome of such a study could resolve the issue of the under utilisation of space, tools and other equipment, as was revealed by my study.

The findings of this study will fill the gap in the literature on education in Swaziland, with specific reference to the factors that affect the teaching and learning of Woodwork and Carpentry in Form V. However, there were several limitations that the present study could not address. For example, a key methodological limitation was the approach to data collection. It is thus

suggested that a mixed methods study that covers more schools, including those in urban and semi-urban areas, be conducted in order to achieve a more generalizable outcome. Moreover, a study on the impact of work integrated learning should be undertaken to ascertain the viability of this approach in the context of pre-vocational education in Swaziland.

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APPENDIX A

INTERVIEW GUIDE FOR TEACHERS

SECTION A: PERSONAL INFORMATION

Interviewer to fill in missing information (where appropriate) or tick the appropriate responses

1. Name of this School.

_____

2. Sex: Male. _____ Female. _____

3. Age: 20 – 30

31 – 40

41 – 50

51 and above

4. Teaching Experience. _____ years

5. Teaching Qualification (to be specified

Certificate

_____

Diploma

_____

Degree _____

Masters

Degree_____

Factors within the school

1. School management/leadership factors

1.1 How does the school administration support the teaching of Woodwork and Carpentry?

1.2 How much time does the school administration give to the teaching of Woodwork and Carpentry?

1.3 Is the time given to this subject enough as compared to the work load or scope of the Woodwork and Carpentry syllabus? Elaborate.

1.4 How does the administrator do a follow up on the subject to make sure that the teaching of the Woodwork and Carpentry subject is not affected?

1.5 Does the administrator have influence or ideas that he/she gives to improve the teaching of the Woodwork and Carpentry subject? If yes state those you can remember.

1.6 In your opinion, in what way does the administrator affect the teaching of Woodwork and Carpentry and how?

2. Teacher Factors

2.1 How qualified Is the teacher to teach Woodwork and Carpentry?

2.2 For how long has the teacher been teaching the subject in the school?

2.3 Describe the pass rate since the presence of the current teacher for Woodwork and Carpentry.

2.4 Does the teacher have teaching materials for the subject?

2.5 are you dedicated to your work? Explain your response.

2.6 Explain how does the teacher teach the subject?

2.7 Does the teacher give an equal opportunity to all his/her students? Elaborate.

2.8 How does the teacher motivate the students?

2.9 In your opinion what is expected from the Woodwork and Carpentry teacher in the school?

3. Learner factors

3.1 How are the students encouraged to choose Woodwork and Carpentry?

3.2 How do the students show interest of learning the subject?

3.3 How do the students learn the subject?

3.4 Describe the type of students enrolled in this program.

3.5 Explain the knowledge of the students on; what, when and how machinery and the tools which they use.

3.6 Describe whether or not you think the learning environment is ideal for all kinds of the students.

3.7 In your opinion how does the school environment affect the teaching of the Woodwork and Carpentry subject in the school?

4. Resource provision.

4.1 Who provides the teaching material for Woodwork and Carpentry?

4.2 Explain how the school ensures that that the material is always enough for all the Woodwork and Carpentry students for the whole year.

4.3 If a student could get injured, explain how he/she can be assisted in order to get first aid.

4.4 What do you understand by, 'Safety Precaution'?

4.5 Where are safety precautions placed around the learning environment?

4.6 What do the students wear during the Woodwork and Carpentry period?

4.7 In your opinion how are the learning resources important in the Woodwork and Carpentry class?

<u>Factors outside the school</u>

1. Government Funding

1.1 How much contribution does the Government add towards the learning of the Woodwork and Carpentry subject in this school?

1.2 Do you think the subject is globally or locally recognized? Explain your answer.

1.3 How do you think the Government affects the learning of Woodwork and Carpentry in schools?

2. Educational policies

2.1 Do you think the learning of Woodwork and Carpentry is meant for every student or is suitable for some certain types of individuals? Explain your answer.

2.2 Describe how students are selected to learn the Woodwork and Carpentry subject.

2.3 What is the learning protocol for Woodwork and Carpentry students in the school?

2.4 Do you think there is need to review Educational Policies in order to improve the teaching of Woodwork and Carpentry in school? If so, explain how?

3. Work/Job prospects

3.1 Do you think there are job opportunities available for Woodwork and Carpentry students?

3.2 Are there any learning opportunities at tertiary level for Woodwork and Carpentry students? Please elaborate.

3.3 In your opinion, what are the benefits of learning Woodwork and Carpentry after finishing school?

3.4 What should be done to improve work/job prospects for Woodwork and Carpentry students?

APPENDIX B

OBSERVATION GUIDE

The following dimensions will be used to classify field-notes under observations

Space = physical lay-out of the place(s),

Actor = range of people involved,

Activity = a set of related activities that occur,

Object = the physical things that are present,

Act = single actions people undertake,

Event = activities that people carry-out,

Time = the sequencing of events that occur,

Goal = things that people are trying to accomplish,

Feeling = emotions felt and expressed.

Dimension	**Observational Notes**
Space	
Actor	
Activity	
Object	
Act	
Event	
Time	
Goal	
Feeling	

APPENDIX C

STUDENTS' FOCUS GROUP DISCUSSION GUIDE

WELCOME

Thanks for agreeing to be part of the focus group. We appreciate your willingness to participate.

INTRODUCTIONS

Introduce your team and let each participant to introduce themselves.

PURPOSE OF THE FOCUS GROUP DISCUSSION

- Explain the purpose and the importance of this focus group discussion,
- The reason we are having this Focus Group Discussion is to find out your opinions, thoughts, feelings, needs, concerns, aspirations, and suggestions towards the teaching and learning of Woodwork and Carpentry,
- Explain why they have been chosen to be part of this discussion,
- Explain to the participants how confidentiality matters will be handled and then ask participants to sign consent forms,
- We need your input and want you to share your honest and open thoughts, feelings, opinions, and suggestions with us.

GROUND RULES

1. **WE WANT YOU TO DO THE TALKING**
    - We would like everyone to participate.
    - I may call you if I haven't heard from you in a while.
2. **THERE ARE NO RIGHT OR WRONG ANSWERS**
    - Every person's experiences and opinions are important.
    - Speak up where you agree or disagree.
    - We want to hear a wide range of opinions.
3. **WHAT IS SAID IN THIS ROOM STAYS HERE**
    - We want you to feel comfortable sharing when sensitive issues come up.
4. **CELLPHONES ARE EXPECTED TO BE ON THE SILENT MODE**

- To avoid disturbances.
- People can respond to calls during breaks, or if its urgent you are free to excuse yourself and respond.

HANDOVER TO MODERATOR

- ***Before asking the first focus group question, an icebreaker will be inserted to increase comfort and level the playing field***

WOODWORK AND CARPENTRY STUDENTS' FOCUS GROUP DISCUSSION QUESTIONS

Factors within the school

1. School management/leadership factors

1.1 How does the school administration support the teaching of Woodwork and Carpentry?

1.2 How much time does the school administration give to the teaching of Woodwork and Carpentry?

1.3 Is the time given to this subject enough as compared to the work load or scope of the Woodwork and Carpentry syllabus? Elaborate.

1.4 How does the administrator do a follow up on the subject to make sure that the teaching of the Woodwork and Carpentry subject is not affected?

1.5 Does the administrator have influence or ideas that he/she gives to improve the teaching of the Woodwork and Carpentry subject? If yes state those you can remember.

1.6 In your opinion, in what way does the administrator affect the teaching of Woodwork and Carpentry and how?

2. Teacher Factors

2.1 How qualified Is the teacher to teach Woodwork and Carpentry?

2.2 For how long has the teacher been teaching the subject in the school?

2.3 Describe the pass rate since the presence of the current teacher for Woodwork and Carpentry.

2.4 Does the teacher have teaching materials for the subject?

2.5 are you dedicated to your work? Explain your response.

2.6 Explain how does the teacher teach the subject?

2.7 Does the teacher give an equal opportunity to all his/her students? Elaborate.

2.8 How does the teacher motivate the students?

2.9 In your opinion what is expected from the Woodwork and Carpentry teacher in the school?

3. Learner factors

3.1 How are the students encouraged to choose Woodwork and Carpentry?

3.2 How do the students show interest of learning the subject?

3.3 How do the students learn the subject?

3.4 Describe the type of students enrolled in this program.

3.5 Explain the knowledge of the students on; what, when and how machinery and the tools which they use.

3.6 Describe whether or not you think the learning environment is ideal for all kinds of the students.

3.7 In your opinion how does the school environment affect the teaching of the Woodwork and Carpentry subject in the school?

4. Resource provision.

4.1 Who provides the teaching material for Woodwork and Carpentry?

4.2 Explain how the school ensures that that the material is always enough for all the Woodwork and Carpentry students for the whole year.

4.3 If a student could get injured, explain how he/she can be assisted in order to get first aid.

4.4 What do you understand by, 'Safety Precaution'?

4.5 Where are safety precautions placed around the learning environment?

4.6 What do the students wear during the Woodwork and Carpentry period?

4.7 In your opinion how are the learning resources important in the Woodwork and Carpentry class?

<u>Factors outside the school</u>

1. Government Funding

1.1 How much contribution does the Government add towards the learning of the Woodwork and Carpentry subject in this school?

1.2 Do you think the subject is globally or locally recognized? Explain your answer.

1.3 How do you think the Government affects the learning of Woodwork and Carpentry in schools?

2. Educational policies

2.1 Do you think the learning of Woodwork and Carpentry is meant for every student or is suitable for some certain types of individuals? Explain your answer.

2.2 Describe how students are selected to learn the Woodwork and Carpentry subject.

2.3 What is the learning protocol for Woodwork and Carpentry students in the school?

2.4 Do you think there is need to review Educational Policies in order to improve the teaching of Woodwork and Carpentry in school? If so, explain how?

3. Work/Job prospects

3.1 Do you think there are job opportunities available for Woodwork and Carpentry students?

3.2 Are there any learning opportunities at tertiary level for Woodwork and Carpentry students? Please elaborate.

3.3 In your opinion, what are the benefits of learning Woodwork and Carpentry after finishing school?

3.4 What should be done to improve work/job prospects for Woodwork and Carpentry students?

4. Strategies that are used to mitigate these factors

4.1 What strategies does the school use to mitigate the factors that are within the school?

4.2 What strategies does the school use to mitigate the factors that are outside the school?

APPENDIX D

INFORMED CONSENT LETTER

Social Sciences, College of Humanities,

University of KwaZulu-Natal,

Edgewood Campus,

Dear Participant

INFORMED CONSENT LETTER

My name is ……. I am an Education Masters candidate studying at the University of KwaZulu-Natal, Edgewood campus, South Africa.

I am interested in exploring the factors that affect the teaching and learning of Woodwork and Carpentry at your school.. Your school has been chosen for my case study. To gather the information, I am interested in asking you some questions.

Please note that:

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person, but reported only as a population member opinion.
- The interview may last for about 1 hour and may be split depending on your preference.
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- You have a choice to participate, not participate or stop participating in the research. You will not be penalized for taking such an action.
- The research aims at knowing the challenges of your community relating to resource scarcity, peoples' movement, and effects on peace.
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.
- If you are willing to be interviewed, please indicate (by ticking as applicable) whether or not you are willing to allow the interview to be recorded by the following equipment:

	willing	Not willing
Audio equipment		
Photographic equipment		

Video equipment		

I can be contacted at:

Email: hlophe.tolly@yahoo.com

Cell: +268 76241209

My supervisor is Dr. Zanel Dube - Xaba who is located at the School of Education, Edgewood campus of the University of KwaZulu-Natal.

Contact details: email: dubez@ukzn.ac.za Phone number: ++27723479030

Edgewood College, University of KwaZulu-Natal

You may also contact the Research Office through:

P. Mohun

HSSREC Research Office,

Tel: 031 260 4557 E-mail: mohunp@ukzn.ac.za

Thank you for your contribution to this research.

DECLARATION

I…… (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT DATE

APPENDIX E

LETTER TO THE SWAZILAND MINISTRY OF EDUCATION AND TRAINING FOR PERMISSION TO CONDUCT RESEARCH AT NKANKU HIGH SCHOOL

Tolly Mabonga Hlophe

Cell: 76241209

Email: hlophe.tolly@yahoo.com

The Director (Through the Permanent Secretary)

Ministry of Education and Training

P. O. Box 39

Mbabane

Swaziland

Dear Sir/Madam

Re-Application for permission to conduct research on the title: '***Exploring factors affecting the teaching/learning of Woodwork and Carpentry subject to form five Pre-Vocational students at a rural high school in Swaziland: an Ethnographic study***' of a Secondary school in the Manzini Region of Swaziland

I am a Pre-Vocational Curriculum Developer who is currently enrolled at the University of KwaZulu-Natal for a M Ed (Curriculum Studies). I am conducting a research study as a fulfillment for this degree. The aim of the study is to understand the perspectives of teachers and students on factors that affect the teaching/learning of ***Woodwork and Carpentry*** and to understand how these perspectives could be used for the improvement of Woodwork and Carpentry curricula materials and its teaching/learning. It is an in-depth study exploring *factors*

within and **without** a school as understood by teachers and students in a rural context. This study is critically important to engage with and listen to the voices of a rural community to understand their experiences better. I hereby request permission to conduct research at Nkanku High School in the Manzini Region of Swaziland from *August 2015 to August 2016.*

As an ethnographer, I will be conducting participant observational research, which means, I will become heavily involved in sharing lived experiences of the school community by spending extended periods of time in this school. The research will take the form of semi-structured interviews, observations as well as document review. Semi-structured interviews will be conducted with Form IV Woodwork and Carpentry students, and Form IV *Woodwork and Carpentry* teachers.

These interviews will take about 45 minutes each. Before the interview, I will arrange a time and place for the interviews that will be convenient to my participants. During the interviews, I will ask questions, record and make some notes on responses. With the participants' permission I will tape-record the interviews to help me capture what was said. These tapes will be erased once the specified storage time has elapsed. After writing up the data, I will discuss it with the participants to check that it accurately reflects their viewpoint. The interview data will be treated with strict confidentiality and will be used for research purposes only and the school, the principal, teachers, parents/guardians and students will not be named. I will do observations of staff meetings, school-based professional development sessions, co-curricular and extra-curricular

activities. Observed critical incidents occurring in the school that are relevant to the teaching of *Woodwork and Carpentry* will be identified, recorded and discussed with participants. Document review will include the school meetings minute books; school policy and the code of conduct for students; Teacher's Preparation book, assessment records, and scheme books, and School Improvement Plan. I will use a field note book to do regular informal writings documenting interactions with teachers, students and parents and school occurrences and critical incidents.

Permission to work at the school will be sought from the principal. Letters of informed consent will be given to all participants i.e. teachers, parents/guardians and students. Letters will be sent to parents/guardians of participating students seeking permission to work with their children.

You have my assurance that the research will not infringe on your normal school programme or have any financial implications for your school.

I thank you for your time and hope that my request meets with your approval.

Yours faithfully

Signature_____

Tolly Hlophe

14/05/2015

Date _____

APPENDIX F

LETTER FROM THE MINISTRY OFEDUCATION AND TRAINING GRANTING PERMISSION

MINISTRY OF EDUCATION & TRAINING

Kingdom of Swaziland

P.O. Box 39
Mbabane
Swaziland

Phone 268 404 2491/3
Fax 268 404 3880

6th November, 2017

Attention:
Headteacher – Emvimbeko High School

Through:
Manzini Regional Education Officer

Dear Colleague,

Re: Request for Permission to Collect Data for University of KwaZulu Natal Student – Tolly Mabonga Hlophe

1. Reference is made to the above mentioned subject.

2. The Ministry of Education and Training has received a request from Mr. Tolly Mabonga Hlophe a student at the University of KwaZulu Natal, that in order for him to fulfil his academic requirements at the University of KwaZulu-Natal, he has to collect (conduct research) and his study or research topic is: Exploring Factors Affecting Teaching of Woodwork and Carpentry to Form Five Pre-Vocational Students at a Rural High School in Swaziland: An Ethnographic Study. The population for his study comprises one subject teacher, seven woodwork and carpentry students, one Headteacher as well as seven parents/guardians. All details concerning the study are stated in the participants consent form which will have to be signed by all participants before Mr. Hlophe begins his data collection. Please note that parents will have to consent for all the participants below the age of 18 years participating in this study.

3. The Ministry of Education and Training request your office to assist Mr. Hlophe by allowing him to use above mentioned school in the Manzini region as his research site as well as facilitate him by giving him all the support he needs in his data collection process. Data collection period is twelve months.

DR. SIBONGILE M. MTSHALI-DLAMINI
DIRECTOR OF EDUCATION AND TRAINING

MINISTRY OF EDUCATION TRAINING
2017 -11- 06
BOX 39
MBABANE
SWAZILAND

cc: Regional Education Officer – Manzini
Chief Inspector – Secondary
1 Head teacher of the mentioned school
Mr. Sabelo Mthembu

APPENDIX G

ETHICAL CLEARANCE CERTIFICATE

9 December 2015

Mr Tolly Mabonga Hlophe 213574045
School of Education
Edgewood Campus

Dear Mr Hlophe

Protocol reference number: HSS/1263/015M
Project title: Exploring factors affecting effective teaching/learning Metal Fabrication and mitigation strategies in a rural high school in Swaziland.

Full Approval – Expedited Application

In response to your application received 7 September 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application 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.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....

Dr Shenuka Singh (Chair)
Humanitities & Social Scinces Research Ethics Committee

/pm

Cc Supervisor: Ms Zanele HW Dube
Cc Academic Leader Research: Professor P Morojele
Cc School Administrator: Ms T Khumalo

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za