

**Visualising undergraduate students' achievement emotions: family, technology and
aesthetics**

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Declaration

I, Terry Shuttleworth, declare that:

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2. This dissertation has not been submitted for any degree or examination at any other university.
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Date: 14 August 2023

Dedication

This dissertation is dedicated to Timothy Barry for his steadfast belief in my humanity and development as an empathic person. His unwavering support for the past four years of my life has seen me through some of the most challenging times, without whom, I would not be at the start of an exciting career as a psychologist.

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- My research participants, who were the inspiration for my work, you are the role models who despite all the challenges you faced, especially while navigating your learning during the Covid-19 pandemic, identified, acknowledged and embraced your achievement emotions as part of your learning journeys.

Abstract

In the educational context, achievement emotions are the range of emotions that a student may experience during and use for the purposes of academic achievement and outcome-oriented activities (e.g., studying for a test, writing a test, and obtaining the results on a test). Achievement emotions can therefore be understood as important mediators that, if recognised and managed appropriately, could transform a student's educational efforts and outcomes. Grounded in Pekrun's Control Value Theory of achievement emotions, this dissertation explores achievement emotions among university students, and presents these emotions as individually and socio-culturally mediated processes which add depth to conceptualising the ways in which students can achieve at university. Using Photovoice as a participant driven and empowering data production strategy and reflexive thematic analysis to analyse the data produced, the researcher explores the subjective meanings that six students gave to the variety of achievement emotions they experienced in their learning journeys. Three main themes suggest that family, technology, and an aesthetic learning space underpin and facilitate the students' achievement emotions of enjoyment, excitement, hope frustration, defeat, and anxiety. The findings indicate that photovoice as a data production strategy conscientised participants to their achievement emotions, speaking to the emancipatory nature of this method.

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Chapter One – Historical, Contextual and Conceptual Perspectives of Achievement Emotions and Learning

1.1. Introduction

Chapter One introduces the historical context and development of achievement emotions research over the past 20 years. The chapter further highlights the lack of coherent research in achievement emotions, existing gaps in the research, ways to increase understanding around the cognitive, motivational and affective components of students' learning (Pekrun, 2006) as well as strengthening students' psychological and physical well-being (Pekrun et al., 2002). Finally, the rationale, overall and specific research objectives, research questions and location of for the study are discussed.

1.2. Historical Context of Academic Emotions and Learning

The majority of previous research on achievement emotions has focused entirely on test anxiety (Pekrun et al., 2002) while other achievement emotions have essentially been neglected by educational researchers. To address this gap, Pekrun and Perry (2014) and other researchers have contributed much to understanding “other” achievement emotions in greater detail. Most research that has been conducted has used specific research and theoretical perspectives (i.e., mood research, achievement motivation, and hopelessness theory) and limited their research to one or two achievement emotions (Pekrun et al., 2002).

Pekrun et al.'s. (2002) work has highlighted the importance that academic learning and achievement play in society. Specifically, much of our productive academic and work lives, social interactions, and the distribution of resources (e.g., access to schooling, bursaries, scholarships, and employment opportunities) have largely been regarded as being dependent on individual achievement. Therefore, Pekrun et al. (2002) emphasise how important learning and achievement are in accessing emotions and activating various “self-referenced, task-related, and social emotions” (p. 92). While exploring how emotions generally influence individual motivation (agency), they are also expected to influence individuals’ cognitive functioning as well as their mental and physical health in educational settings (Pekrun et al., 2002).

In an analysis of five qualitative studies, Pekrun et al. (2002) discovered that students experience a diverse range of emotions in academic settings. Given this discovery, theories and studies that limit the experience of multiple emotions may miss vital information related to understanding students’ affective lives (Hailikari et al., 2016). Overall, anxiety as an emotion accounted for 15 to 25% of all emotions reported in several areas of the learning environment (Pekrun et al., 2002). The pressure to achieve and fear of failure were reported to greatly increase emotional responses, thus indicating a need to enhance students’ mental health (Raccanello et al., 2022) so they can develop the coping mechanisms to effectively deal with academic demands, and thereby increasing their opportunities for success (Pekrun et al., 2002). One way that students reported coping was explained by their meta-emotions: the way they feel about their emotions. For example, several students reported feeling angry about experiencing anxiety before examinations. For some of them, this anger assisted them in creatively managing their anxiety. These findings indicate that meta-emotions may enable students to manage their negative emotions, which education officials may

want to consider when supporting students with their emotional experiences . In Pekrun et al's. (2002) development of the Academic Emotions Questionnaire (AEQ), they discovered students experience a diverse range of emotions such as enjoyment, hope, pride, relief, anger, shame, anxiety, boredom and sadness. Pekrun et al. (2002) considered three criteria for the inclusion of emotions when developing the AEQ scale: first, scales that represent the principal emotions experienced by students in academic settings, second, achievement emotions that were most commonly reported in their exploratory research, and third, both positive and negative emotions as well as activating and deactivating emotions based on the two dimensions of valence and activation which determine the effects of emotions (Behrens et al., 2019; de la Fuente et al., 2020; Duffy et al., 2020). The findings further highlighted the significant influence “achievement emotions have on students’ motivation, learning strategies, cognitive processes, self-regulation, and academic achievement as well as to personality and antecedents” at school and university (Pekrun et al., 2002, p. 91). Pekrun et al. (2002) therefore recommended the need to strengthen emotion research in educational psychology. Thus, achievement emotions encompass the experiences of learning, classroom instruction and achievement (O’Toole & O’Flaherty, 2022; Pekrun et al., 2002; Pekrun, 2019).

1.3. Rationale for the Study

In the context of this study, emotions can be understood from psychological and biological perspectives encompassing multiple components of “interrelated psychological processes including affective, cognitive, physiological, and motivational component processes” (Pekrun et al., 2002, p. 95). This conceptualisation goes beyond understanding the traditional understanding of test anxiety by considering components of motivation as well. Pekrun (2006) specifically

conceptualises achievement emotions as “tied directly to achievement activities or achievement outcomes...e.g. activity emotions pertaining to ongoing achievement-related activities, and outcome emotions pertaining to the outcomes of these activities” (p. 317), which are seen as emerging from learning, classroom instruction and/or the frustration and anger students experience when completing challenging assignments (Pekrun et al., 2002). Generally, achievement emotions occur briefly in a specific learning context at a specific time or are repeatedly experienced by an individual related to achievement activities and outcomes (Pekrun, 2006). Thus, in this study, the achievement emotions commonly experienced by students will be explored in greater detail related both to their learning activities and the outcomes of these activities to gain a more coherent understanding of the reciprocal effects achievement emotions have on their learning trajectories (agency) (Bandura, 2006). The research problem pertains to attempting to understand the role achievement emotions play in learning and academic achievement.

Although achievement emotions are not new to educational research, very little research has focused on these emotions in the diverse and politically transformed higher education institutions (HEIs) outside of developed nations. Moreover, there appears to be no research on achievement emotions having been undertaken within (South) African universities. As such, a discussion of South Africa’s educational history and transformation within HEIs is discussed as a rationale for the study below.

The past 29 years has seen major transformation in the higher education sector since the end of the Apartheid era. Prior to democracy, higher education was physically, ideologically, culturally, and racially fragmented with financial support being awarded based on race and culture. A defining

feature of the transformation in universities has been the physical and ideological integration of a system that was fragmented, separate, and unequally financed according to race, culture, and ethnicity (Council on Higher Education [CHE], 2016). While inequalities still exist in South African universities, a more diverse population is represented by students and staff (CHE, 2019). As a transformative strategy and in line with global educational trends, there has been a move to enhance students' academic achievement through the implementation of several teaching and learning projects, focusing on student access, throughput and achievement (CHE, 2016).

While a focus on university students' achievement emotions could inform education officials and policy makers of which positive and negative emotions influence students' performance, they could further provide officials with the personal resources students use to cope with their achievement demands. If negative emotions negatively influence students' performance, it is reasonable to assume fewer coping strategies and personal resources are available to them to complete their academic tasks. In turn, education officials can then implement programmes that evaluate the factors that can determine the resources that are required for their academic task completion. Additionally, assessing which are personal factors compared to situational factors would be important to understand. The findings of these programmes could provide valuable insights for formal intervention strategies to be developed for students and lecturers, with the aim of improving lecturing processes and to address the personal factors (de la Fuente et al., 2020). These aspects, therefore, provided a rationale for the study, the interpretive paradigm and methodology, and its focus on the reciprocal relationship between achievement emotions, student's study behaviours, the achievement activities and the outcomes of their achievement goals.

Thus, this research responds to three apparent gaps in the field. First, the research aims to explore the achievement emotions experienced by undergraduate students in a South African university. Achievement emotion research has only been explored in one other study of South African university students (Munro & Shuttleworth, 2021). Second, the research responds to the call for further research on achievement emotions in diverse educational settings, which South African universities typically signify. Third, achievement emotions are reportedly the most commonly experienced emotions by students with educational and psychological researchers only beginning to understand their functional importance and the need to integrate research more coherently in the field (Pekrun & Perry, 2014).

1.4. Structure of the Dissertation

This section provides a brief overview of the structure of the dissertation. Chapter One introduces the general historical perspective of achievement emotions over the past two decades, highlighting Pekrun and his colleagues significant contribution to the field. Findings from various studies and the gaps in field are further described as well as the rationale for the study. Additionally, the history of higher education in South Africa and its subsequent transformation is discussed. In Chapter Two, achievement emotions research in a variety of educational contexts is highlighted. Moreover, the Control Value Theory and the rationale for using it as a theoretical framework is discussed. Finally, the research objectives and research questions and a conclusion are provided. Chapter Three introduces and discusses the methodology of the study, specifically discussing the interpretive paradigm and the qualitative approach. It further reiterates the rationale and the relevance of the research questions to the rationale, including the research processes and a description of analyses that were employed to interpret the data. Finally, the ethical considerations

are described and concludes with a description of the quality, trustworthiness, and credibility of the study. Chapter Four provides participants' reflections of the cognitive, affective and motivational aspects of their learning behaviours, activities and outcomes related to the six key achievements emotions that emerged from the data. Chapter Five provides a detailed discussion of the interpretation of the data according to the *activation* and *valence* of each achievement emotion that was reported. Each achievement emotion discussed is supported by literature and the implications for the participants' study behaviours, learning activities and outcomes related to cognitive, affective and motivational aspects are discussed. Chapter Six discusses the implications and reflections, and the limitations and the strengths of the study. Finally, the recommendations for future research are discussed.

1.5. Conclusion

In Chapter One, the historical perspective of achievement emotions and learning research in the field was discussed, especially contributions by Pekrun and his fellow researchers. Various findings from across the globe, and the lack of coherence and gaps within the field were discussed. Additionally, the historical perspective of higher education in South Africa and the relevance of achievement emotions to encouraging access, participation, throughput and achievement in diverse educational settings was further explained as the research problem and the rationale for the study.

Chapter Two – Literature Review and Theoretical Framework

2.1. Introduction

Chapter Two will introduce and discuss findings from achievement emotions research globally and the CVT with its relevance to this study. The theoretical assumptions and the justification for using the CVT will also be described. Moreover, achievement emotions within the framework of CVT will be highlighted. Additionally, other studies that have used CVT to explicate achievement emotions in several educational contexts will be discussed. Finally, the research objectives and research questions are provided before summarising the chapter.

2.2. Achievement Emotions

In a meta-analysis of achievement emotions, positive and negative arousal and academic performance of students across mainland China, Lei and Cui (2016) found overwhelming evidence of a positive relationship between positive high arousal (PHA), positive low arousal (PLA) and academic achievement and a negative relationship between negative high arousal (NHA), negative low arousal (NLA) and academic achievement. The analysis further revealed evidence that academic achievement has successfully been used as a method to evaluate changes in students' rates of success or failure, teachers' classroom management strategies, and the effectiveness of educational systems (Lei et al., 2015). Therefore, a considerable body of recent empirical research has concentrated on the reciprocal influence that achievement emotions have had on learning outcomes (Dong & Yu, 2007; Kim & Hodges, 2012); however, inconsistencies have been reported in the findings. Generally, several studies have found that in academic contexts, students who

experience positive emotions have a positive effect, such as high marks and good test results (Kim & Hodges, 2012; Villavicencio & Bernardo, 2013) while negative emotions have negative effects, such as low marks and poor test results (Fong Lam et al., 2015; Villavicencio, 2011). Thus, positive emotions seem to have a positive effect on keeping students interested in their studies over a longer period of time (Dong & Yu, 2007) while increasing their motivation and creative learning techniques, resulting in independent learning. In contrast, negative emotions (e.g., anger, anxiety, boredom, hopelessness, and shame) seem to have negative effects (Raccanello et al., 2022) because they can reduce students' motivation and interest in learning, thereby relying on extrinsic motivation (Behrens et al., 2019; Pekrun et al., 2017; Raccanello, et al., 2022) to avoid failure and often resulting in more mechanical learning strategies (e.g., repetitive memorising) (Pekrun et al., 2002; Turner & Schallert, 2001).

Previous empirical research has not considered whether negative emotions may positively influence academic achievement and conversely, that positive emotions may negatively influence learning outcomes (Turner & Schallert, 2001; Wang & Chen, 2005). This effect could possibly be because positive emotions lead to self-fulfilment and that negative emotions can positively influence learning by motivating students to persevere and adjust their learning behaviours to improve their achievement outcomes. Therefore, the influence of academic emotions on positive learning outcomes cannot be fully explained. These inconsistencies could be attributed to several factors such as small sample sizes and differences in participants' cultural beliefs, regional location, age, gender and achievement domain moderating the effects of academic emotions on achievement (Lei & Cui, 2016). The implications of their findings are similar to the traditional view that positive achievement emotions influences achievement emotions positively, and

negative achievement emotions influences academic achievement negatively (Villavicencio, 2011) and were influenced by several moderating factors. The findings of Lei and Cui's (2016) study were limited in that they only examined, the direct effects whereas it has been discovered that indirectly, achievement emotions influence academic achievement across other variables (Kim & Hodges, 2012). Thus, indirect influence of achievement emotions on academic success is needed in future research.

In a reciprocal effects study linking emotion and achievement over time using the PALMA longitudinal study, Pekrun et al. (2017) investigated adolescents' development in mathematics with results in line with the control value theory (CVT) of achievement emotions (Pekrun, 2006; Shuman & Scherer, 2014). The findings revealed that positive emotions positively predicted achievement trajectories and achievement positively predicted these emotions while controlling for gender, intelligence and socio-economic status. Additionally, negative emotions (anger, anxiety, shame, boredom, hopelessness) negatively predicted achievement trajectories, and achievement negatively predicted these emotions. These findings highlight the importance of emotions for students' achievement and of achievement for the development of emotions (Pekrun et al., 2017, p. 3). Furthermore, the findings indicate how achievement influences the development of emotions where performing well in school can increase students' positive emotions while decreasing negative emotions over time, whereas performing poorly in school decreases the likelihood of positive emotions and increases the experience of negative emotions. Together, these effects result in a positive reciprocal feedback model linking emotions and achievement over time while controlling for cognitive ability and demographic variables (Pekrun et al., 2017), which

represents a significant advancement over previous research that has mostly focused on unidirectional links between emotions and achievement.

In a more recent study, Parker et al. (2021) studied achievement appraisals, achievement emotions and performance in an online learning environment. The researchers interest was in the motivation profiles of students related to their achievement control and value appraisals in a two semester psychology module. The researcher's rationale for the study was based on the fact students who transition from school to university usually encounter unforeseen academic and personal challenges highlighted by unfamiliar teaching practices and online learning platforms involving obstacles to their motivation. Using latent profile analysis, three motivation profiles emerged that encompassed patterns of cognitions and emotions well-established and validated by the CVT (i.e., high control-enjoyment; low control-boredom; and low value-boredom). For example, students who had high control-enjoyment profiles believe they can control the outcome of their academic activities, value them, and experience higher levels of enjoyment and lower levels of boredom as they participate in their learning activities (Parker et al., 2021). The researchers found that high levels of control and value were aligned with moderate levels of anxiety in this profile consistent with the CVT. When students assign value to succeeding academically, the threat of failure is amplified, thus activating anxiety. However, when they believe they have control over their academic success, it decreases their anxiety in such a way that it does not interfere with their participation and achievement (Parker et al., 2021). In the low control-boredom profile, students value academic achievement but believe they have little to no control over achieving it or avoiding failure. In line with CVT, boredom was the most dominant emotion with some anxiety and only a little enjoyment. The third profile of low value-boredom is consistent with the CVT's hypothesis

that boredom is activated by students who place little value of academic activities and the outcomes. This profile possibly reflects students who find the course too easy. The CVT posits that these students have control over an activity but appraise it as having little to no value (Pekrun et al., 2007). These motivation profiles were important to understand as they contribute to a more in-depth understanding the participants' achievement emotions in the discussion chapter of this study.

Additionally, there is a lack of research related to the associations between CVT and online learning platforms at a time when educational systems globally are converting academic programs to Internet and computer-assisted platforms. Blended learning that includes a combination of Internet and in-person instruction, can create many distractions such as gaming, instant messaging and social media that, in turn, can negatively influence motivation and participation (Gaudreau et al., 2014; Moore & Kearsley, 2011; Wu, 2017 as cited in Parker et al., 2021). In a recent systematic review of a blended-online learning platforms, the main challenges students experienced were around motivation involving self-regulatory behaviour in using technology (Rasheed et al., 2020). While achievement emotion research has focused on traditional face-to-face classroom instruction, with relatively few studies examining such emotions in online settings (Artino & Jones, 2012), an online study by Tempelaar et al. (2012 as cited in Parker et al., 2021) found enjoyment related positively, and boredom negatively, to how often students evaluated and engaged in practice tests. Another study by Artino and Jones (2012) found enjoyment positively predicted motivated behaviours in an online learning platform. In light of the research on control-value appraisals and emotions importantly influencing motivational behaviours, these associations are worth researching in online learning platforms where there is an ever-increasing demand for focus and

attention, and more challenges for students to stay motivated in their learning contexts (Artino & Jones, 2012; Rasheed et al., 2020).

While the current study does not specifically focus on online learning, due to the Covid-19 restrictions, participants were forced to participate in an online learning platform as well as engage in the PEIs through online Zoom interviews. Thus, as there is a lack of research in this area and considering the global trend to convert to online learning platforms, the current study can importantly contribute to understanding participants' challenges in this environment given the limitations around the quality of instruction, academic participation and classroom environment (Parker et al., 2021).

As test anxiety (Alemu & Feyssa, 2020; Onwuegbuzie, 2004; Pekrun et al., 2017) has been one of the main emotions studied in the field of achievement emotions, the section below discusses research in statistics and mathematics anxiety both at high schools and universities.

2.2.1. Students' Statistics and Mathematics Anxiety

Just as considerable empirical evidence on test anxiety exists, there is much research on students' anxiety related to mathematics at school and statistics modules at universities globally. Specifically, there is significant empirical support for the assertion that self-reported trait anxiety is related to subjective beliefs involving personal competence (Goetz et al., 2013), which is a critical antecedent of anxiety and plays an important role in reporting trait emotions generally (Pekrun, 2006). In their research, Goetz et al. (2013) distinguish between students' trait and state

anxiety where trait anxiety refers to a student's consistent (habitual) experience of anxiety as an antecedent to their perceived competence in mathematics (as a self-reported measure), while state (momentary) anxiety is related to students' direct experience of anxiety prior to and during a mathematics test (Goetz et al., 2013). The

Two studies that investigated gender differences in trait anxiety compared to state mathematics anxiety in a sample of 584 and 111 students respectively, revealed that female students report higher levels of anxiety than their male counterparts. However, there were no gender differences indicated for state anxiety using experience-sampling methods while students completed a mathematics test in the first study and attended mathematics classes in the second study. The contradictory findings between trait and state mathematics anxiety were partially accounted for by female students reporting lower perceived competence in mathematics than male students despite having the same average grades in mathematics (Goetz et al., 2013). The researchers report the negative consequences anxiety has on mental health, self-regulated learning and academic achievement (Goetz et al., 2013).

Moreover, existing research on mathematics anxiety has almost always been self-reported related to trait anxiety and not state anxiety during real mathematics tests situations. Given the notable differences in the results, and the lack of state based anxiety measures related to mathematics, it raises the question whether gender differences actually exist between female and male students. The subsequent findings of the two studies reported no actual differences between girls and boys mathematics anxiety and confirmed that female students only perceive they are less competent in

mathematics compared to male students when in actual fact, they perform just as well as male students (Goetz et al., 2013).

In another study that sought to qualitatively explore the views of 26 graduate students towards a statistics module, the findings reported five themes related to statistics anxiety: importance of the module, mathematics skills, computer skills, examination stress and foreign language skills. The findings indicate that graduate students believe that it is important to regularly attend and study statistics modules, they need to be compulsory and be a final semester module as well as include skills they will need to use in the future research. Furthermore, graduate students believe their current mathematics skills are not sufficient enough to succeed in a statistics module (Tutkun, 2019). The researcher concluded that conceptualising and understanding where the anxiety originates from, will help researchers to develop and design more effective statistics modules (Tutkun, 2019). Generally, statistics anxiety negatively affects students' performance, which is especially relevant for social science university students who usually have little or no prior experience with statistics, resulting in negative attitudes towards statistics related modules. These negative attitudes and emotions are thought to affect their academic achievement (Tutkun, 2019).

In a study by Frias-Navarro et al. (2018) investigating the state anxiety of 30 students enrolled in a research statistics module, they found that students experience high levels of statistics anxiety which generally decreases as the module progresses and they engage with the module content. Moreover, their final results maintains an inverse relationship with the level of statistics anxiety. From these findings Frias-Navarro et al. (2018) recommend providing detailed teaching guidelines at the beginning of the module in order to reduce students' anxiety at the outset of their module. The researchers report that the challenges experienced by students related to statistics anxiety is

not necessarily related to poor academic performance or lack of skills but related to incorrect perceptions about statistics or a lack of confidence in their mathematics skills as well as previously reported difficulties with the subject, which all contribute to their experience of anxiety (Frias-Navarro et al., 2018).

Additionally, findings from studies by Onwuegbuzie (2004) and Onwuegbuzie and Wilson (2003) indicate a high percentage (80%) of students experience anxiety related to statistics modules, which may result in many of them delaying their enrolment in the module or deciding not to take the exam until the end of their degrees. As the sample for this study was undergraduate Psychology 201 students who were enrolled for an introductory research methods module and the study explored the achievement emotions related to their learning trajectories with anxiety being one of them, the researcher felt it was necessary to provide prior research on test anxiety related to mathematics and research statistics.

In light of the above findings, it is evident there is a need for more extensive research around understanding the link between students' emotions and their achievement trajectories and how achievement influences the development of their emotions. Moreover, the findings highlight the need for future research using multiple methods to test the reciprocal relationship between emotions and achievement. Lastly, research in education highlights the need for understanding how educational psychologists can support students' psychological and physical well-being (Goetz et al., 2013; Pekrun et al., 2002) while assisting them in developing the relevant coping skills to deal with the academic demands of their studies that result in successful learning trajectories and academic outcomes (Pekrun et al., 2002). Thus, the researcher has chosen to use the control value

theory (CVT) to explore undergraduate students' achievement emotions and their learning trajectories which is discussed below (Pekrun & Perry, 2014).

2.3. The Control Value Theory

Recent research by Pekrun (2017) found that adolescents' emotions are linked to their achievement. Findings from previous research (Daniels et al., 2009; Meece & Eccles, 1990; Pekrun, 1992; Pekrun et al., 2014, 2017) indicate there is a reciprocal relationship between achievement and emotions (e.g., students experience emotions arising from their achievement outcomes as well as their emotions influencing their achievement activities and outcomes). Thus, achievement and emotions have a reciprocal causal relationship over time. Although researchers have differed in their conceptualisation of emotions, valence (positive or negative) and activation (activating or deactivating) have consistently been emphasized as important dimensions to understanding them (Moors, 2009; Pekrun & Perry, 2014; Shuman & Scherer, 2014) by proponents of the CVT.

The CVT of achievement emotions has been used in a number of previous studies on emotions, learning and academic achievement. While theoretical models differ in their views related to the antecedents of emotions, Pekrun's CVT of achievement emotions views (cognitive) appraisals (i.e., the intrapersonal plane) as the antecedents of emotions (Pekrun, 2006) as well as from a relational perspective (i.e., the interpersonal plane). Although both the CVT and activity theory were used in Munro and Shuttleworth's (2021) study on the achievement emotions of high achieving undergraduate students, the current study only made use of Pekrun's (2006) CVT as a theoretical basis for this study. Below is a general discussion of CVT, its relevance to emotions in

educational contexts, and a justification for its use in the proposed study. As such, an adapted taxonomy of the participants' achievement emotions according to valence and activation is illustrated in Figure 2.1 below:

Figure 2.1.

Three-dimensional Taxonomy of Participants' Achievement Emotions - adapted from Pekrun, Goetz, Frenzel, Barchfeld, and Perry (2011), and Pekrun and Perry (2014)

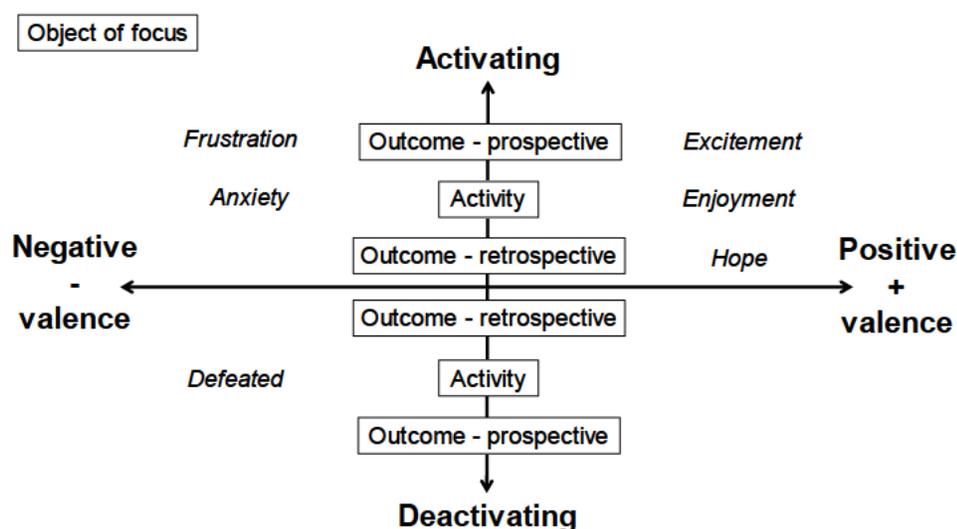


Figure 2.1. depicts two intersecting axes (dimensions), with a horizontal axis denoting the valence of an achievement emotion and a vertical axis representing the activating tendency of the achievement emotion. The object of focus is the third dimension to the three dimensional taxonomy, and these are represented through six rectangles positioned along the vertical axis. Each rectangle contains words that indicate a specific object of focus. Words in italics represent the six most commonly reported achievement emotions from the PEIs of this study, and the most commonly reported achievement emotions validated by the Achievement Emotion Questionnaire, which are located within Figure 2.1. according to their valence, activating tendency, and object of focus (Pekrun et al., 2011). CVT is a social cognitive theory that provides a framework which

allows for the integration of constructs and assumptions from several theoretical approaches related to achievement emotions (Pekrun, 2006). CVT views emotions as intrapsychic in response to achievement activities and both their prospective and retrospective outcomes (Pekrun & Perry, 2014) (See Figure 2.1., Section 2.3.). It is a student's cognitive appraisal of the control they have and the value they place on an academic activity that forms the basis of their achievement emotions (Pekrun et al., 2007). For example, if a student believes they can control the outcome of an upcoming exam (successfully passing) and the exam is valuable to them so they can graduate, it is likely to elicit achievement emotions such as hope and anxiety. Therefore, these emotions may influence students' cognitive processes and study behaviours. For example, if a student feels hopeful that they will pass their final examinations so they can graduate with their degree, hope as an achievement emotion may serve to motivate the student to study sufficiently to pass their examinations. On the other hand, if the student experiences severe anxiety related to their upcoming examinations, it may cause them to become so immobilised and fearful that they do not study enough to pass examinations and graduate. Thus, CVT highlights the important role achievement emotions play in achievement activities (e.g. attending classes and studying for an exam) and achievement outcomes (e.g. success or failure in an exam) (Pekrun & Perry, 2014).

Additionally, CVT explores the effects that emotions have on interpsychic (i.e., the interpersonal/social plane) processes of students' learning and achievement (Pekrun et al., 2007). In this case, achievement and social emotions (emotions students may feel towards the achievement of others) overlap and are elicited by the successes or failures of others (e.g. jealousy and admiration) (Pekrun & Perry, 2014; Pekrun et al., 2007). CVT maintains that students'

participation and performance in academic activities are directly induced by their achievement emotions which are relevant to their achievement trajectories (Pekrun & Perry, 2014).

Finally, CVT addresses the universal nature (Pekrun & Perry, 2014; Pekrun et al., 2007) of achievement by proposing that the functional mechanisms of emotions, their antecedents and outcomes are the same across people, genders, domains and culture. However, the frequency, content and intensity of these emotions are expected to vary widely due to differences in individual temperaments, achievement settings, developmental trajectories and culture (Pekrun & Perry, 2014).

2.3.1. Rationale for Adopting the Control Value Theory

As CVT is a widely accepted and commonly used theory (Duffy et al., 2020) which explicates achievement emotions while prioritising the cognitive and relational aspects of emotions in achievement settings (Pekrun & Perry, 2014; Pekrun et al., 2007), it provides a comprehensive theoretical basis. The theory has been used in a number of studies and developed over several years emerging from both exploratory qualitative and confirmatory quantitative research (Linnenbrink, 2006; Loderer et al., 2018; Pekrun et al., 2002). Lastly, the CVT's universal relevance to achievement emotions (Pekrun & Perry, 2014) further provides a rationale for its use in this study.

2.4. Overall Objectives of the Study

1. The overall aim of this research is to generate data on the achievement emotions that undergraduate students from a South African university commonly experience in their achievement activities and trajectories.

2. As the study is proposed to take place among students registered for an introductory research methods (and statistics) module, a sub-aim of the study is to generate data on achievement emotions pertaining to research methods (and specifically statistics) learning.

The specific objectives for the study were to:

1. Identify achievement emotions commonly experienced by students in their learning contexts e.g. during lectures, writing assignments or tests as well as learning behaviours.
2. Explore and understand the origins of their emotions in their specific learning environments.
3. Understand the structural elements of these emotions using the control value theory as a framework to understand them e.g. the cognitive processes and mediating factors involved in achievement emotions and learning.
4. Understand how achievement emotions influence students' successful learning outcomes.

2.5. Research Questions

The overarching research question which guided the research was, "Which achievement emotions do undergraduate students commonly experience in their achievement activities and trajectories in their degrees?" Specific questions related to this study are:

1. Which emotions are commonly experienced by students in academic contexts during lectures, learning behaviours, completing assignments or writing examinations?
2. What are the students' perspectives about the origins of these emotions?
3. What are the elements of these emotions and how are they structured?
4. How do these emotions influence successful learning outcomes?

2.6. Conclusion

In Chapter Two, achievement emotions research was discussed and the CVT was introduced in relation to understanding achievement emotions in the context of this study. Additionally, students' statistics and mathematics anxiety was discussed. Lastly, the study's objectives and research questions were described. Chapter Three below, discusses the methodology of the study using a qualitative approach from an interpretive paradigm.

Chapter Three – Methodology

3.1. Introduction

Although they differ in how they are operationalised, most theoretical conceptions of emotions have consistently highlighted *valence* (positive and negative) and *activation* (activating and deactivating) as key dimensions of emotion research (Moors, 2009; Shuman & Scherer, 2014). As a widely accepted and researched theory (Duffy et al., 2020) which focuses on both these dimensions of emotion, the theoretical framework for this study was grounded in a social cognitive perspective of emotions by adopting the CVT (appraisal theory) as a lens through which emotion, learning, and academic achievement can be conceptualised and explored, which is discussed in more detail in the introduction and literature review. As the questions of the study are exploratory in nature, it guided the researcher's use of a qualitative research design including a visual data production method and qualitative interviews.

Chapter Three will discuss relevant methodological considerations in relation to the conceptual, contextual, and theoretical perspectives of this study. Furthermore, the rationale of the study will be reiterated as well as the relevance of the research questions to the rationale. The rationale for the use of a qualitative methodology will be presented as well as the research processes and a description of analyses that were employed for interpretation of data. Moreover, the overall objectives as well as the specific objectives and research questions for the study will be discussed. A section on the ethical considerations that were necessary for the study will also be described. Lastly, the chapter will conclude with a description of the quality, trustworthiness, and credibility necessary for the success of a qualitative study.

3.2. Contextual, Conceptual and Theoretical Frameworks (Methodological Considerations)

The origins and emergence of the CVT, its development over the last twenty years and its current importance to understanding achievement emotions in higher education contexts was presented in the first two chapters of this dissertation. As the current study identified a gap in the literature on achievement emotions and learning of undergraduate students related to the CVT in South Africa, there was an opportunity to explore them in the higher education sector.

Recent research, (Parker et al., 2021; Pekrun, 2017; Raccanello et al., 2022) discovered that students' achievement emotions influence their attention, motivation, learning strategies, and their self-regulated study behaviours. Students' experience of achievement emotions is rooted in how they appraise their success or failure, as well as individual factors such as temperament and their social contexts supporting them influencing these appraisals, (e.g., gender and cultural norms, achievement goals, instructional communication and examination environment) (Pekrun, 2017).

Considering the high failure and drop-out rates in higher education institutions in South Africa, these factors are important to understanding how achievement emotions reciprocally influence students' learning. In an attempt to understand how participants appraise their achievement emotions according to the cognitive and motivational aspects of their learning, and to discover the subjective meanings they give to their learning trajectories, it was appropriate for the researcher to use the interpretive paradigm to frame their experiences. Thus, a discussion of the value of using an interpretive paradigm and the qualitative approach is provided below.

3.3. The Value of the Interpretive Paradigm

Interpretive research highlights both observable behaviour and the symbolic meanings people attribute to their experiences. Thus, relativism is the main ontological focus of interpretivism in that reality is subjectively experienced and unique to each individual. As such, our realities are negotiated through our senses and the consciousness we experience when engaging with people and objects in our surroundings. In essence, reality is individually constructed and many realities exist for individuals (Guba & Lincoln, 1994).

From an epistemological position, interpretivism is focused on the subjective meaning individuals assign to their interactions with everyday phenomena integrally linked to their knowledge of it. When the same phenomenon is experienced by different individuals, their construction of that phenomenon may differ in the way they construct meaning in different ways (Crotty, 1998); however, truth is co-constructed (Creswell & Poth, 2018; Liamputtong, 2019). Therefore, knowledge is historically situated and culturally influenced, with interpretivism essentially accepting the meaning individuals co-construct through their reflexive dialogue with people and interactions with phenomena in the world (Cohen et al., 2018; Liamputtong, 2019).

In the research context, interpretivist researchers identify, categorise and assign meanings related to how the participants in their study make decisions, take action and integrate them in a relevant context (Ulin et al., 2005). Thus, interpretive data is inductively produced with no prior knowledge (Cohen et al., 2018). Moreover, interpretivist researchers study individuals by exploring the physical, social, cultural and political influences of their lives (Creswell & Poth, 2018). Qualitative

analysis allows the interpretive researcher to explore the multiple links between these meanings and the participants' lives (Ulin et al., 2005).

Methods used by a qualitative researcher from an interpretive framework include semi-structured interviews, open ended questions, observations and visual methods in natural settings which allow participants to express their ideas and actions in a natural way. Thus, interpretive methods generate insights of individuals' behaviour and actions from the participant's perspective and allow them the space to express themselves freely. Essentially, interpretive researchers seek to explore and understand why individuals behave the way they do in the contexts of their daily lives (Guba & Lincoln, 1994). Both researchers and participants are equally and actively engaged in data production where research questions emerge naturally and participants are critically conscious of their role in the research and become interested in their own ideas and actions (Ulin et al., 2005).

Interpretive researchers acknowledge that although knowledge is usually generated inductively (Clarke & Braun, 2017), their data is interpreted from specific theoretical perspectives (deductively) (Clarke & Braun, 2017) they use to guide and frame the findings revealing that value free knowledge cannot exist.

In the context of this study, the researcher explored and interpreted the multiple factors which give meaning to the participants' achievement emotions related to their study decisions and behaviours. The researcher looked for similar constructions and patterned meanings (Harper, 2002; Rania et al., 2015) which could provide a more in-depth understanding of the achievement emotions undergraduate students commonly experience in their achievement activities and trajectories

through reflexive thematic analysis (Braun et al., 2019). Specifically, the meaning these achievement emotions have on their learning behaviours and study decisions are important to understand as these emotions either positively or negatively influence students' performance and the resources that are accessible to them (de la Fuente et al., 2020).

As one of the primary aims of interpretive paradigm is to obtain a deeper understanding of the individuals' lived experiences (Guba & Lincoln, 1989), which cannot be explained quantitatively, it was necessary for the researcher to choose a qualitative approach to explore the subjective meanings the participants gave to their achievement emotions, which is discussed in the section below.

3.4. The Value of Qualitative Inquiry

Fundamentally, qualitative inquiry attempts to explore topics (Creswell & Poth, 2018) and discover perspectives and meaning of the social world that cannot be measured by traditional quantitative methods, offering multiple subjective realities (Hesse-Biber, 2017). According to Yin (2016):

Qualitative inquiry documents the stuff that happens among real people in the real world in their own words, from their own perspectives, and within their own contexts; it then makes sense of the stuff that happens by finding patterns and themes among the seeming chaos and idiosyncrasies of lots of stuff (p. 3).

Liamputtong (2019) further emphasises the importance that qualitative inquiry plays for populations who are too small to be quantifiably measured (Yin, 2016). Individuals tend to distrust

and not want to participate in traditional quantitative studies whereas qualitative studies allow researchers to engage and build rapport with communities. Specifically, Photovoice and photo elicitation interviews (PEI's) as data production methods, give the participants the power to illuminate the issues facing their communities (Allen, 2012).

Qualitative inquiry is increasingly being adopted as a research approach because it contributes to a deeper understanding of the “beliefs, attitudes and behaviours” of the individuals being studied, especially in health and patient-centred research settings (Liamputtong, 2019, p.13), and by social scientists.

3.5. The Reflexive Journey of the Researcher's Methodological Decisions

In explicating the conceptual, contextual, and theoretical perspectives specific to this study and the methodological decisions of this study, it is necessary to understand the researcher's interest in supporting students in attaining their achievement trajectories in higher education settings. The researcher's interest in achievement is based on the value she places on education and the insurmountable challenges she faced having to overcome not only a physical disability but the neurological and cognitive disorder of epilepsy. In overcoming these challenges, the researcher has an inherent interest in researching groups who, despite being faced with political, cultural, social and economic challenges in the current educational context of high failure and dropout rates, have a deep desire to excel academically in their achievement trajectories.

The researcher's epistemological orientation to supporting university students in achieving academic success in higher education settings is further grounded in conscientising students to their achievement emotions and learning contexts. Thus, the principles of *access* and *participation*

become important to not only the current study but to the process of transformation in South African higher education today.

The researcher further acknowledges the epistemological assumptions of socially constructed knowledge of the world and human beings as being produced in the minds of individuals' thoughts, language, and interactions. Just as students became conscientised to their achievement emotions and learning behaviours through the Photovoice and the PEIs of the study, Burr (2019) argues that "people construct and negotiate identities for themselves and others through their everyday social interactions with each other" (p. 119). Thus, the language the participants used around their learning activities and behaviours can be viewed as having shared symbolic meaning as the codes and themes central to the interpretive paradigm.

The researcher attempted to link her own epistemological beliefs to the interpretive paradigm and the meanings participants shared that are relevant to and throughout this study.

3.6. Overview of Qualitative Rationale and Methodology

The rationale for this study has been founded in the historical-contextual perspective in Chapter One and the conceptual perspective in Chapter Two. The study attempted to add value to the dominant themes of education by focusing on achievement emotions in an educational context. It further attempted to offer new insights into the *valence* and *activation* of participants achievement emotions related to their achievement trajectories (i.e., their achievement activities and study behaviours) in a diverse higher education institution, which has not previously been researched in South Africa. Therefore, the focus on achievement emotions was unique to the South African higher education context.

The research process was informed by the contextual, conceptual, and theoretical perspective of the study and therefore, focused on the nature of the relationship between achievement emotions and students' learning trajectories. It also focused on the reciprocal nature of the behaviours, activities, support systems, individuals, processes, structures and places that have influenced students' achievement emotions and outcomes. The first and second research questions therefore, related to the most commonly experienced achievement emotions and the participants' perspectives on where these emotions originate from. Although the qualitative sample was limited to the UKZN psychology undergraduate student population due to purposive sampling, the sample was representative of a conscientised group of participants who could clearly articulate their experience of achievement emotions in their learning journeys. The third and fourth research questions focused on exploring the more detailed elements of these emotions in the reflexive thematic analysis and discussion chapter as interpreted and understood by both the researcher and the participants. Therefore, the above questions are relevant to the historical-contextual, conceptual, and theoretical perspective that informs this study.

In line with the interpretive paradigm and the CVT underpinning this study, the tools for analysis were the participants' photographs and their associated photonarratives, and the PEIs related to the idiographic data, which was oriented towards the meanings participants gave to their achievement emotions experienced in their learning journeys. An additional rationale for adopting a visual method such as Photovoice was related to a gap in using visual methodologies in the higher education sector as noted by researchers in the field. Specifically, Metcalfe (2015, p. 111) argues researchers "have yet to embrace these techniques" and instead rely on non-visual methods which may "limit our understanding of the contemporary academic environment". Furthermore,

researchers from fields outside of higher education are already seeing the value of visual methodologies in eliciting more meaningful information than can be obtained from traditional interview methods (Power et al., 2014). Thus, this gap supported the use of a visual methodology for this study.

3.7. Research Design and Process

While the study used a qualitative design, there were two phases, namely; Phase 1 and Phase 2. The University of KwaZulu-Natal was selected as the location of the study. The sub-sections below will give an account of the research processes (methods, sampling and analysis) that were part of this study and an explanation of the data analysis will be provided.

3.7.1. The University of KwaZulu-Natal as a Location of the Study

The study is located at UKZN's School of Applied Human Sciences in the Discipline of Psychology, Pietermaritzburg campus during the first (S1) and second (S2) semesters of 2021. The study participants were purposively sampled from 305 undergraduate students registered for Psychology 201 (on the Pietermaritzburg campus) as part of an assignment for their Introduction to Research Methods module in S1. In S2, 63 students were invited to participate in individual interviews and six participated. Participants are from a culturally diverse undergraduate student population generally representative in age, gender and race of most transformed South African universities. As both the assignment and the interviews were conducted online due to Covid-19 restrictions, and the content of the assignment and interviews were not intended to be distressing, the researcher did not believe any of the participants were at high risk of physical or psychological

harm as a result of participating in the study. However, counselling was made available from Student Support Services if any of the students felt distressed by the any part of the research process. As students are required to complete an introductory research methods module (e.g., Psychology 201 P1: Introduction to Research Methods) as part of their undergraduate degrees, the assignment is a module requirement of their degree. The UKZN Registrar granted gatekeeper's permission for the researcher to access the study population as the researcher chose to collect data from undergraduate psychology students as part of Phase 1 of the data production S1 (See Appendices 1, 1.1, 1.2, 1.3 and 1.4). The HSSREC ethics committee (HSSREC/0001062/2020) approved the researcher's ethics application as part of the supervisor's overarching study on educationally and socio-politically relevant spaces for university students. As they are undergraduate students enrolled at a university, their ages ranged between 18-30 years old.

The rationale for the use of UKZN as a location of the study was based on practical reasons as well as factors related to the relevance of the study's context. Although utilising student populations is not always recommended and often frowned upon in a variety of research fields, according to Joubert et al. (2019), the field of research is often relevant and well-motivated by students. One way of ensuring that the use of student populations is limited is the approval by ethics committees requiring ethical research practices. One of their main concerns that Foot and Sanford (2004) and Peterson (2001) raise is that not all student populations are representative of adult populations and this questions the validity and reliability of the sample. However, the use of students as a sample was deemed appropriate and relevant to the research study as the findings directly affect them; they were readily accessible to the researcher and the research is exploratory in nature, as

achievement emotions have not been widely researched in diverse higher education settings in Africa.

3.7.2. A Qualitative Design

The study adopted a qualitative design (Liamputtong, 2013; 2019; Yin, 2016). According to Yin (2016) the suitability of this design is specifically related to the researcher's worldview (i.e., rich descriptions of subjective meanings and socially constructed realities for each participant).

The intention to use a qualitative design was to explore achievement emotions among university students as individually and socio-culturally mediated processes which add depth to conceptualising the ways in which students can achieve at university. The data production (sampling and collection procedures), and data analysis and interpretation are detailed below.

As there are multiple definitions of a qualitative approach, Yin (2016) provides a useful conceptual framework which consists of five distinctive features unique to a qualitative approach which are discussed below.

The first distinctive feature of a qualitative approach involves exploring the meaning of people's lives in real-world settings - in their everyday roles or expressed by the participants themselves through their own writing and even photography (Yin, 2016).

The second distinctive feature of a qualitative approach is its ability to present the subjective views of the participants in a study. Thus, the ideas that emerge from qualitative findings symbolise the meanings the participants give them, not the values or ideas of the researcher (Yin, 2016).

The third distinctive feature attends to the social and contextual considerations of the participants' lives. These contextual conditions are central to the meaning they attribute to their lives while other traditional research methods cannot address these conditions (Yin, 2016).

The fourth distinctive feature of a qualitative approach is that it explains participants' subjective meanings by using existing or emerging theories. The participants' patterned meanings could also be used to develop new concepts which might explain new social phenomena (Yin, 2016).

The fifth and final distinctive feature of a qualitative approach is that it attempts to collect data from a range of sources of as part of a given study. The complexity of the context and the diversity of its participants are likely to justify the use of interviews, photographs, writing and observations. A study's findings will be concluded by using triangulated data from various sources which will increase a study's credibility and trustworthiness (Yin, 2016).

The use of a qualitative approach is relevant and suitable for this study as it explores the patterned meanings the participants attribute to their learning and achievement emotions as interpreted by both the participants and the researcher through an iterative and reflexive process (Braun et al., 2019; Clarke & Braun, 2017). As the qualitative research approach emerged from an interpretivist paradigm which views the world as socially constructed, interpreted, and experienced by people in their interactions with each other and in broader social systems (Ulin et al., 2005), the interpretive paradigm is suitable as a framework to understand the data.

3.7.3. Data Production

Below is a description of Phase 1 and Phase 2 of the data production.

3.7.3.1. Phase 1 - The Assignment, Photovoice and Photonarratives.

As part of the module requirements for Psychology 201 (the supervisor for this study is the module coordinator for this module), 305 students completed an introductory research methods assignment. Section 1 of the assignment involved an activity inspired by Photovoice (Wang & Burris, 1997; Wang & Redwood-Jones, 2001) in which students were asked to take four photographs in response to a prompt (guidance on what they will take photographs of) or a question related to their learning and achievement emotions in the undergraduate studies generally. In Section 2 of the assignment, participants were asked to write a 250 word photonarrative for each of their four photographs (see Appendix 2 for a copy of the assignment). As the researcher chose to only analyse the data deductively for those positive and negative emotions that emerged according to the CVT, the need for full visual narratives that usually occur with a Photovoice activity fell away and were not provided.

Phase 1 of the study was undertaken in Semester 1 where the researcher used a participant driven data production method (Torre & Murphy, 2015). Students were invited to consider completing two further optional parts of the assignment (Part 3 and Part 4), which invited them to consider consenting to the researcher using their photographs and photonarratives for reflexive thematic analysis as well as potentially being invited to further participate in PEIs related to their data. Therefore, with the participants' consent, the photographs and their associated photonarratives from the assignment were the 'instruments' used to produce the data in Phase 1 of the study.

Importantly, the assignment was assessed by 10 Psychology 201 tutors (i.e., not the researcher or her supervisor), and the assessment of the assignments was not linked in any way to whether a student consented or did not consent to participate in the research study.

The researcher then reviewed the photonarratives of the 123 students who consented to their photographs and photonarratives being used for research purposes. The researcher then identified 63 participants based on the theoretical value their photonarratives offered the study. Theoretical value refers to the relevance participants' photographs and photonarratives offer the study relating to their achievement emotions and the CVT (Silverman, 2011). In other words, the researcher looked for practical instances of their achievement emotions in their photographs and photonarratives as a selection and recruitment method for Phase 2 of the study. Of the 63 invited to participate, six students agreed to participate in the PEIs.

Although the information sheet and informed consent were attached to both the assignment and independently for the HSSREC proposal application, the process of consent was ongoing and continuously negotiated through the research. For example, the research supervisor invited potential participants to consent to participating in the study during an assignment information session he held during Phase 1 of the study. At this stage, participants consented to both the use of their photographs and their photonarratives for analysis, and for agreeing to potentially being invited to participate in the PEI's. Additionally, the researcher asked each participant in the PEIs whether they were happy to continue participating in the study. This procedure addressed consent for both Phase 1 and Phase 2 of the study (See Appendices 2 and 3).

The anticipated sample size the researcher used for Phase 2 of the study (5-10 participants) was based on when she anticipated data to reach saturation as they are generally not predetermined in qualitative research and is an accepted sampling decision associated with sampling adequacy and data saturation (Creswell & Poth, 2018; Kuper et al., 2008; Liamputtong, 2019).

3.7.3.2. Phase 2 – Photo Elicitation Interviews.

As discussed above, based on the theoretical value (Silverman, 2011) of the photographs and related photonarratives from the students' research methods assignment (purposive sampling), the researcher then invited six students to participate in PEIs in Phase 2 of the study, which was undertaken in Semester 2. Those students who consented to participate in Phase 2 of the study were invited to a scheduled Zoom interview via a link emailed to them and at a time that was suitable to both the researcher and each participant. All of the participants who used photographs of themselves consented to them being used. The researcher together with the participants reflexively explored their photographs, photonarratives, their symbolic meanings and interpretations during the PEIs (Copes et al., 2018; Rania et al., 2015). Harper (2002) emphasises the personal meaning that visual stimuli contribute to a PEI when compared with the traditional interview method of using words as a medium of exchange. Furthermore, when using visual stimuli, participants are more likely to engage in deeper reflections (Clark, 1999) and levels of consciousness (Harper, 2002).

As its common practice for adolescents and young adults to take, share, and comment on photographs on social media platforms such as Instagram, Facebook, Snapchat and Twitter, the

researcher reasoned the participants would be receptive to taking photographs and participating in a PEI as detailed in Section 4 of their assignment (see Appendix 2). Therefore, PEIs were chosen for their suitability as a data production method in a higher education context with Psychology 201 students as the participants (Steyn & Kamper, 2011).

Photovoice can be used as an innovative tool by educational researchers to understand achievement emotions in the higher education landscape through the eyes of students (Luttrell, 2010; Meo, 2010). Additionally, the method empowers participants (Allen, 2009; Sanon et al., 2014) by shifting the power dynamic from researchers to students as knowledge creators (Allen, 2012), and by controlling the data production and use of them (Allen, 2009; Luttrell, 2010). Researchers can further empower participants by allowing them to construct meanings without the preconceived ideas of the researcher (Clark, 1999).

The relevance and importance of the interpretive paradigm is highlighted here and is used to contextualise both the photographs (idiographic data) (Cohen et al., 2018), photonarratives, and PEIs that formed part of this research project. The use of photographs, their symbolic meanings, explanations and interpretations by the students in the PEI's, are intended to give meaning to the students' achievement emotions related to their achievement activities and trajectories. As part of the research methods assignment, participants were given the following instructions as prompts for the Photovoice activity:

Photovoice Prompt:

Using the camera function on your cellphone, take four photographs that represent your positive and negative learning emotions you experience or have experienced in your undergraduate studies

generally. Two of the photographs should represent any positive emotions you experience in your learning activities at university. The other two photographs should represent any negative emotions you experience in your learning activities at university.

3.7.4. Data Analysis

Reflexive thematic analysis (RTA) approaches include Braun and Clarke's (2006; 2017) widely used version of thematic analysis (TA), as well as others such as Langdridge (cited in Braun et al., 2019). These researchers have conceptualised TA as a qualitative data collection and analysis tool unrestricted by theoretical commitments and underpinned by a qualitative paradigm (Braun et al., 2019; Clarke & Braun, 2017). As a qualitative approach highlights patterns of meaning and multiple realities contextually, the researcher's subjectivity and active role in producing knowledge is important to the reflexive thematic analysis process (Braun et al., 2019).

In RTA, themes are conceptualised as patterns either explicitly (semantically) or more implicitly (conceptually deeper meanings) evident as coding output. They result from the researcher engaging in deep analysis and understanding of patterns across the data (Braun et al., 2019) that can be linked to the research aims and questions. Themes as 'patterned meanings' emerge after an "extensive iterative and reflexive process by the researcher" (Munro & Shuttleworth, 2021, p. 150). For this study, the researcher will immerse herself in the data through data collection (photonarratives from assignment and PEI's where any further meanings not explicitly obvious in the photonarratives will be probed further in the interviews referencing back to the photographs when necessary), transcription, analysis, coding and recoding, participant checking, researcher-supervisor discussions; and identifying themes (Braun et al., 2019). The researcher's reflexive and

iterative approach to coding, recoding and identifying themes involved a dialectically deductive and inductive process as not only did she look for codes in the data that confirm the study's theoretical framework (deductively looking for instances of achievement emotions); however, the researcher concurrently approached the data inductively by coding beyond theoretically predetermined instances of achievement emotions. Developing themes enabled the researcher to respond to the research question and develop theoretical propositions about achievement emotions among undergraduate students in a culturally diverse context. Practically, the transcripts from the PEI's were iteratively coded for instances of achievement emotions informed by the CVT and achievement emotions that fall outside of any predetermined ideas of achievement emotions.

3.8. Ethical Considerations

Ethical clearance for the study was granted prior to the study initiation (i.e., HSSREC/00002943/2021) (See Appendix 1). Additionally, updated and recertified ethical clearance for the overarching institutional study was granted prior to study initiation (i.e., HSSREC/00001062/2020) (See Appendix 1.1). The study reported in this dissertation was embedded within the overarching institutional research study on educationally and socio-politically relevant spaces for university students.

Gatekeeper's permission was granted for the original institutional study and HSSREC approved amendments and recertification. An updated gatekeeper's permission letter from HSSREC has been granted for the overarching study (See Appendix 1.4).

3.8.1. Ethical Principles Specific to the Research.

The ethical principles specific to the study as well as to visual methods are discussed in the subsequent sections below.

3.8.1.1. Autonomy and Coercion.

The researcher ensured the autonomy of the participants in the study by informing them of what the study was about and the objectives of the study (informed consent). As part of the informed consent, the researcher further explained that participation in any phase or stage of the study is voluntary and they have the right to withdraw at any time without any negative consequences (Wassenaar & Mamotte, 2012). Participants were given the opportunity to ask the researcher any questions or concerns they may have during or after the study (The Belmont Report, 1979).

As autonomy and coercion are interrelated, in addition to explaining to the research participants of their right to withdraw from study at any time without any negative consequences to them completing the assignment or consenting to participate in the second phase of the study, the researcher explained to them that there was no physical or monetary rewards for participating in the study to ensure they do not feel enticed by any incentives being offered, while if such a reward were not offered they would otherwise not have participated. The assignment was not marked by the researcher or her supervisor as it was marked by the Psychology 201 tutors, which again,

ensured the participants were not coerced in any way to participate in the study which is also discussed in the data production section above (The Belmont Report, 1979).

3.8.1.2. Anonymity and Informed Consent.

The researcher ensured participants' identities were anonymised and kept confidential by removing their student numbers from the assignments and the participants who gave written consent for their photographs to be used for research purposes, appearing in the dissertation and any subsequent research publications (Creswell, 2014). The Psychology 201 lecturer (i.e., the research supervisor) provided an online lecture and information session for the students on the Psychology 201 Introduction to Research Methods assignment and explained the assignment and the associated research project. This helped students make an informed decision about whether to consent to participate in the study or not (See Appendix 3). Informed consent was obtained via email after the information session, which was given prior to the students beginning their research methods assignment (Barrow & Brannan, 2021). The consent process is discussed in detail in the data production section above. There were no participants who refused to give consent for photographs of themselves being used, therefore pixelating the photographs to provide anonymity and confidentiality was not necessary.

3.8.1.3. Respect and Dignity.

The researcher treated the participants with respect and dignity when engaging with them during the data production stages by giving them the opportunity to share their experiences of their

achievement emotions, life views and creating the space for the conscientising effects of the Photovoice activity (Freire, 2005; Sanon et al., 2014). The researcher encouraged them to share stories and photos that reflected their achievement emotions and were personally meaningful to them while the researcher showed empathy and sensitivity when necessary.

3.8.1.4. Beneficence and Non-Malevolence.

Although it was not expected that participants were likely to experience any undue psychological distress or be physically harmed in any way while engaging in achievement activities and the PEIs, due to the nature of Photovoice which may elicit emotional responses that need to be dealt with sensitively and empathically, counselling from the Humanities Student Support Services at UKZN was offered to any participant who may have experienced distress, thereby adhering to the principle of non-malevolence (See Appendix 4). The assurance of counselling being made available by the Humanities Student Support Services was made when the overarching institutional research project (i.e., HSSREC/00001062/2020) was approved. By the participants reflecting on their achievement emotions and talking about the people, places, processes and structures that influenced their achievement emotions, it was anticipated they may feel positive *valence* and *activation* in their achievement emotions both individually and collectively as students in an educational setting (Wang & Burris, 1997). In essence, helping the students become more aware of their learning and achievement emotions is likely to help them feel more empowered to bring attention to issues they may feel strongly about in their learning environment (Sanon et al., 2014). This effect was in fact achieved by two of the participants who directly experienced the positive

effects of the Photovoice and PEIs by discussing how meaningful participating in the data production had been to them and how it had conscientised them to their achievement emotions.

3.8.2. Ethics Related to Visual Methods.

According to Wang and Redwood-Jones (2001), photovoice as a visual data collection method is grounded in the ethical principles that underpin the field of health education. These principles are the advancement of social justice, respect for autonomy, the avoidance of harm and the promotion of beneficence. As part of the Photovoice activity, participants were requested to take photographs that reflected their achievement emotions while engaged in their achievement activities.

Following the guidelines of Wang and Redwood-Jones (2001), the purpose of the photographs and how they were to be used (to answer the research question, for analysis and publication of the dissertation) were included in the research assignment instructions (see Appendix 2). It was further stipulated that the photographs will not be used for profit nor will their actual names or any other identifying features appear alongside the photographs. Lastly, it was explained that for those participants who consented, the photographs might appear in future publications related to the study.

In light of the fact that the participants own the photographs, an acknowledgement, and release clause was inserted into the informed consent form whereby participants consented to their names (pseudonyms) and photographs being used in the publication of the dissertation (Appendix 3). For

the purposes of the assignment, and to protect the privacy and identity of other persons, students were asked not to take any photographs of other people for their assignments (see Appendix 2).

3.9. Trustworthiness

Traditional criteria for ensuring rigour in positivist paradigms are well known and widely accepted methods which include validity (internal validity) generalisability (external validity), reliability (internal consistency) and objectivity (Creswell, 2014; Creswell & Poth, 2018). However, the trustworthiness of qualitative research is often criticised by traditional positivist researchers because it fails to “adhere to canons of reliability and validity in the traditional sense” (LeCompte & Goetz, 1982, p. 31). Additionally, positivist terminology is incongruent with the principles of qualitative research (Ely et al., 1991). Consequently, experts in research methods developed similar criteria to quantitative rigour, demonstrating how they can be used by qualitative researchers to address the issues of validity, reliability and objectivity, notably from Silverman (2011). However, in an attempt to move away from the positivist paradigm, naturalistic researchers developed their own frameworks and terminology to ensure trustworthy qualitative research (Liamputtong, 2019; Shenton, 2004). As one such researcher, Guba (1981) proposed four criteria qualitative researchers need to consider to ensure a trustworthy study, corresponding to the same core principles of positivist research: a) credibility (internal validity); b) transferability (external validity/generalisability); c) dependability (reliability); d) confirmability (objectivity) (Lincoln & Guba, 1986).

3.9.1. Credibility (Internal validity).

Credibility addresses whether the outcomes and decisions made by the researchers are trustworthy to the extent they include detailed data sources, methods and explanations. The researcher ensured the study's credibility by engaging in reflexive praxis during the different stages of data production and analysis including the triangulation of multiple data sources (photographs, photo narratives and PEIs) and member checking (going to participants, supervisor and peers to check the accuracy of researcher's interpretations). Additionally, the researcher encouraged participants to reflect on their achievement emotions as honestly as possible using iterative questioning and returning to a photographic reflection where further insights were necessary for more accurate and meaningful interpretations (Srivastava & Hopewood, 2009).

3.9.2. Transferability (External validity/generalisability).

Transferability is the relevance and applicability of a study's findings to other qualitative research settings. Potential researchers (the reader) will look for similarities across the study, its sample, context and their study (Kuper et al., 2008). To ensure the transferability of this study, the researcher reports in detail so the reader understands the context of the study and its findings. The researcher also compared the results with similar studies or existing theoretical models relevant to the findings to further ensure transferability (Hanson et al., 2019).

3.9.3. Dependability (Reliability).

A researcher's ability to effectively establish the credibility of a study is closely linked to successfully demonstrating the dependability of the study (Lincoln & Guba, 1986). The dependability of the study can be addressed by the (current) researcher reporting on the processes and procedures in detail (Shenton, 2004), where the analytical decisions are recorded and coherence in the methods and findings are evidenced throughout the study (Liamputtong, 2013), enabling a future researcher to use a similar design for their study. The researcher of the current study provides the reader with detailed descriptions of the research practices that were followed to enable readers to develop a thorough understanding of the methods and their effectiveness. These details are described and discussed in a) the research design and its implementation, b) a detailed plan of the data production, collection and analysis strategies, and c) reflecting on the study in a discussion of the findings, limitations and suggestions for future research (Shenton, 2004).

3.9.4. Confirmability (Objectivity).

The confirmability of a study refers to ensuring the data, findings, interpretations and recommendations of the study are the result of the experiences and ideas of the participants rather than the constructions of the researcher (Lincoln & Guba, 1985). In this study, the researcher provides evidence from the data related to the credibility, transferability and dependability by providing an 'audit trail' (Lincoln & Guba, 1985). Additionally, the researcher provides a reflexive account of how her preconceptions influenced the theoretical decisions and methodologies

adopted, and the reasons they favoured one approach more than others while acknowledging the limitations and weaknesses of frameworks and methods employed in the study. Lastly, the researcher discusses how triangulation using several data sources (photographs, photonarratives and PEIs), and validation strategies (member checking, peer validation and researcher debriefing) were employed to reduce researcher bias and ensure the overall trustworthiness of the study.

3.10. Conclusion

Chapter Three has provided a detailed description of the research methodology for the study, which included the contextual, theoretical and methodological considerations using a qualitative approach and the interpretive paradigm. The research design and process were explicated which included a discussion of the sampling and data production methods (photovoice and PEI's), and the analysis. A discussion of reflexive thematic analysis including the transcription of the interviews, coding and recoding, interpretation and how themes were generated are provided. Ethical considerations and the ethical principles specific to visual methods were also described in detail. Lastly, the researcher discussed how the trustworthiness (rigour) of the study would be addressed linking it back to the sampling, data production, analysis and the interpretation stages of the research process. The next section (chapters four and five) will present the findings of the phenomenon under study and a discussion of the findings. Chapter Six will include the strengths and limitations of the study, and the implications and recommendations for future research.

Chapter Four: Family, Technology and Aesthetic Learning Space: Thematic Findings

4.1. Introduction

This chapter explores achievement emotions among university students and presents these emotions as individually and socio-culturally mediated processes. Using Photovoice as a participant driven and empowering data production strategy, the researcher explores the subjective meanings that six students gave to the variety of achievement emotions they experienced in their learning journeys. Below, is a description of the positive and negative achievement emotions (i.e., enjoyment around learning, hope around studies and the future, excitement around learning, frustration with technology, aesthetics and communication, defeated by deadlines, and anxiety around failure, isolation and social interaction). The researcher engaged in both an inductive, bottom up approach (emerging themes not influenced by any theoretical framework) and a deductive, top down approach (Control Value Theory) to reflexive thematic analysis of the data, strengthening the rigour of the study.

4.2. Themes From the Data

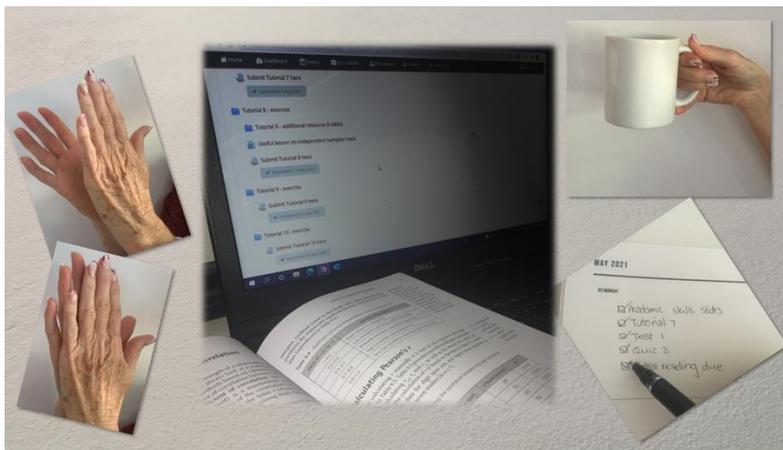
While six participants experienced both positive and negative achievement emotions in their learning behaviours and activities, all of them chose to present and discuss the photographs that elicited positive emotions first during the PEIs; thus, the positive emotions that emerged in the data will be presented first followed by the negative emotions. Table 4.1. below represents both the positive and negative achievement emotion themes that emerged from the data.

Table 4.1.*Positive and negative achievement emotion themes*

Positive achievement emotion themes	Negative achievement emotion themes
Enjoyment around learning	Frustration with technology, aesthetics and communication
Hope around studies and the future	Defeated by deadlines
Excitement around learning	Anxiety around failure, isolation and social interaction

4.2.1. Enjoyment Around Learning

During her PEI, Kerry presented Photograph 1, and spoke about enjoying how the photograph of her checklists (depicted in Photograph 1) motivates her as they provide order and structure, which results in her enjoying her studies and in her feeling motivated to work harder.



Kerry -Photograph 1: A checklist creates order and structure in my studying

Kerry's reflection on her enjoyment of her studies, this enjoyment being driven by developing checklists, is evident in her remark:

Uhm, how I feel motivated when I have order and structure in my studying. Um, so I have my checklist and I'm ticking things off. Then I feel you know, oh, like, I've gotten something done and [...] it motivates me to carry on. And then also I was doing quite well at the um for the tutorials for the Psych 201 and I was understanding it, I think partly because of my biology already having done the stats and that sort of thing so it was quite easy for me to just pick up and carry on with that. Um, and so that also then motivated me because I was doing well and I was enjoying it. Then I felt motivated to carry on and, you know, work harder.

Kerry also explained that when she feels comfortable in her workspace (at her desk) (see Photograph 2), she feels more motivated to do her academic work because she is enjoying being in the space.



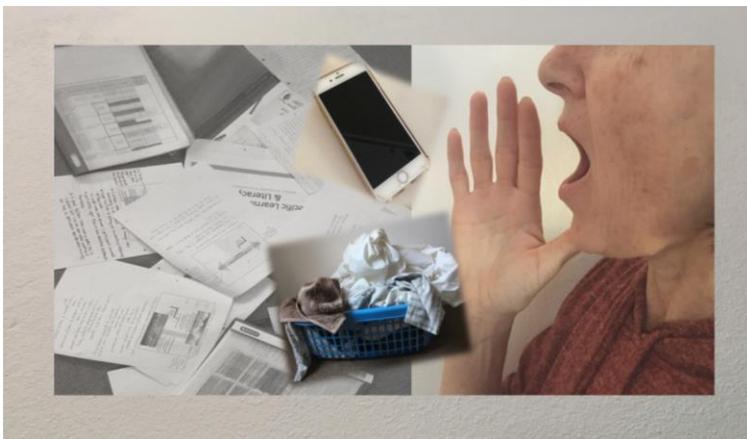
Photograph 2: Enjoying her workspace (Kerry)

Kerry's enjoyment of an aesthetically pleasing and tidy workspace is reflected in the following extract:

[w]hen my desk and my workspace is tidy and it looks aesthetically pleasing and I feel comfortable, then I feel more motivated to actually sit down and do the work, because then I'm I'm enjoying the space that I'm in so actually now working obviously from home.

In the extract above, Kerry's experience of enjoying her workspace, highlights the importance an aesthetically pleasing environment can have on positive learning behaviours. In contrast, Kerry also produced Photograph 3 (see below), noting that:

I made I made the picture of all the [...] papers in black and white, kind of then with the colour thing. Uhm, so how when there is that that disorder and mess it almost takes the colour out of the learning and makes it uhm, less enjoyable.



Photograph 3: Chaos and distractions (Kerry)

Overall, Kerry emphasises the importance of colour to her learning, highlighting the black and white notes in Photograph 3 as representing disorder and a mess. Removing the colour from her notes and learning environment seems to make learning less enjoyable for Kerry.

Another participant, Malia, reflected on being free to do the activities she enjoys, presenting Photograph 4 (see below) as illustrative of this point.



Photograph 4: Do the things I enjoy (Malia)

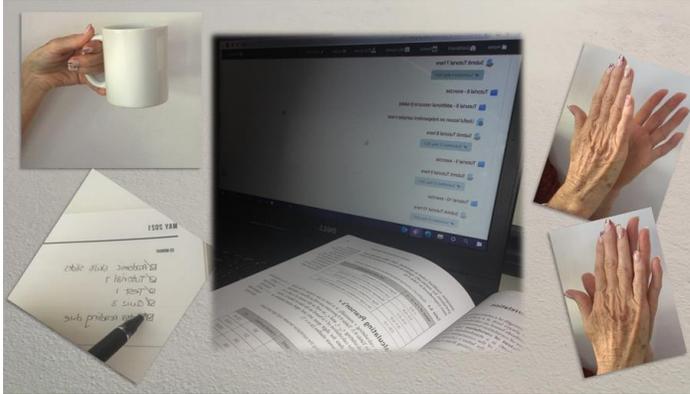
Malia remarked, “So I try to push everything like all my work in the weekdays so that my weekends are free to actually do things that I enjoy and, you know, have a break”. This reflects the importance that Malia put on taking a break from studying to do things she enjoys. Malia also commented on having spoken to a few psychologists about a future career as a psychologist and reflected on feeling motivated to work towards this goal (through studying) as she has always wanted to be in a helping profession and thinking of others first. She claimed to enjoy helping other people, as suggested in the following extract:

But I met many other psychologists and, uh, speaking to them and things like motivated me even more to get into this career doing...you can help people and I enjoy interacting with people as well, so ya...uhm, mostly that, uh, you, you get to it. The whole point of interacting with people and trying to help them and you always want to listen to someone else. I know your own interest is important and keeping your own mental health healthy, but also to think of others first and putting others first I that's what I enjoy, ya, ya.

Later in the interview, Malia also referred to enjoying management and business modules, which also formed part of her studies. Towards the end of the interview, Malia explained how she found the Photovoice assignment (i.e., learning activity) (and related PEI) very meaningful and enjoyable to her. She claimed, “and those pictures are kind of...yes, so those pictures were quite I felt like powerful and meaningful to me, so I enjoyed speaking about it and ya.”

4.2.2. Hope Around Studies and the Future

Contrastingly to how Photograph 1 was first presented describing how a checklist creates a sense of order and structure for Kerry, Photograph 5 (See below) was also used to represent a sense of hope in the support she receives from her family.



Photograph 5: Family support creates hope (Kerry)

Kerry commented how she experienced hope related to her family's support in:

And then other pictures of someone clapping their hands and then someone holding a mug just represents like the support from my family while studying at home. Having them encourage me to work harder and encourage to do my best and like supporting me in terms of bringing me coffee if I'm studying late or anything like that...Definitely hope that if I'm doing well now, it'll hopefully carry on, ya.

Kerry also felt a sense of achievement and growth related to studies and learning outcomes supported by her family commented in:

Ya, so like feeling a sense of achievement and uhm of like...of like growth maybe so I'm growing in what I'm studying uhm...So definitely some like having my family around me. That's an incentive cause you know my parents have sacrificed a lot they like I'm not on a student loan. They're paying for my studies and they often ya will sacrifice things to make sure that I can carry on studying.

In addition to Kerry experiencing hope from family support, Tsitsi, another participant, reflects on how she feels support not only from people close to her but from the time she spends in nature in depicted in Photograph 6 (See below).



Photograph 6 : Nature inspires me and gives me hope for my studies (Tsitsi)

Tsitsi remarked how spending time looking at the trees and the sky gives her a lot of inspiration and hope for her studies and how nature positively influences her well-being related to her learning journey. This is reflected in the following extract from Tsitsi's Introduction to Research Methods assignment:

The reason I took the photo it because I love how nature and time has got an influence in my studies. I feel blessed to have an opportunity to study, have a healthy life and support I am getting from people close to me. It helps me to believe in myself and have hope in where there's no hope. It gives me hope that I can succeed in life, that I have to be patient even though it hard to move forward. I'm willing to learn more than I learned or learning.

4.2.3. Excitement Around Learning

Excitement as a positive emotion emerged quite often from the PEIs and in some of the participants' narratives from their Introduction to Research Methods assignment. The extracts below reflect not only excitement that is deductively analysed according to the CVT, but those instances that excitement was inductively analysed both in learning contexts and beyond. Specifically, Malia's reference to being conscientised by the research process is discussed in detail and related to Photograph 7 (See below).



Photograph 7: Excited at fulfilling my dreams (Malia)

Although Photograph 7 was first presented as Photograph 4 describing how Malia pushes herself to get work done so she is free to do the activities she enjoys on the weekends, the photograph also symbolised several emotions (e.g., utter happiness, enthusiasm and accomplishment), when she has completed an assignment or task. However, Malia highlighted feeling excitement about

fulfilling her dream of studying at university and a career in psychology, which is reflected in the narrative extract from her Introduction to Research Methods assignment below:

I took this picture out of excitement, it related to my own excitement of getting into college and finally getting to work towards my desired career, knowing that I am on the path to fulfilling my dreams and achieving my goals was a feeling of bliss. It was not only about the beautiful view but also about how the person's attitude matched the surroundings that she was in.

Towards the end of the PEI, Malia remarked how excited she had been to participate in the PEI and have the interview because it was something she had not experienced before. This was reflected at the end of the interview when she commented:

Uhm, naturally I was, I was quite excited to uh have this interview with you ya, coz I haven't done anything like it and those pictures are kind of...yes, so those pictures were quite I felt like powerful and meaningful to me, so I enjoyed speaking about it and ya.

These remarks further reflect how photovoice can be a powerful and meaningful medium for a participant in a research study. In speaking about the Photovoice activity as part of the Introduction to Research Methods assignment in her PEI, Malia became aware of the meaning the activity and the photographs gave to her, which she may not have been aware of prior to the Photovoice. In effect, the Photovoice activity had an emancipatory effect of conscientising her to achievement emotions and potentially influencing future learning strategies as well as her experiencing excitement around her learning activities.

In another extract from the interview, Malia commented on feeling excited to learn about business and engaging in the field reflected in the extract below:

Although I know psychology is also serious but uh, ya, but uh, with business and management its easy, it's not easy, but, uh, you can...it's exciting to learn as well because you're always in the business field and you're always interacting with people.

In the above extract, she reflects in more detail how she enjoys business management as well as psychology and is excited to learn it as a module as it allows her to be actively involved in the business field while interacting with people. This again reflects her enjoyment and excitement when interacting with people in various contexts.

While Malia expressed her excitement around her learning activities, Siyanda expressed his excitement around having access to the technological resources (i.e. a laptop, internet and Zoom lectures) that allow him to engage in his learning, which he related to a photograph of his laptop (See Photograph 8) below.



Photograph 8: Excitement in my space of using the best technology (Siyanda)

As part of Siyanda's PEI, he commented on experiencing excitement in the context of his workspace and the laptop he has been given to attend online Zoom lectures. He seems to view the laptop as facilitating his learning and empowering him to focus on his academic work as well as developing the necessary skills to work independently in his own time and space. These thoughts are reflected in the following extract:

So, we have this kind of gadgets and the other our whole base in our homes. So, it helps us to be more vigilant and more independent so that we can study and protect on what we're studying. So, there's [...] more, we can gain more information on our own so that we can execute the skills on, on our own time and our own space...I can say it's excitement, excitement mam.

The importance of technology (a laptop and data for an internet connection) for his studies and successful academic achievement as well as the ability to maintain communication (Burkitt, 2019) with his family is discussed in greater detail in the following extract:

So, as we started with these conditions of pandemic, so we had to attend classes with laptops. They had to approach uh, Zooms in our Epson or laptop so that you can attend classes and we can write assignments with our laptops and we can communicate with our families with the laptop so that we can be, so that we can prevent virus infections, so that's all I can do on the laptop. So there are various things that I can do with this kind of laptop and like [...] when we're studying, so we have to double check with the other lectures with videos from other universities so that we can gather here bigger information so that we can understand a lecturer.

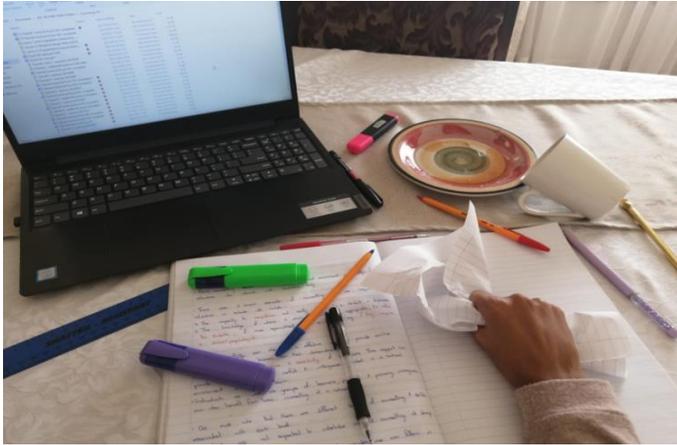
When asked to further identify a specific emotion related to the importance of communicating with his laptop, he commented, “Yes, ma'am, I can say it's in [...] excitement, right. Excitement, okay yes ma'am.”

The analysis of the positive emotions in the participants' learning environments and the activities they were involved in were provided above. Below, the analysis of the participants' negative emotions in their learning environments and activities is discussed.

4.2.4. Frustration With Technology, Aesthetics and Communication

A negative achievement emotion that was often spoken about in the PEIs was frustration. Frustration was generally experienced around technological issues of loadshedding, poor internet connections, a lack of communication and support from lecturers, missing online lectures and tests, distractions from working at home or in residence as well as feeling depressed, isolated and alone due to Covid 19 pandemic. Below are extracts and reflections from the participants.

In contrast to the participants positive emotions, related to their learning activities, behaviours and work environments, Malia comments how she experiences frustration related to a disorganised and chaotic workspace as reflected in Photograph 9 below.



Photograph 9: A disorganised workspace (Malia)

As part of her PEI and in relation to the photograph above, Malia expresses feeling overwhelmed and frustrated by her workspace and the amount of work she needs to complete to meet a deadline. She emphasises that due to the overwhelming amount of work she has, she stops being aware of her workspace and her level of frustration (gripping squashed paper) when she is under pressure and in that space. This is seen in the extract below:

Uhm, also with the laptop it shows the whole uh list of work that you gotta do, which just symbolizes the amount of work we get sometimes and how that's overwhelming. And we also, we don't become aware of our working space because of all that work and the frustration I, I think I have a hand gripping squashing paper. That's frustration for trying to figure out if I'm going to be able to complete all this. The list of work or not um the scattered pins also to show unorganized feelings and tension in the stress and ya.

Malia again comments on experiencing frustration, specifically related to understanding statistics reflected in Photograph 10 below.



Photograph 10: Frustrated with understanding statistics (Malia)

In Photograph 10 above (a collage of three), it shows Malia's brother holding and hanging his head like he had given up on understanding statistics and she comments on how frustrated she feels when trying to understand equations in statistics to the point she feels exhausted and overwhelmed and close to experiencing a nervous breakdown. This is reflected in the following extract:

It's showing how frustrating it is to try to make sense of equations, like for stats we had some equations and uh, honestly some of them were very confusing or it took a lot of time to grasp onto and get the hang of it, but uhm ya, so [...] it made you wanna pull your hair out of it but ya, that's showing frustration and also with the bottom picture on the right uhm, that showed exhaustion because of all those studying and how exhausting it can be and sometimes when you don't get to have that break, you end up passing out on your books it does happen and ya, and then everything scattered shows also unorganized here, but more focusing on sometimes giving up. The exhaustion and feeling stressed, and then the top picture with the tear uh, that shows how overwhelming it can be and when you just feel

like you can't do it at all. And, uh, ya, sometimes you do breakdown. We all have those nervous breakdowns and ya, so that just shows the sadness and overwhelmment.

In contrast to experiencing frustration related to too much work and trying to understand statistics, Siyanda relates feeling frustrated (See Photograph 11 below) when trying to study in his residence as his roommates are noisy, making it difficult for him to concentrate.



Photograph 11: Frustration with noisy roommates (Siyanda)

Siyanda remarks on liking to work in a quiet space and not having this so he can concentrate on his work creates frustration for him which is seen in:

Yes, ma'am, because I, what I can say is that I, I'm assuming that I like to work in [...] a quiet space so yes, in this kind of residence there is no there's no peace... uh, I can say chan...frustration.

Towards the end of Kerry's PEI, the researcher asked her what her overall experience of studying at UKZN had been so far and what emotion/s would summarise her experience. She made several

references to feeling frustrated with many roadblocks and challenges along the way. These are reflected in the following extracts:

The first one result would probably be frustration, uhm because ever since I've started, there's kind of there's always been so many roadblocks to my learning...so I was kind of just told okay, just do this... and “no, it's fine, you'll handle it,” and it actually turned out to be very stressful trying to keep up and like...and where I wanted to come add on the psychology...“No, you can't do this.”...I was very frustrated...there was a lot of like hindrances and kind of people in the administration...they'd be like, “Oh no, no no, go talk to this person,”...and then you just like constantly feel like you just getting handed off because no one actually wants to help you. Ya, definitely, just then kind of feel like oh well, might as well just give up.

With regards to the difficulties around learning while there is loadshedding, she expressed a lot of frustration reflected in the following extract:

So, this obviously has to do with load shedding um, and also often in Hilton we have random power outages where it's also very frustrating that nothing gets said about it. So, no one really knows...So, it's kind of that lack of control for me. Definitely affects my studies negatively, because then I feel like I've lost control of the situation and my laptop has gotten quite old now, so it only works for a very short period of time without power. So obviously studying from home now, a lot of my time is dedicated to working on my laptop...So, it definitely it's a frustrating element.

While Kerry reflected on experiencing frustration regarding a lack of clear communication from university staff and her difficulties with loadshedding, Thandiwe commented on how important taking breaks (See Photograph 12 below) was to her studies otherwise she feels frustrated and overwhelmed by the long periods of work and having to adapt to online classes.



Photograph 12: Taking breaks is important (Thandiwe)

She emphasised how these breaks were essential to relieving her experience of frustration as keeping up with the amount of work they were given was difficult for her to manage which is reflected in the following extract:

Ya, so uhm, I, I feel it's important for us to [...] have snacks to take a break. Actually, more than just makes snack, but just the thing I put in, but to take a break when studying [...] it, it's really frustrating. It's too much, and now that it's under, we are under online learning so everything just too much. So, we constantly need breaks because keeping, keeping up with schoolwork is difficult honestly, at this moment.

4.2.5. Defeated By Deadlines

Many times, the participants feel overwhelmed by their workload or they feel like giving up when they have not passed a test or done well in an assignment, which often results in them feeling defeated. Two of the participants commented on feeling defeated in their learning journeys which are discussed below.

Just as Kerry commented on feeling frustrated with loadshedding which was discussed above, she also described feeling defeated about this very issue (See Photograph 13 below) and the resulting delays in meeting deadlines.



Photograph 13: Defeated by Deadlines (Kerry)

Kerry emphasis on feeling defeated around the resulting difficulties (i.e., her laptop's battery no longer lasting very long and not being able to meet a deadline) with loadshedding is further exacerbated by academic work she is already finding difficult to understand. Her feeling of being

defeated and wondering whether it's worth doing the work to finish her degree, is further reflected in her reference to the political riots of 2021 that created a lot of worry and anxiety for people's safety and their future in South Africa. These thoughts are reflected in the following extract:

A feeling of like uhm defeated almost I think cause if I'm already doing something working on something that maybe I'm battling with or uhm, you know quite difficult. And then the power goes out. Then it's just kind of defeated like oh, should I really worry about this? Is it really worth it, you know? And definitely I mean this last week has been a really good representation of that, with everything going on. Ya it was right to sit down and, you know, get some work done and work through some things or whatever like cause you're constantly checking your phone for updates for what was going on and the kind of this thought process of is it really worth it? Like the world around us is almost burning down, is it really worth, you know, putting in to get this degree finished and to get this work done.

A bit further into the interview related to the same photograph of a laptop and the loadshedding difficulties, Kerry again spoke about feeling defeated which is reflected in extract below:

Ya, so that was just kind of just symbolizes the fact that now there's no power. My laptop is now dead and it it it kind of symbolizes my emotions towards my work. When that happens is then I then feel defeated and like you know, don't need to do this now then. And why should I do it and whatever? Like you know, don't need to do this now then. And why should I do it and whatever?

Similar to Kerry's experience of feeling defeated with the resulting difficulties of loadshedding and meeting deadlines, Thandiwe reiterated feeling defeated with attempting to get her work done while coping with loadshedding and poor cellphone connections seen in Photograph 14 below.



Photograph 14: Loadshedding and poor connection issues (Thandiwe)

Thandiwe further remarked on the difficulties of having to live in a township where cellphone towers and Wi-Fi connections are poor. Thus, her feeling defeated about the situation in the context of her studies while attempting to successfully complete her degree is reflected in the following extract:

Then loadshedding comes, then it, I just felt defeated just for the project. You know, we could think of a person living in a rural area who goes to the to the internet cafe to do schoolwork and then then get the...you travelled from where you stay to the internet cafe. Then when you get there, there's loadshedding.

4.2.6. Anxiety Around Failure, Isolation and Social Interaction

Below, are extracts from participants who experienced anxiety in their learning journeys and spoke about them in their PEIs. In Tsitsi's PEI, she discussed one of her photographs of spending time in nature as important to process her academic tasks and lower her level of depression and anxiety.

This is reflected in her comment:

I am inspired by nature all the quietness, which helps me to process what I am thinking, allows me to explore my understanding in different ways. It lower my level of stress and depression, anxiety.

Towards the end of the of Tsitsi's PEI, she spoke about experiencing quite a bit of anxiety when loadshedding occurs and she cannot get her work done. These comments were related to Photograph 15 below which shows a Wi-Fi connection outside her house where she struggles to connect to the internet, especially when there is loadshedding.



Photograph 15: Anxiety caused by poor internet connections and loadshedding issues (Tsitsi)

Her thoughts around these connection difficulties are emphasised in the following comments:

Yes, yes the anxiety. I'll be stressed, yoh, there'll be lots on my mind, which are bad, bad, bad or negative thinking. I'll be thinking of all the negative things. I'm afraid of failing girl. I'm very scared.

In contrast to Thandiwe's anxiety around her connection difficulties, in Sandile's first photo narrative, he commented on experiencing less anxiety (See Photograph 16 below) during the Covid 19 lockdown.



Photograph 16: Experiencing anxiety (Sandile)

Sandile chose Photograph 16 to reflect the positive emotion (i.e., experiencing less social anxiety) as he was not required to be physically present for lectures nor forced to interact with his fellow students. He explained that he is somewhat of an introvert and experiences social anxiety at some level, which are reflected in the following comments:

Secondly I did my work more individually, away from human presence since we did not attend physical lectures. That resulted to my social anxiety levels declining as I were now forced to socialise less i.e., I were exposed to more positive levels of emotion with lower

levels of anxiety. I perform more efficiently more which could be accounted to lockdown legislation and my being introverted partially.

He supports his comments about experiencing less anxiety by spending time reading books instead which is seen in, *“I really got into reading books cause that was that was the only thing that was available for me to do. That was interesting enough”*.

Sandile compares his lack of social anxiety with still experiencing anxiety in general supported by, *“that that that's that because that time, my my anxiety levels were pretty low, at least from the social perspective. Anxiety in general not, but social, socially it was relatively low”*.

In contrast to Sandile’s lack of social anxiety, Photograph 17 (See below) reflects his experience of anxiety around his workload and being socially isolated.



Photograph 17: Anxious about my workload and social isolation (Sandile)

While Sandile remarked on feeling lower levels of social anxiety due to the lockdown restrictions, later in the PEI, he expressed experiencing anxiety around the amount of schoolwork he still had to do and not having enough social interaction in the following extracts:

The anxiety came from the schoolwork I still had to do, as well as from my desire to socialise, even with one person, because I spent a lot of time in isolation. The negative emotion that can be inferred from this would be from the sadness of being alone compiled with the anxiety from schoolwork.

The extract below reflects how Sandile has experienced anxiety in his studies and in his life generally for some time:

With me person with me, my I've [...] had issues with my anxiety so it's kind of hard to explain feeling those things like to explain exactly what that means exactly. It's [...] been a very difficult thing for me to explain but I would say it just brought me to focus. Whether I had anxiety or not, I, I still I still I still had to put in work.

Sandile further commented on experiencing anxiety related to using his bed for everything (i.e., he was restricted to going anywhere during Covid 19, even outside) can be interpreted as he became conscientised to his use of space and feeling stuck there and feeling socially isolated. This is reflected in the following comments:

When I would be in bed, I would spend a lot of time in bed [...] So, uh I got to this this was a big way I was spending a lot of time in bed. A lot like I I kind of got worried. What's going on? For work I'm working in bed, I'm sleeping in bed. I slept a lot. I would just sit sometime just sit in bed, don't know, just do do nothing, just sit there. That got my anxiety

for my anxiousness to rise a bit cause it seemed as if I was stuck in this in this place and I couldn't go anywhere. I couldn't socialize with people which which as much as I'm not once one to social.

Sandile went on to discuss how at times during Covid-19 lockdown and his studies, his state of mind was very fragile and his level of anxiety was so high, that he turned to engaging in self-harming activities. These are reflected in the following extract:

Remember earlier I I on the first picture I explained how it wasn't clear to me how to explain my anxiety but the best that I can, I can try to explain this to you this way. I spent more time with my school but at the same time, a lot of other things were happening, so in my mind I was in the state of, I thought about it quite quite often. I was in the state of my anxiety is acting cause when that happens, I, I usually, I turn to like a lot of self-harming activities that that I, that I my my anxiety was was really bad at that at that moment but at the same time I was so used to it just seemed like part of life. There seemed like part of life but as much as I was still doing my school.

In contrast to Sandile's anxiety around social anxiety and his academic workload, Siyanda discussed experiencing anxiety technological issues with the Wi-Fi router reflected in Photograph 18 below.



Photograph 18: Relying on technology creates more anxiety (Siyanda)

Siyanda's anxiety related to technological issues of poor Wi-Fi connections in the following comments:

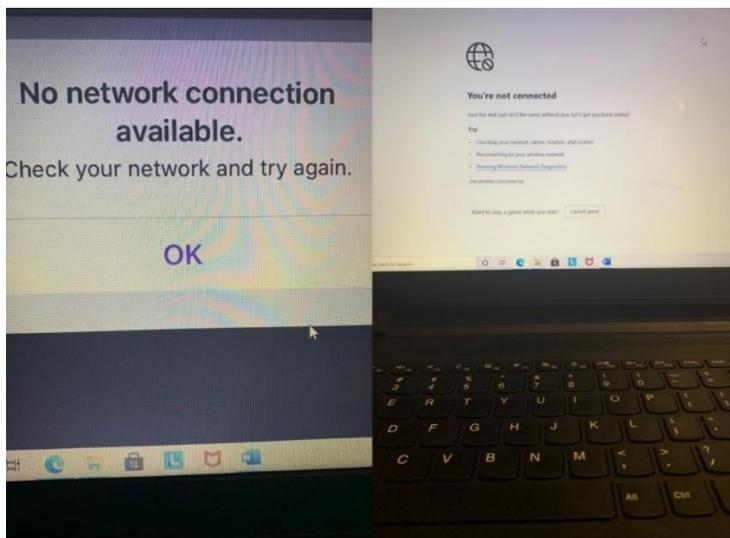
Uh, again, say uh, it's stressful now I can say it's stressful now...Anxiety, usually if we're connecting this kind of of of router, it's usually usually miss classes which are miss meetings, so that's it because anxiety.

In Siyanda's last photo narrative that he chose to reflect a negative emotion, he again talks about experiencing anxiety related to the issue of connecting to the Wi-Fi router at his residence, disrupting online classes and quizzes. He discusses this from the perspective that the more students at the university rely on and use the Wi-Fi, the more anxiety he experiences reflected in the following extract:

The photograph symbolizes the Wi-Fi router or the solution that is needed [for] the students...This model could not [bear] the large amount of connectivity due respective restriction that were put in place during the installation. It quite concerning and frustrating

because during the quizzes, it usually lose[s] connectivity and it interrupt[s] your progress. The study says that Wi-Fi radiation causes the development of anxiety, so the more we use this kind of technology, the more we anxious we may feel about our safety. Books and bad network causes anxiety for students, and it make them feel incompetent. The reason behind this photograph I wanted to portray the advantages or disadvantages of having a Wi-Fi router in residences. The most concerning case is that it is affecting the progress of students in university during examinations.

In line with Siyanda’s anxiety around dysfunctional Wi-Fi routers, Thandiwe discussed her anxiety around poor network signals during loadshedding which is reflected in a Photograph 19 (See below) with a message “No network connections available. Check your network and try again” on her laptop.

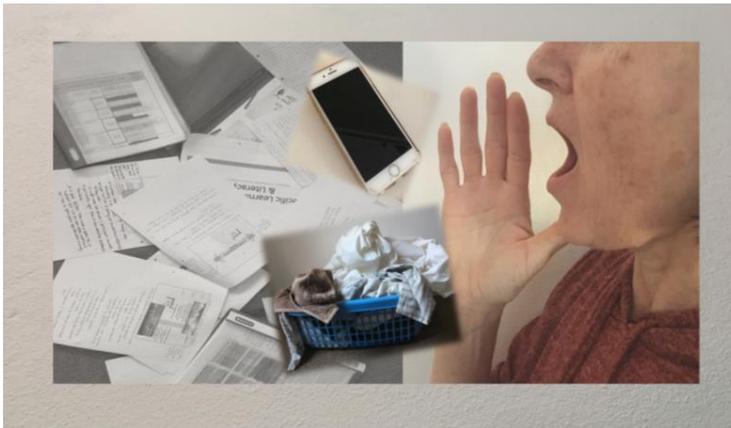


Photograph 19: Anxiety about poor signals (Thandiwe)

Thandiwe highlighted that when cellphone signals were not strong enough she could not connect to an online test during a period when there was loadshedding. Her anxiety and frustration around these issues are reflected in the following comments:

The only network that was working was Cell C, so I had to find someone with sourcing and it wasn't, it was someone from next door, not in the house. So, I had to move to that presence, plus buy them data so they can help me connect and I can continue writing. Lucky I did, I was able to pretty much. So, there are lots of things that come, you know, cause a lot of anxiety and stress and frustration for students, especially with excuse me...

Compared to Siyanda and Thandiwe's anxiety about poor network connections, as part of Kerry's PEI, she discussed experiencing anxiety in the context of her workspace as seen in Although Photograph 20 below (This photograph was first presented as Photograph 3).



Photograph 20: The mess around me causes anxiety (Kerry)

Kerry emphasised how if there is a mess around her when she is trying to write a test, it causes her anxiety which is reflected in the following extract:

Ya, so often if I'm like very stressed about something, or I've procrastinated and listening to the last minute and I'm rushing to try and get it done, then there will often be, you know, like a bit of mess around me or uhm, if I'm trying to write a test and I haven't studied properly, so I'll have my notes with me, and then I kind of in the test, I get stressed and anxious and so then the notes get all mixed, but then that just makes me more anxious and it kind of just accelerates the situation and definitely it does sometimes get messy, and then I immediately notice when it does get messy the stress, it seems to enhance the stress and the anxiousness.

Related to the same anxiety, she stated that “Sometimes still a little bit anxious, uhm about like am I really going to be able to like work through this or get this done or whatever.”

Similar to anxiety caused by a messy workspace and last minute studying, Kerry also experiences anxiety when she does not use colour to prioritise her work and organise her notes as seen in Photograph 21 below.



Photograph 21: Colour aids my notes (Kerry)

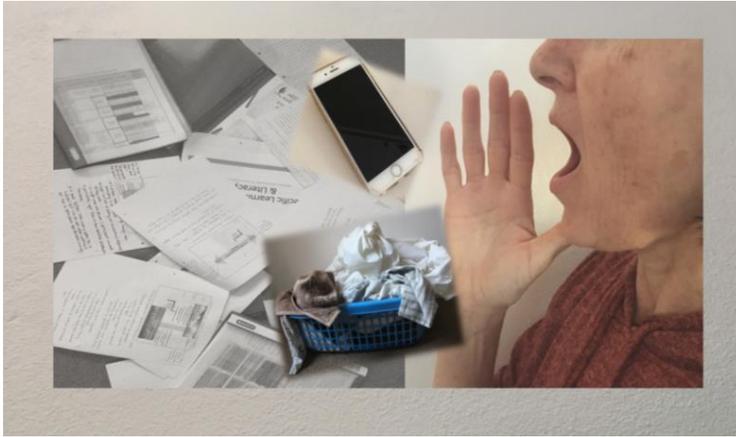
Kerry highlighted how she organises her work with colour coding tasks according to the level of priority they need to be completed in and with the importance of a neat workspace, it helps her feel in control otherwise she starts to feel anxious. These thoughts are reflected in an extract from her second photo narrative below:

I try to make sure that my working environment is as neat as possible as having order in my work helps to make me feel like I am in control. When my workplace gets untidy, I start to feel anxious and as if I am losing my hold of the situation. My preference for order includes how I take notes. They must be tidy and well written, as well as involve a lot of colour. By using coloured pens (as seen on the desk in the photo) I feel happier about my work and find that colour aids in making the notes more interesting. I keep a notice board in front of me that has my calendar as well as a timetable for lectures, which helps me to visualize what needs to be done and gives me an idea of the amount of time I must do it in. My diary is like my right hand, I take it everywhere so that I can make notes whenever and can make checklists for what needs to be done.

Kerry further commented how important an aesthetically pleasing work environment is to her anxiety levels. She reiterates that when she feels calm and at peace, she has a positive mindset to her work and is productive, which is seen in the following extract:

The aesthetic of my environment is also important to me, when I feel calm, comfortable and at peace, I then have a good work ethic. Specially since we have been working from home it has been vital that I maintain an organized and aesthetically pleasing environment as this helps encourage me to work hard and keep a positive attitude towards my work. I have noticed that when working, a positive attitude delivers positive results.

While Kerry highlighted how colour aids her study behaviours and learning, and a neat work environment keeps her calm and at peace, she also commented on how a disordered desk removes the colour from her workspace and increases her anxiety as seen in Photograph 22 (Also Photograph 3 & Photograph 20) below.



Photograph 22: Disorder in my workspace removes the colour (Kerry)

These thoughts around her anxiety are reflected in:

Sometimes still a little bit anxious, uhm about like am I really going to be able to like work through this or get this done or whatever...I associate that that sense of lack of colour with the stress and anxiety and...

In contrast to Kerry's anxiety around a neat workspace and a lack of colour creating anxiety for her, Kerry remarked on the lack of control she feels with loadshedding, her laptop battery being low, completing her work and the riots that occurred in July 2021 reflected in Photograph 23 below.



Photograph 23: My anxiety, worry and concerns (Kerry)

Kerry reflected on her anxiety, worry and concerns around these issues in the following extract:

And then the power goes out [...] Is it really worth it, you know? And definitely I mean this last week has been a really good representation of that, with everything going on [...] Like the world around us is almost burning down, is it really worth, you know, putting in to get this degree finished and to get this work done? [...] And also, kind of a sense of loss because now a lot of people are thinking, oh, the next step thing now is just to move like it's not worth staying and... And so, that like uncertainty and anxiousness and fear of the future [...] and also you know my thought was, you know if I want to have kids, do I want to bring kids into this kind of setting who I feel that still provide for them and make them feel safe, if I had to do that, ya.

In Malia's PEI, she spoke a few times about feeling stressed, tense and overwhelmed by the amount of work related to her studies. Although she doesn't directly use the words anxiety, this emotion can be inferred from her comments which are reflected in the extract below.

Malia is talking about how spending time with her family watching the sunrise at the beach takes her away from the anxiety and stress of her university work and acts as a motivation for the week ahead. These thoughts are reflected in the following remarks:

Okay, so for learning it's some sort of motivation cause you know you can look forward to it. That's why in the week you're stressing doing your work and then at least you know at the end of the week you're getting like rewarded. It's some sort of a reward. Ya, so it's something to motivate and to look forward to and...

Just as Kerry commented of experiencing anxiety around a disordered workspace and lack of colour in her learning activities, Malia explained how her anxiety was related to chaotic workspace reflected in Photograph 24 (Also Photograph 9) below.



Photograph 24: Symbolises anxiety under pressure (Malia)

In a discussion related to her third photo narrative, Malia comments how the overturned mug and the scattered pens in the photograph next to her laptop are a reflection of feeling chaotic, uneasy,

tense, overwhelmed and anxious. She emphasises how when students experience anxiety and are under pressure, they are not aware of the chaos in their working environment. These thoughts and emotions are reflected in the following extract:

The scattered pens and the placement of the toppled mug with tea spilt over shows a sense of uneasiness. We can also see tension depicted by the hand that's gripping the page and is squashing it at the same time. On the laptop screen it is showing a whole list of tasks that need to be completed and this points out the reason for the tense and unorganized feelings. [...] This picture symbolizes anxiety and the way we behave when under pressure, such as the toppled over mug of tea, it shows how we become unaware of the surroundings.

In the PEI, Malia talked about generally being a calm person but feeling stressed about work piling up which causes anxiety and tension reflected in the following comments:

Uhm, I'm mostly a very calm person, but uh, sometimes when work piles up uh and it does get you like big assignments such as like maybe those four to six page essays that you know you got you even though you start them in advance, but the research and then the the referencing all the stressful bits about it, it gets to you, so that's when it gets tense.

This anxiety and tension she experiences are further supported by the following extract:

So, sometimes when uhm I do get stressed, I just feel like putting it all off, putting the laptop off, putting everything off and just uh, doing nothing, or sometimes I do give up that's technically giving up, but obviously I don't. But uhm, ya, I feel like giving up and I feel overwhelmed uhm, I get very tense. I start pacing sometimes up and down, you know in our passage and try to think to myself how am I going to get this? I need a plan; I need

to organize myself and where to start. How to go about it so everything starts getting piled up in my mind because you're trying to find the plan to get it done quickly cause you also know this you got when you got a certain amount of time to get it done, so you end up getting a bit overwhelmed.

Similar to Malia's other comments regarding her work-related anxiety, in one of her photo narratives from her Introduction to Research Methods assignment, she developed a theme called "cannot stand the pace", where she wrote about the anxiety she experiences related to the amount of work and the pace at which she, as a second year psychology student is required to work at seen in Photograph 25 (Also Photograph 10) below.



Photograph 25: Cannot take the pace (Malia)

Malia's anxiety around not being able to manage the task due to the pace she is required to work at is reflected in the following extract:

If you cannot stand the pace, it means that you are unable to do things well when there is a

lot of pressure. You begin to encompass feelings of anxiety and uneasiness knowing you cannot handle the task you are completing like the hand gripping the page in picture [2]. When you are anxious you tend to become unconscious of the way you working, and the manner in which your working environment looks, i.e., the unorganized table with scattered pens etc.

She again reiterates that due to the pace she needs to work at, this causes anxiety which results in a disorganised workspace.

4.3. Conclusion

Chapter Four reported on the achievement emotions according to the Control Value Theory. The subjective meanings that six students gave to the various achievement emotions they experienced in their learning journeys were explored and three main themes emerged (i.e., family, technology, and an aesthetic learning space) underpin and facilitate the students' achievement emotions of enjoyment, excitement, hope, frustration, defeat, and anxiety. Chapter Five will discuss these achievement emotions in greater detail while attempting to highlight the importance of understanding how they influence and facilitate university students learning in a diverse educational setting. The chapter will further discuss how photovoice conscientised participants to their learning activities, behaviours and spaces. The chapter will conclude with the limitations of the study and recommendations for future research.

Chapter Five: A Discussion of the Data

5.1. Introduction

Chapter Five is a discussion of the findings. Specifically, it will discuss the findings from the methods (Rania et al., 2015; Sanon et al., 2014; Wang & Redwood-Jones, 2001) that attempted to enhance the rigour of the study (Braun et al., 2019; Hanson et al., 2019; Kuratani & Lai, 2011; Shenton, 2004). The researcher will further attempt to discuss the findings from the theoretical lens that framed the study; the Control Value Theory (Pekrun & Perry, 2014) as well as the literature reviewed in Chapter Two (see Section 2.2). Chapter Five further functions to revisit the findings from the study that were presented in Chapter Four and give a more detailed theoretical discussion of each achievement emotion. The limitations of the study, the potential for future research in undergraduate achievement emotions, and the conclusion will be discussed in Chapter Six of the study.

5.2. The Overall Findings

The findings and discussion arising from the analysis are presented according to the achievement emotions of enjoyment, hope, excitement, defeated, frustration and anxiety. Although other achievement emotions were inductively identified from the data (e.g., loneliness, calmness and motivation), the achievement emotions named above were the most prevalent and meaningful in terms of the research objectives and questions. In addition, the themes in the study were given a more descriptive element to them (e.g. enjoyment was named enjoyment around learning, hope was named hope around studies and the future, defeated was named defeated by deadlines and so forth). Just as Pekrun and other researchers in the field of achievement emotions have provided

empirical evidence of their existence (Duffy et al., 2020; Lazarides & Raufelder, 2021; Loderer et al., 2020; Parker et al., 2021; Pekrun & Perry, 2014; Pekrun, 2019; Villavicencio, 2011), the researcher classifies enjoyment around learning, hope around studies and the future, and excitement around learning (the first, second and third themes) as positive activating emotions (see the top half of Figure 2.1 in Chapter Two, Section 2.3) confirmed in the data. Additionally, the researcher classified frustration with technology, aesthetics and communication and anxiety around failure, isolation and social interaction (fourth and sixth themes) as negative activating emotions (see the bottom half of Figure 2.1, Chapter Two, Section 2.3) confirmed in the data. In contrast, while the researcher classified defeated by deadlines (the fifth theme) as a negative deactivating achievement emotion (see the bottom half of Figure 2.1, Chapter Two, Section 2.3), very little empirical evidence exists of it in emotion research over the past twenty years. Most of the (achievement) emotions presented by the participants in this study were activating emotions. Given the conscientising effect that Photovoice as a participatory data production method had on the participants, it is not surprising the majority of activating emotions that emerged from the data were associated with high levels of learning activities. An interesting outcome of the participants' conscientisation was the powerful meaning it gave them to participate in the Photovoice activity and the PEIs. This is discussed in each participant's achievement emotion as they emerged.

While emotions according to the CVT have already been defined in the literature review chapter, their importance in the discussion below as well as their relevance to the literature is focused on again here. According to Pekrun (2006, p. 316), emotions are “multi-component, coordinated processes of psychological subsystems including affective, cognitive, motivational, expressive, and peripheral physiological processes”. Although all these components are aspects of the

achievement emotions that emerged from the participants' Introduction to Research Methods assignment and the PEI's, this study focuses on the affective, motivational, and cognitive components in the discussion of each theme below.

Affect relates to an embodied emotional state that involves a cognitive judgement that an experience is either positive or negative (DeSteno, Gross & Kubzansky, 2013, as cited in O'Toole & O'Flaherty, 2022). In this study, the terms 'affect' and 'emotion' are understood to have the same meaning and are used interchangeably (Izard, 2000). Core affect recognises a certain level of activation, perceived as pleasant (positive) or unpleasant (negative) (Posner, Russell, & Peterson 2005). Emotions are "organized cognitive-motivational-relational configurations whose status changes, with changes in the person-environment relationship as this is perceived and evaluated (appraised)" (Lazarus, 1991, p. 38). In academic settings, any success will be appraised as a positive emotion and any failure with a negative emotion (Pekrun, 2006).

5.3. A Discussion of the Findings

As in Chapter Four above, the positive emotion themes from the participants' Photovoice narratives and PEIs will be discussed followed by the negative emotion themes while each theme will be supported by literature. In other words, each emotion (theme) will be discussed alongside relevant literature that supports the findings from these themes.

5.3.1. Enjoyment Around Learning

In the photographs that were presented and discussed by Kerry in the PEI, a few pertained to the achievement emotion of enjoyment. As the participants were prompted to take or select

photographs that related to both positive and negative achievement emotions in their learning contexts, she produced two photographs that reflected the order and structure of lists and an aesthetically pleasing workspace (See Chapter Four, Section 4.2.1). Enjoyment as an achievement emotion was created by the checklists that provide order and structure for her to feel motivated to persevere with her studies. As Kerry was doing well in her Psych 201 statistics tutorials, her experience of enjoyment as an achievement emotion motivated her to persevere and work even harder. In reference to Kerry's second extract from Photograph 2 (See Chapter Four, Section 4.2.1), a tidy desk and workspace again supports her enjoyment of the space she is working in, thereby positively influencing her study behaviours and experience of enjoyment as an achievement emotion.

Importantly, the achievement emotion of enjoyment reflected in the extracts from Kerry's Photograph 1 and Photograph 2 (from Chapter Four), illustrates how certain study behaviours (e.g., writing checklists) created the order and structure needed to succeed in her academic work and workspace (tidy desk and aesthetically pleasing workspace). In addition to the positive influence Kerry's study behaviours had on her work and achievement, her explanation points to the positive activating role that this enjoyment has on her ongoing experience of motivation and her determination to succeed academically in the future. Enjoyment as both a retrospective study behaviour and an achievement outcome, and a prospective motivation to achieve in the future, seems to mediate between current study behaviours, past knowledge and achievements, and the potential for future academic achievement, especially when she has appraised these behaviours and achievements as valuable to her and she has high levels of control-enjoyment (Parker et al., 2021; Pekrun & Perry, 2014).

In contrast to the positive activating emotion of enjoyment from the extract above, Kerry's description of an untidy workspace and a lack of colour in her black and white notes represents disorder and chaos for her. Thus, without colour in her learning environment, the absence of enjoyment can be seen as a negative activating emotion, possibly discouraging (Fritzsche & Kordts-Freudinger, 2018; Hailikari et al., 2016) her to achieve academically (Pekrun & Perry, 2014) as well as enhancing boredom (Loderer et al., 2020; Pekrun et al., 2011; Rowe & Fitness, 2018; Sharp et al., 2016) and more specifically, low value-boredom (Parker et al., 2021).

For Malia, the experience of enjoyment as an achievement emotion came from motivating herself to finish her work during the week so she could be free to do the things she enjoys the most on weekends. She remarked on this as, "*So I try to push everything like all my work in the weekdays so that my weekends are free to actually do things that I enjoy and, you know, have a break*". In this extract, enjoyment can be viewed as a positive activating achievement emotion that mediates between being motivated to meet assignment or task deadlines as a prospective individual study behaviour and achievement outcome as well as a prospective motivation to do the things she enjoys at some future time (on weekends).

Importantly, Malia's appraisal of the control she has to complete her work during the week and the value (Shao et al., 2020) she places on being free to do the things she enjoys on the weekend can motivate her to learn, to pay attention to her work, and use effective learning behaviours to achieve academically, which supports the cognitive, motivational and affective components of emotions of the CVT (Pekrun & Perry, 2014), especially when she has high levels of control-

enjoyment (Parker et al., 2021). As a positive activating emotion, Malia expressed her enjoyment of both taking the photographs for the Psychology 201 Introduction to Research Methods assignment as well as discussing her positive and negative emotions related to the photographs in the PEI. She went on explicate how meaningful these activities had been in, *“and those pictures are kind of...yes, so those pictures were quite I felt like powerful and meaningful to me, so I enjoyed speaking about it and ya.”* This extract illustrates how enjoyment as an achievement emotion conscientised her to her achievement emotions in her learning journey as well as the power of Photovoice as a participatory data production method.

5.3.2. Hope Around Studies and the Future

In Photograph 5 and Photograph 1, Kerry explained how hands clapping and mugs of coffee symbolised a sense of hope in the support she receives from her family in reference to her comments from Photograph 5, (See Chapter Four, Section 4.2.2). Kerry further reiterated how she perceives her family’s support as an incentive to achieve academically in, *“so definitely some like having my family around me that's an incentive cause you know my parents have sacrificed a lot. They...like I'm not on a student loan”*. Her experience of hope mediates between cups of coffee to paying her student fees to words of encouragement. In both extracts, her experience of hope can be appraised as a positive activating emotion experienced retrospectively as an outcome of the physical and emotional support her family give her. Additionally, in both instances, Kerry appraises her learning activities by placing high levels of value on the hope (i.e., value-hope) she receives from her family’s support (Parker et al., 2021).

In reference to Tsitsi's extract from Photograph 6 (See section 4.2.2.), her sense of hope mediates between the inspiration she feels when she spends time in nature and in the support she receives from people close to her. In this instance, Tsitsi appraises her learning activities with high levels of value on the hope she experiences from her immersion in nature and the individuals who support her in various ways (Parker et al., 2021).

Importantly, most of the students in the study seemed to have a positive and future minded orientation and expressed feelings of hope in relation to their short and long term achievement goals. This is consistent with current research that confirms positive correlations between academic performance among university students and positive activating emotions such as hope, pride, and enjoyment (Lei & Cui, 2016).

5.3.3. Excitement Around Learning

In recent research, Pekrun (2019) highlighted the importance of emotions extending beyond academic learning to importantly influence students' well-being and career paths. (i.e., while enjoying the challenge of a difficult project, it can promote innovative ideas and solutions and motivate students to set goals for future successes.

In reference to the extracts from Photograph 7 (See section 4.2.3), Malia highlighted feeling excitement about fulfilling her dream of studying at university and a career in psychology. In the extract, Malia's excitement of being accepted at 'college' (university) can be viewed as a positive activating emotion that she experienced retrospectively and knowing she was on the "*path to*

fulfilling my dreams and achieving my goals was a feeling of bliss,” excitement is experienced prospectively. Feeling bliss as an emotion is related to feeling motivated to achieve her dreams and goals, therefore, it can inductively be classified as a positive activating achievement emotion. In this instance, Malia has placed value in what being accepted into university means for her related to her dreams and career aspirations. Finally, she reflected on how her attitude towards achieving her dreams and desired career matched her surroundings in the photograph (e.g., her outstretched arms at sunrise on the beach) related to her feeling excitement as a positive activating emotion. Here, she places great value on her environment and its capacity to inspire her into action (e.g., having the right attitude and engaging in the learning behaviours and activities) that will allow her to fulfill her dreams. Unlike her environment (e.g., the weather at sunrise) her attitude and the behaviours she engages in are within her control which research has shown to positively influence motivation in achievement activities (Pekrun & Perry, 2014; Pekrun, 2019). In this instance, Malia appraises her freedom to participate in fun activities over the weekend with high levels of control-excitement around her learning activities hopefully resulting in a career in psychology (Parker et al., 2021).

In another extract related to Photograph 7, Malia describes feeling other achievement emotions (e.g., utter happiness, enthusiasm and accomplishment) when she has completed an academic assignment. Again, these emotions can inductively be classified as positive activating emotions related to excitement as an achievement emotion. She has experienced these emotions retrospectively to the achievement activities she was engaged in (e.g., completing an assignment). These emotions are rooted in both the control she has to complete the assignments as well as the value she places in them directing her towards reaching her achievement goals (Parker et al., 2021).

A further discussion around her feeling excitement was related to learning content and a specific module (e.g., business management) she is registered for her degree. Her achievement emotion of excitement in this instance can be viewed as a positive activating emotion prospectively experienced related to the value she places on her interest in the business field as well as her interactions with the people in this field. This finding highlights the importance that both activity and sociocultural factors play in both mediating and positively influencing achievement of students in various contexts.

Malia expressed excitement at being interviewed which in this instance, can be classified as a positive activating emotion prospectively and currently (i.e., while the interview was taking place) as this was a new experience for her. This was reflected at the end of the interview when she commented, *“yes, so those pictures were quite I felt like powerful and meaningful to me, so I enjoyed speaking about it and ya”*. Malia’s comments further reflect how powerful and meaningful Photovoice as a participatory data production method is and thus, she experienced enjoyment around talking about the data production. Excitement as an achievement emotion can be classified as a positive activating emotion retrospectively experienced based on the value and meaning she felt it gave to her. The awareness Photovoice created for a few of the participants indicates the powerful conscientising effect it can have on them. From this conscientisation, excitement, enjoyment and hope can be classified as meta emotions (Pekrun et al., 2002, 2007).

In the extracts from Photograph 8 (See section 4.2.3.), Siyanda elucidates his experience of excitement related to using technology (i.e., a laptop and Wi-Fi router) as these were new to him having come from a rural area. Siyanda’s excitement around using a laptop is related to how it facilitates his learning by attending online Zoom lectures during the Covid-19 lockdown.

In the first extract, Siyanda explains how using the laptop allows him to be more independent in his studies by being able to obtain knowledge independently as well as searching for information in his own time and space. In Siyanda's PEI, excitement can be classified as a positive activating emotion both prospectively and retrospectively experienced based on the control he has to engage in learning by using his laptop for lectures and assignments as well as the value he retrospectively places on his independence with using a laptop.

Siyanda also highlighted the importance of using technology (i.e., laptop) for both collective academic activities (i.e., Zoom lectures), and individual activities (i.e., communicating with his family) in *"They had to approach uh, Zooms in our Epson or laptop so that you can attend classes and we can write assignments with our laptops and we can communicate with our families with the laptop"*. When probed further about his excitement with using his laptop to communicate, Siyanda explained, *"Yes, ma'am, I can say it's in [...] excitement, right. Excitement, okay yes ma'am."*

From Siyanda's extracts, excitement is classified as a positive activating achievement emotion prospectively experienced. In this instance, his excitement around the utility of his laptop is directly related to the control he has over its use and places value on the activities as well as the outcomes. Thus, Siyanda appraises using his laptop for online lectures and communicating with his family with high levels of control-excitement and value-excitement (Parker et al., 2021). In this instance, the importance that both learning activities and sociocultural communication play in mediating positive learning experiences for students in various contexts is highlighted. Additionally, the importance of socially mediated technology use in a learning context during the Covid 19 pandemic is highlighted, and supported by current research findings (Loderer et al.,

2020), especially in technology based learning environments (TBLEs) where the proximal antecedents of e-learning and computer self-efficacy mediate the cognitive and motivational components (antecedents) of both positive and negative achievement emotions (Raccanello, et al., 2022).

Importantly, excitement experienced by the above participants mediated between pleasing aesthetic workspaces, family support, technological utility and sociocultural activities and communication, highlighting the positive and negative influence they have on both learning activities, their outcomes and the way they motivated the participants in their learning environments. Below is the discussion related to the negative achievement emotions that emerged from the participants' PEIs.

5.3.4. Frustration With Technology, Aesthetics and Communication

Research findings have revealed that positive activating, negative activating, and negative deactivating emotions are directly relevant to educational contexts where technology is the primary mode of learning (Duffy et al., 2020, Loderer et al., 2020) and (Harley et al., 2020; Jarvenoja et al., 2020; Mayer, 2020 as cited in Raccanello et al., 2022). Frustration as a negative achievement emotion was generally experienced related to technology and communication deadlines and distractions as well as the psychological and emotional consequences of the Covid 19 pandemic.

In reference to the extract from Photograph 9 (See section 4.2.4.), Malia reflected on her photograph representing a disorganised and chaotic workspace. She explained how her hand gripping paper tightly and the scattered pins on her desk emphasised her feeling frustrated by the amount of work she still has to complete.

Other emotions Malia refers to are tension, stress and overwhelm. These emotions are both discussed in the context of her workload as well as inductively related to her feeling frustration. In this extract, frustration is classified as a negative activating emotion experienced prospectively based on the lack of control she feels she has in meeting her assignment deadlines and the value she places on the outcome (completing the assignment on time). Although negative emotions such as frustration, anxiety and shame can undermine students' ability to pay attention in their learning contexts, Malia's experience of frustration appears to be associated with an internal locus of control rather than an external locus of control (i.e. such as a virus) in technology based contexts, thus motivating her to manage the workload and meet the deadlines for her assignments (Mentis, 2007; Pekrun, 2018).

In Malia's second extract related to Photograph 10 (See section 4.2.4.), she describes experiencing frustration when attempting to understand equations for statistics to the point she feels exhausted and overwhelmed, and close to experiencing a nervous breakdown. It is interesting to note, she did not use a photograph of herself but one of her brother holding his head like he had given up on understanding statistics. In this photograph (a collage of three photographs), Malia explains in detail how her frustration manifested in exhaustion that she's passed out on her desk and feeling stressed and overwhelmed to the point of crying and having a nervous breakdown. The multiple words she uses to describe her emotions indicates the level and intensity of frustration she is feeling related to understanding statistics. In this instance, frustration is classified as a negative activating emotion experienced retrospectively.

Additionally, Malia has appraised her frustration with equations from an external locus of control (Goetz et al., 2008). This is based on her experience of exhaustion and pointing out the scattered

papers that represent disorganisation on her desk, which could be externally contributing to her frustration and feeling overwhelmed to the point of tears and a nervous breakdown. The exhaustion she is experiencing is the result of the academic demands of her module and possibly the deadlines which she has no control over. Students will experience frustration, anxiety and overwhelm when they believe they cannot control the outcome of their academic tasks or assignments (Raccanello et al., 2022). However, in some instances, experiencing such negative achievement emotions can motivate students to creatively seek solutions (i.e., Malia solving equations for statistics), especially when they expect to succeed (Pekrun, 2017). Thus, Malia appraises her frustration with solving equations and meeting assignment deadlines with low levels of control-frustration but valuing the achievement outcome highly enough to persevere and to succeed with her academic assignments.

In reference to the extract from Photograph 11 (See section 4.2.4.), Siyanda expressed frustration around not being able to concentrate on his work properly due to the noise his fellow roommates make in the residence they share together. Frustration as an achievement emotion can be seen as a negative activating emotion experienced retrospectively as an outcome of the noise while he attempts to study. In this instance, Siyanda appraised his frustration from an external locus of control as he has no control over the noise his roommates make. However, he places sufficient value on his achievement tasks, that he is motivated to complete his assignments (Pekrun & Perry, 2014; Raccanello et al., 2022) despite the distractions, indicating a strong internal locus of control to avoid failure at all costs and achieve academic success (Pekrun, 2017). Thus, he experiences low control-frustration but places high value on succeeding academically (Parker et al., 2021).

In a discussion around her overall experience of studying at the university, Kerry describes the many frustrations she had experienced around changing degrees and a lack of clear communication (Burkitt, 2019) on how to do so. She explicitly expresses her frustration around experiencing many roadblocks to her learning which are illuminated in, *“No, you can't do this”...I was very frustrated...there was a lot of like hindrances and kind of people in the administration...Ya, definitely, just then kind of feel like oh well, might as well just give up”*.

In her PEI, her frustration can be classified as a negative activating emotion retrospectively experienced due to the lack of clear communication from lecturers, student counsellors and academic staff. In her experience, Kerry appraised her frustration from an external locus of control as the university staff were unable to give her clear information related to changing her degree.

Importantly, her frustration illustrates how certain roadblocks (i.e., lack of clear information) created the frustration she experienced when attempting to change her degree from biology to psychology. In addition to the negative influence Kerry's frustration had on her changing her degree, her explanation points to the negative activating role that this frustration has on her motivation and her wanting to give up before she had successfully changed her degree (the outcome). Frustration as a retrospective achievement emotion, seems to mediate between the lack of clear communication (Burkitt, 2019; Luria et al., 1932) around changing her degree and the potential to achieve academically, especially when she has appraised a future career in psychology as valuable to her success. In this instance, she experiences low levels of control-frustration (Parker et al., 2021). However, she was sufficiently motivated to eventually obtain the correct information on how to change to a psychology degree which she is currently studying, thus indicating a strong intrinsic motivation (i.e., internal locus of control) to achieve academic success and her future

career aspirations (Pekrun & Perry, 2014; Pekrun, 2017). Therefore, students' subjective perceptions of the instructional clarity and support they receive in a learning environment importantly influences their motivation and engagement in that learning environment (i.e., not giving up despite the communication challenges) and ultimately, their achievement (Artino, 2009; Artino et al., 2012).

Other frustration experienced by Kerry related to loadshedding. Here again, frustration can be viewed as a negative activating emotion experienced both prospectively as load shedding is scheduled in the future and frustration experienced as an outcome of loadshedding retrospectively. In this instance, Kerry explicitly illuminates how she feels out of control of the situation in, "*So, it's kind of that lack of control for me definitely affects my studies negatively, because then I feel like I've lost control of the situation*". Importantly, the loadshedding and regular power outages created the frustration related to her feeling out of control. In addition to the negative impact the loadshedding has on her levels of frustration, her explanation points to the negative impact it had on her use of technology (i.e., her laptop battery not lasting very long). In this instance, she assigns her frustration to an external locus of control. In other words, she experiences low levels of control-frustration (Parker et al., 2021). Studies relating to emotions in TBLE's reporting the harmful effects negative emotions such as frustration, anger and boredom have on achievement (Bosch et al., 2013; D'Mello & Graesser, 2011 as cited in Raccanello et al., 2022) supports the negative impact it has on her achievement described above.

Finally, in reference to extract from Photograph 12 (See section 4.2.4), Thandiwe explained how she experiences overwhelming frustration when she doesn't take breaks from her studies. She also experiences frustration with the transition to online learning and feels overwhelmed with trying to

keep up with the demands of the work in, “*Ya, so uhm, I, I feel it's important for us to take a break when studying, it, it's really frustrating*”.

In this instance, her frustration is classified as a negative activating achievement emotion experienced retrospectively. It is important to note that although the pressures of her work and online learning have negatively activated her experience of frustration, the decision to take regular breaks and eat snacks would however, result in deactivating her frustration (Pekrun & Perry, 2014). This observation indicates that although she appraises her frustration from an external locus of control (Gross, 2008), her studying behaviour (i.e., taking a break) is appraised from an internal locus of control (Kim & Hodges, 2012) and the value she places on persevering with her studies to achieve academic success (i.e., completing her assignments and degree). Thus, she experiences low levels of control-frustration (Parker et al., 2021). Current research on the negative impact TBLEs have on students' studies supports this finding (Loderer et al., 2020). However, the outcome of taking regular breaks to alleviate her overwhelming frustration, acts as an extrinsic motivation for her to put effort into her work to avoid failure and achieve her academic goals, especially when she expects to succeed (Pekrun, 2017).

5.3.5. Defeated By Deadlines

At times, the participants felt overwhelmed by their workload or they felt like giving up when they have failed a test or were struggling to understand an assignment, consequently feeling defeated. In a few of the PEIs, feeling defeated emerged as a dominant achievement emotion which is discussed below.

In reference to the extracts from Photograph 13 (See section 4.2.5.), Kerry describes feeling defeated by the loadshedding issue as it negatively impacts on her ability to participate with online lectures and complete assignments in, “*A feeling of like uhm defeated almost I think cause if I'm already working on something that maybe I'm battling with*”. In this extract, feeling defeated can be classified as a negative deactivating achievement emotion experienced both prospectively as loadshedding is scheduled at set times in the future as previously mentioned, and retrospectively due to loadshedding. As an outcome, her laptop battery does not last long and she cannot get much work done. Kerry appraised her feeling defeated from an external locus of control as she was unable to control the imposed loadshedding by Eskom.

Importantly, her sense of defeat illustrates how certain challenges out of her control (i.e., loading shedding and poor laptop battery) negatively impacted on her feeling defeated while she attempted to complete her assignments and engage in online lectures and tutorials. In addition to the negative influence Kerry's defeat had on her study tasks and learning, her description strongly influences the negative activating role that this defeat has on her motivation and her wanting to give up before she has completed her academic assignments (the outcome). Feeling defeated as a retrospective achievement emotion, seems to mediate between the power outages and the potential to achieve academically, especially when she has appraised her academic achievement as valuable to her future success. Although in this instance, she experiences low levels of control-defeat (Parker et al., 2021), it seems she has a strong intrinsic motivation (i.e., internal locus of control) to achieve academic success (Pekrun & Perry, 2014; Pekrun, 2017).

Although not explicitly stated in this extract nor directly influenced by load shedding, due to the increased demands of online learning (e-learning), Kerry's workload may have negatively

influenced her confidence in this area. The increases in workload could have resulted in her losing confidence in her ability to master e-learning tasks and she may have suddenly viewed the tasks as extremely demanding. Experiencing difficulties with the ever-increasing demands of e-learning self-efficacy is supported by current research in the field of achievement emotions associated with e-learning during a global pandemic (Raccanello et al., 2022).

In line with the loadshedding issue, Thandiwe reiterated the difficulties with power outages resulting in her feeling defeated represented in Photograph 14 (See section 4.2.5.) in her extract, *“Then loadshedding comes, then it, I just felt defeated just for the project...you travelled from where you stay to the internet cafe. Then when you get there, there's loadshedding”*. As can be seen here, Thandiwe echoes a similar experience to Kerry. From this extract, feeling defeated can be classified as a negative deactivating emotion retrospectively experienced as an outcome of loadshedding. In this instance, Thandiwe experiences low levels of control-frustration (Parker et al., 2021) as she appraised her feeling defeated from an external locus of control as she was unable to control the outcome of travelling to the internet café and not having any internet connection due to imposed loadshedding. Additionally, her experience of defeat was due to the inconvenience of time wasted and the cost to travel to the internet café, which can be perceived as valuable to her based on the effort she was willing to make to achieve academic success.

Importantly, her defeat illustrates how certain challenges out of her control (i.e., loading shedding and an internet café with no internet connection) negatively impacted on her feeling this emotion while she attempted to complete her project. In addition to the negative influence Thandiwe's defeat had on her, this incident strongly influenced the negative activating role that this defeat had on her motivation and wanting to give up before she had completed her project.

In a discussion directly after this example, Thandiwe supported her sense of defeat by reflecting on the lack of supportive communication from lecturers (i.e., being able to communicate with them more and lecturers being more understanding of students' difficulties related to loadshedding and internet connection issues), especially when she has appraised her academic achievement as valuable to her future success. Difficulties with effective communication and lack of support in a TBLE influences Thandiwe's experience of low levels of control-defeat (Parker et al., 2021). However, it appears she places a great amount of value (i.e., internal locus of control) on her achievement (Pekrun & Perry, 2014; Pekrun, 2017). Thus, Thandiwe's perceptions of the lack of communication and support she receives from lecturers related to the loadshedding and technology challenges, positively influences her motivation and participation in her learning outcomes and achievement goals (Artino, 2009; Artino et al., 2012).

5.3.6. Anxiety Around Failure, Isolation and Social Interaction

Test anxiety or fear of failure around examinations can challenge students' performance and negatively influence students' underachievement and low performance as well as negatively affect their mental and physical health (Alemu & Feyssa, 2020; de la Fuente et al., 2020; Loderer et al., 2020; Paechter et al., 2017; Parker et al., 2021; Pekrun, 2006; Pekrun & Perry, 2014; Rowe & Fitness, 2018; Shao et al., 2020). Below, is a discussion of the various contexts participants experienced anxiety as an achievement emotion.

In reference to one of Tsitsi's photo narratives related to Photograph 6 (See Section 4.2.2.), she reflected on how important it was for her to spend time in nature to reduce her levels of stress depression and anxiety in, *"I am inspired by nature, all the quietness which helps me to process what I am thinking, allows me to explore my understanding in different ways. It lower my level of*

stress and depression, anxiety”. In this extract, anxiety can be classified as a negative deactivating emotion retrospectively experienced. However, the outcome of spending time in the quietness of nature has a positive deactivating effect by allowing her to process her thoughts and decreasing her levels of anxiety resulting from her learning activities and assignments. In this instance, Tsitsi’s stress, depression and anxiety is experienced extrinsically; however, she has appraised her anxiety in her learning environment from an internal locus of control believing she has enough control to reduce her levels of anxiety by spending time in nature and placing great value on her achievement goals (Pekrun & Perry, 2014). Thus her reduced levels of anxiety and depression from spending time in nature have positively influenced her high levels of control-anxiety (Parker et al., 2021).

In reference to the extracts from Photograph 16 (See section 4.2.6.), Sandile reflected on experiencing less anxiety during the Covid-19 restrictions as he was not required to be physically present at lectures nor interact socially with his peers. In his photo narrative from the Introduction to Research Methods assignment, he describes how he often experiences social anxiety as he is an introvert. In his PEI, anxiety can be classified as a negative deactivating emotion retrospectively experienced. In this instance, his reduced levels of anxiety can be perceived to be positively influenced from an external locus of control as a consequence of the Covid -19 restrictions, thus indicating high value placed on low levels of anxiety (Parker et al., 2021). Additionally, even though books were the only resource available to him during Covid, his interest in reading them supported the positive deactivating effect the reduced anxiety levels had on his mental health. Interestingly, he highlighted how it was only his social anxiety that had been reduced and not his general experience of anxiety.

Contrastingly, a little later in the PEI and in reference to the extracts from Photograph 17 (See section 4.2.6.), Sandile explained how he experienced anxiety from a huge workload and feeling socially isolated. In this discussion, his experience of anxiety can be classified as a negative activating achievement emotion experienced retrospectively and prospectively.

From Sandile's anxiety related to workload, the achievement emotion is retrospectively experienced while his anxiety and loneliness related to his desire to socialise is experienced prospectively. The anxiety related to his workload is perceived from an internal locus of control which he views as important and valuable to academic achievement. Current research supports this finding with evidence that academic control positively predicted students' achievement while negatively predicted anxiety, and thus potential failure or drop out (Respondek et al., 2017).

In addition, his anxiety surrounding his desire to socialise is perceived from an external locus of control. In this instance, he cannot control the Covid-19 restrictions and thus cannot socialise with anyone to relieve his anxiety (Pekrun & Perry, 2014; Pekrun et al., 2017). Thus, he experiences low control-anxiety in his desire to socialise and not feel so isolated (Parker et al., 2021). Sandile also emphasised how on several occasions, his anxiety and isolation got so bad that he engaged in self-harming behaviours illuminated in, *"I was in the state of my anxiety is acting cause when that happens I, I usually, I turn to like a lot of self-harming activities..."*.

From this discussion, his anxiety can be classified as a negative activating achievement emotion experienced both prospectively and retrospectively. His anxiety is experienced retrospectively as an outcome of his isolation and loneliness and prospectively as an emotion he feels that results in self-harming behaviours.

Even though the anxiety Sandile was experiencing at the time was so bad that he was now so used to feeling it, this implies he has potentially been experiencing anxiety and engaging in self-harming behaviours for a long period of time. The manifestation of these emotions and behaviours is a further indication he may have suffered with depression for some time and accepted he would continue to experience these emotions in the future seen in , *“The[y] seemed like part of life but as much as I was still doing my schoolwork”*. However, this remark indicates a resilience to persevere with his academic assignments for his degree. In relation to Sandile’s poor mental health, he appraised his situation from an external locus of control as he was unable to engage in actions that reduced his anxiety nor eliminated his self-harming behaviours. However, his continued participation in his work indicates he considers his work important and valuable to his academic achievement (Pekrun & Perry, 2014). In this instance, he experienced both low levels of control-anxiety and high levels of achievement anxiety (Parker et al., 2021).

Both Siyanda’s extracts from Photograph 18 (See section 4.2.6.) and Thandiwe’s extracts from Photograph 19 (See section 4.2.6.) reflected anxiety related to the technological issues surrounding poor internet connections while attending online lectures and completing and submitting assignments. In both PEIs, the participants’ experiences of anxiety can be classified as negative activating achievement emotions retrospectively experienced. Both participants appraised their situations from an external locus of control (Pekrun, 2018). Siyanda cannot control the slow internet connection when all of the students in his residence are using it nor could he afford to buy data as its too expensive thus resulting in him experiencing anxiety and stress, especially when the connection was poor during exam time. Additionally, his anxiety around the exposure of radio frequencies from the Wi-Fi prospectively cause his to experience anxiety. In this instance, Siyanda experienced low levels of control-anxiety (Parker et al., 2021).

Thandiwe could also not control the lack of a cellphone signal and data connection due to loadshedding. As a consequence, she experienced anxiety and frustration, especially since she was busy writing an online test when it was interrupted. Although the resulting interruption in her test was experienced from an external locus of control (Pekrun, 2018), she appraised her situation partially within her control in that she found a neighbour who had cellphone reception and bought enough data to use their cellphone as an internet connection so she could complete the test. These actions strongly indicate she has a strong internal locus of control (Mentis, 2007) due to the value she places on her learning and achievement. In this instance, Thandiwe experienced high value-anxiety (Parker et al., 2021).

Throughout Kerry's discussion surrounding the photographs that represented her negative achievement emotions, several learning activities, study behaviours and outcomes reflected her experience of anxiety. In the extracts related to her messy workspace from Photograph 20 (See section 4.2.6.), Kerry's anxiety can be classified as a negative activating achievement emotion experienced retrospectively (Pekrun & Perry, 2014). Her lack of test preparation caused her to experience the anxiety (Alemu & Feyssa, 2020; Pekrun, 2017; Pekrun et al., 2002, 2017). In other words, her decision not to study properly had a negative impact on her anxiety resulting in her notes becoming messed up, which in turn increased her levels of anxiety and stress as well as feeling out of control. From the extracts, she appraised her experience of anxiety and the outcomes of her poor study behaviours with low control-anxiety (Parker et al., 2021).

Kerry also described how using colour in her environment helps to relieve some of her work related anxiety. She explained in detail how a tidy work environment creates order for her and in turn, allows her to feel in control of her learning environment and study behaviours. She went on to say how notes, especially coloured notes support her in keeping her content interesting. Her detailed use of a calendar, timetable and diary illustrate how much of a visual learner she is and how these visual aids support her in her learning environment. The antecedents of neatness, order, colour and light further indicate how important they are in influencing her achievement emotions and achievement goals, especially in her maintaining her sense of calm, comfort and peace. Thus, they indicate how a pleasing aesthetic environment facilitates her learning activities, which emerged several times in the participants' PEIs from this study.

From Photograph 21 (See section 4.2.6.), anxiety can be classified as negative deactivating achievement emotion experienced retrospectively. From Kerry's extract surrounding this photograph, she appraised her aesthetically pleasing workspace and learning from both an internal locus of control and an external locus of control (Kim & Hodges, 2012; Pekrun & Perry, 2014). She appraises her learning space from an internal locus of control due to the study behaviours she is engaging in to create a productive and effective learning space (i.e., creating calendars, checklists, timetables, coloured notes and having a neat desk). She also appraises her learning activities from an external locus of control (Kim & Hodges, 2012) as these are visual aids used to create a conducive learning environment towards her achievement goals. Thus, Kerry places a great amount of value on the control she has of her learning and achievement. In line with this finding, she has high control-anxiety and highly values her study behaviours that result in her academic success (Parker et al., 2021).

In Photograph 22 (See section 4.2.6.), Kerry illuminates how important colour is to her learning environment and how removal of colour represents disorder. In the discussion around this photograph, anxiety can be classified as a negative activating achievement emotion experienced retrospectively. From the extract, she appraises her learning environment from an external locus of control. In other words, she feels she has little control of her learning environment when colour is removed and thus, it causes her to experience anxiety, stress and disorder. In this instance, she appraised her experience of anxiety and the lack of colour in her learning environment as low control-anxiety (Parker et al., 2021).

In the extracts from Photograph 23 (See section 4.2.6.), Kerry's reflections on her anxiety, worry and concerns are discussed around the loadshedding and the political riots that occurred in July 2021. From the photograph, anxiety can be classified as a negative activating emotion retrospectively experienced. Although, she had already discussed her frustration around loadshedding, in this instance, she focused on discussing her anxiety and concerns surrounding her safety while attempting to study during the riots of 2021. Kerry's anxiety is also experienced prospectively related to a fear she has for her family's safety as well and the prospect of having children grow up in such an unsafe country.

In both her anxiety surrounding the loadshedding and her anxiety around her safety, she experiences anxiety from an external locus of control (Goetz et al., 2008; Pekrun & Perry, 2014). In other words, she appraises these incidents in her learning environment with low levels of control-anxiety (Parker et al., 2021). Importantly, anxiety seems to mediate between the achievement challenges (i.e., low battery capacity of her laptop and no internet connection) as an outcome of loadshedding and her future fear of bringing up and protecting children in such a

politically unstable environment, especially when she has appraised her academic achievements and safety as valuable to her future success (Parker et al., 2021; Pekrun & Perry, 2014).

Towards the end of Malia's PEI, she draws attention to several occasions where she experiences anxiety in her learning environment. In one of these occasions, she relates to being stressed (anxiety is implicitly inferred) during the week to get the work done so she can enjoy her weekend with her family watching the sun rise (Photograph 4 – See section 4.2.1.). From this discussion, anxiety can be classified as a negative activating achievement emotion retrospectively experienced due to the academic activities and study behaviours she engages in during the week. Anxiety in this situation can further be perceived to be experienced prospectively as it is experienced ahead (in the future) of her weekends, which she wants to enjoy. In this instance, she experiences anxiety from an internal locus of control (Goetz et al., 2008) with high levels of control-anxiety and high levels of value-anxiety (Parker et al., 2021).

In Malia's discussion related to her third photo narrative, and as part of her PEI she explains how Photograph 24 (See section 4.2.6.) reflects the multiple and complex emotions of chaos, unease, tenseness, overwhelm and anxiety related to her learning environment. Malia specifically identifies them as “negative learning emotions” emphasising the negative activating role these emotions have on her study behaviours and learning outcomes. She goes on to succinctly encapsulate the anxiety she experienced and discussed in the extract in, *“This picture symbolizes anxiety and the way we behave when under pressure, such as the toppled over mug of tea, it shows how we become unaware of the surroundings.”* It is interesting to note that in the extract related to Photograph 24 and prior to this sentence, she refers to the multiple emotions detailed as hers. However, in this extract she refers to “we” where anxiety is experienced by all students studying her degree or at

university. This may indicate, she identifies and acknowledges anxiety as such a dominant emotion for herself, there is no doubt in her mind that all students will experience the same level and intensity of anxiety that she does. Importantly, this finding lends further support and credence to the overall understanding from research on achievement emotions, that students experience anxiety the most when compared to other achievement emotions in academic learning environments (Loderer et al., 2020; Paechter et al., 2017; Pekrun, 2006; Pekrun & Perry, 2014; Shao et al., 2020). In this instance, she experiences anxiety from an internal locus of control with low levels of control-anxiety (Parker et al., 2021); however, she still place great value on achieving her academic goals.

In another discussion (See second extract from p. 98) surrounding Malia's learning environment, she again highlights the multiple emotions that she experiences when her work piles up too much. The emotions include stress, tenseness and overwhelm which are implicitly inferred as anxiety. From her discussion, it appears that at times, her workload anxiety results in her feeling overwhelmed to the point she wants to give up or just shut down her laptop and do nothing. In this discussion, her anxiety can be classified as a negative activating achievement emotion experienced both retrospectively and prospectively (Pekrun & Perry, 2014).

Malia's anxiety seems to mediate between experiencing the emotion because no matter how much she plans her work in advance of the deadlines, it takes such a long time to complete her work and experiencing anxiety due to her spiraling thoughts about how to manage the amount of work with failure looming as a potential outcome. In this instance, she perceives her anxiety from an internal locus of control aligned to low levels of control-anxiety and high levels of value placed on

achievement as she indicated she would not give up despite feeling like doing do at times (Parker et al., 2021).

In Malia's PEI, she described how she gave the theme "cannot take the pace" to her Photograph 25 (See section 4.2.6.). In her comments, she again emphasised her feelings of anxiety and uneasiness if she could not keep up with the demands of her assignments and learning which are reflected in, "*If you cannot stand the pace, it means that you are unable to do things well when there is a lot of pressure*". From the discussion in her PEI, anxiety can be classified as a negative activating achievement emotion experienced retrospectively as an outcome of struggling to keep up with the pace of the work in her degree (Pekrun & Perry, 2014). Malia's anxiety seems to mediate between not keeping up with the pace of the assignment deadlines and believing she won't do well as a consequence. Additionally, being conscientised to the fact that when a person (Malia) experiences anxiety, they are unaware of how they are working or the chaos they have created in their work environment. In this instance, she perceives her anxiety from an internal locus of control (Goetz et al., 2008) aligned to low levels of control-anxiety and high value-anxiety (Parker et al., 2021).

Importantly, participants described experiencing anxiety as both a negative deactivating achievement emotion related to a lack of social anxiety and spending time in nature while other participants experienced anxiety as a negative activating achievement emotion related to the challenges of meeting deadlines, technology based issues, poor study behaviours and communication barriers between the university and students. Although the majority of participants experienced anxiety from an external locus of control, the value they placed on their academic

achievement activated their intrinsic motivation to achieve their learning activities despite the difficulties they experienced.

5.4. Conclusion

Chapter Five provided a more detailed discussion and analysis of the participants' extracts from Chapter Four according to the Control Value Theory (Pekrun & Perry, 2014) while offering research that validates and supports each achievement emotion related to the current study's findings.

Chapter Six – Concluding Summation

6.1. Introduction

Chapter Six discusses the implications and reflections of the study, the strengths and limitations as well as the recommendations for future research. The final section of this chapter concludes the study.

6.2. Implications and Reflections

This study has explored the role that six dominant achievement emotions may play in the academic achievement trajectories of Psychology 201 undergraduate students at a university in South Africa. Given that importance that emotions play in learning in diverse higher education settings, it has become increasingly important for HEIs to understand the individually and socio-culturally mediated processes in which students can achieve at university. The focus of this study has been on the role of achievement emotions in the academic achievement trajectories of undergraduate university students. Theoretically, the findings from the studies reported in this study point to the potential motivational component of enjoyment and hope as positive activating emotions in high achieving students' academic journeys. The findings further suggest that anxiety can be experienced as a negative activating and deactivating emotion in the undergraduate students' learning context.

In addition to the potentially new theoretical insights made in this study, it also explored the role that Photovoice as a data production strategy can play in conscientising participants to their achievement emotions, speaking to the emancipatory nature of this method. By conscientising the participants to their emotions in their learning journeys, it allows them to develop a trusting

relationship with the researcher (Capello, 2005; Clark, 1999; Epstein Stevens, McKeever, & Baruchel, 2006; Fischman, 2001 as cited in Meo, 2010). If students trust the researcher, they are more likely to feel comfortable to share the deeper emotional components of their learning and achievement creating the space for implicit idiographic data on achievement emotions to emerge (Becker, 2002; Schwartz, 1989 as cited in Meo, 2010).

Moreover, participants who are conscientised to the personally meaningful nature photographs have for them are understood to engage the more emotional parts of the brain, importantly influencing engagement with their achievement emotions (Munro & Shuttleworth, 2021). After using both traditional data collection methods and PEIs in a research study, Shohel and Mahruf (2012) confirmed that PEIs produce more in-depth and meaningful accounts of the topic being explored compared to traditional methods such as interviews.

While Photovoice and PEIs produce more meaningful accounts of achievement emotions, the use of these data production methods present some limitations. One concern in using these methods is that some participants may take photographs that appear to be unrelated to their learning trajectories. However, the researcher understood that photographs are nuanced with symbolic meanings, and that any unrelated photographic content may potentially be related to the study's research aims clarified by the participants. The ethical complications associated with using Photovoice is another potential limitation as it requires participants to be trained in the ethics of taking photographs for research purposes as well as needing the time to take the photographs before they have their PEIs with the researcher. Thus, it may be more cost and time effective for

researchers to conduct semi-structured interviews with participants about their achievement emotions (Munro & Shuttleworth, 2021).

Overall, however, the researcher argues that taking and sharing photographs through social media platforms such as Tik Tok, Instagram, and/or Snapchat is a socially meaningful cultural practice among youth. Thus, introducing this practice as a methodology for exploring achievement emotions is likely to create a lot of interest and participation among students in higher education settings. As personally meaningful symbolic systems, photographs “may be a powerful means of organising affect” (Luria et al., 1932, p. 432) in achievement emotion research.

Positive emotions in the present study were found to be associated with a range of motivational functions, reportedly promoting communication, exploration, flexible thinking, engagement, persistence, resilience, goal pursuit and reciprocity amongst others (Rowe et al., 2015).

6.3. Strengths of the Study

The main strength of the study was the use of Photovoice and the PEIs conscientised participants to their learning activities, behaviours and spaces. Thus, taking photographs was a medium that created the meaning they found in the learning activities, behaviours and outcomes they engaged in.

A second strength of the study was that the findings highlighted both similarities and differences in the students experiences related to their emotions (e.g. family support or family as a motivation to achieve academically versus feeling isolated and alone; common frustrations with poor internet connections, loadshedding and Covid restrictions).

6.4. Limitations of the Study

One of the main limitations that the researcher identified in the study, was that although the researcher actively engaged in a both inductive and deductive analysis of the data, most of the themes related to achievement emotions were only reported from the theoretical framework of CVT. Therefore, data that did not relate to achievement emotions was not analysed, potentially disregarding any meaningful data that could still be important for university officials and stakeholders to use in implementing programmes that support students in their achievement goals. A second limitation of the study was the poor participation response. Although generalisability is not an aim of qualitative research, of the 305 students registered for the PSYC 201 module and the 63 invited to participate in Phase 2 of the study, only six students consented to their photographs being used and to participating in the PEIs. Although this may be a valid limitation, the findings from this study may offer meaningful insights into the incidence of cognitive and affective processes in more common blended and online learning platforms. A third limitation of the study relates to the sampling technique as it only included PSYC 201 undergraduate students and not all psychology undergraduate students or students from across other disciplines within the School of Applied Human Sciences.

While the researcher analysed the data both inductively and deductively to increase the rigour of the study, she refrained from imposing her own beliefs on the participants in the interpretation of the data and the photographs. Additionally, she engaged in reflexive writing during and after data production. These practices speak to the confirmability of qualitative methods, where the findings of the study are created by the participants and not by the researcher's own motivations or interests (Lincoln et al., 1985; Miles & Huberman, 1994).

The researcher questioned whether her epistemological beliefs related to achievement emotions by attempting to understand both the CVT and the interpretive and contextual complexities of the participants data to discover whether students could authentically be conscientised to their emotions, achievement activities, study behaviours and achievement outcomes.

6.5. Recommendations and Future Research

The following is a discussion of future recommendations for further studies in the context of achievement emotions in higher education. The recommendations are discussed related to the overall findings of the study.

It is important to understand how achievement emotions influence university students' learning behaviours and academic activities they participate in since these emotions either positively or negatively affect their achievement and what resources they have available to them to support them in attaining their achievement trajectories. If students experience more negative emotions than positive emotions in their learning activities, it is reasonable to assume that there are less resources available to them to complete an academic assignment. As a consequence, the likelihood of burnout and disinterest will follow in the interim, potentially resulting in poor achievement and increased dropout rates (de la Fuente et al., 2020).

Based on the findings of this study it would be important to undertake a similar study across disciplines within the School of Applied Human Sciences with students at various levels of study (i.e., first, second and third year students and undergraduate and postgraduate students). It is further recommended that based on the findings from future research, university officials implement

preventive programs that assess the origins of negative achievement emotions in university students to ascertain which personal factors and situational factors influence their negative achievement emotions and poor academic performance. This knowledge would create the opportunity for developing formal intervention strategies for both lecturers and students, with the aim of improving teaching and learning processes, and to support students in addressing personal factors such as anxiety or perfectionism.

Understanding the relationships between these factors is essential to the accurate assessment of achievement emotions and the treatment strategies of such symptoms as stress, anxiety and burnout amongst students. Not only should personal factors be understood, but the interaction between personal and contextual factors be explored related to interactions in class settings, study behaviours and learning activities, including test situations.

A third recommendation would include developing interventions such as emotional regulation strategies that address attention or offer specific training to enhance performance. Such interventions could be offered in various formats (i.e., individual, group or online), with the effectiveness of using the online platform recently evidenced (Freire et al., 2019; Park & Adler, 2003).

6.6. Conclusion

Findings from the study not only reveal a relationship among the students' achievement emotions and their achievement activities and behaviours but the influence it has on their motivation. Consequently, researchers need to continue to investigate how students and their activities

influence learning outcomes and/or their behaviours, in order to better understand how these achievement emotions can positively influence their learning trajectories at university. With this information, strategies can be developed to provide psychological support to university students who do not have access to the resources needed to achieve.

References

- Alemu, B., & Feyssa, T. (2020). The relationship between test anxiety and academic achievement of grade ten students of Shirka Woreda, Oromia Regional State, Ethiopia. *African Educational Research Journal*, 8(3), 540–550. <https://doi.org/10.30918/aerj.83.20.097>
- Allen, L. (2009). “Snapped”: Researching the sexual cultures of schools using visual methods. *International Journal of Qualitative Studies in Education*, 22(5), 549–561. <https://doi.org/http://dx.doi.org/10.1080/09518390903051523>
- Allen, Q. (2012). Photographs and Stories : Ethics , Benefits and Dilemmas of Using Participant Photography with Black Middle-Class Male Youth. *Qualitative Research*, 12(4), 443–458. <https://doi.org/10.1177/1468794111433088>
- Artino, A. R. (2009). Internet and Higher Education Online learning : Are subjective perceptions of instructional context related to academic success? *Internet and Higher Education*, 12(3–4), 117–125. <https://doi.org/10.1016/j.iheduc.2009.07.003>
- Artino, A. R., Holmboe, E. S., & Durning, S. J. (2012). Control value theory: Using achievement emotions to improve understanding of motivation, learning, and performance in medical education: AMEE Guide No. 64. *Medical Teacher*, 34(3). <https://doi.org/10.3109/0142159X.2012.651515>
- Artino, A. R., & Jones, K. D. (2012). Exploring the complex relations between achievement emotions and self-regulated learning behaviors in online learning. *Internet and Higher Education*, 15(3), 170–175. <https://doi.org/10.1016/j.iheduc.2012.01.006>
- Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1, 164–180. <https://doi.org/https://doi:10.1111/j.1745-6916.2006.00011.x>

- Behrens, C. C., Dolmans, D. H., Gormley, G. J., & Driessen, E. W. (2019). Exploring undergraduate students achievement emotions during ward round simulation: A mixed-method study. *BMC Medical Education, 19*(1), 1–7. <https://doi.org/10.1186/s12909-019-1753-1>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic Analysis. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 843–860). <https://doi.org/https://doi.org/10.1007/978-981-10-5251-4>
- Burkitt, I. (2019). Emotions, social activity and neuroscience: The cultural-historical formation of emotion. *New Ideas in Psychology, 54*, 1–7. <https://doi.org/10.1016/j.newideapsych.2018.11.001>
- Burr, V. (2019). Social Constructionism. In Pranee Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 118–131). Springer.
- Clark, C. D. (1999). The autodriver interview: A photographic viewfinder into children's experience. *Visual Sociology, 14*(1), 39–50. <https://doi.org/10.1080/14725869908583801>
- Clarke, V., & Braun, V. (2017). Thematic analysis. *Journal of Positive Psychology, 12*(3), 297–298. <https://doi.org/10.1080/17439760.2016.1262613>
- Cohen, L., Manion, L., & K., M. (2018). *Research Methos in Education*. Routledge.
- Copes, H., Tchoula, W., Brookman, F., & Ragland, J. (2018). Photo-Elicitation Interviews with Vulnerable Populations: Practical and Ethical Considerations. *Deviant Behavior, 39*(4), 475–494. <https://doi.org/10.1080/01639625.2017.1407109>

- Council on Higher Education. (2019). *Vital Stats Public Higher Education 2017*.
https://www.policysa.com/images/VitalStats_Public Higher Education 2017.pdf
- Council on Higher Education (South Africa). (2016). *South african higher education reviewed : two decades of democracy*.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Sage Publications Inc.
- Creswell, J. W, & Poth, C. N. (2018). *Qualitative Inquiry* (3rd Editio). SAGE Publications.
- Creswell, John W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Sage Publications Inc. <https://doi.org/10.2307/3152153>
- Crotty, M. (1998). *The Foundations of Social Research: Meaning and Perspective in the research Process*. Allen and Unwin.
- Daniels, L. M., Stupnisky, R. H., Haynes, T. L., Perry, R. P., Newall, N. E., & Pekrun, R. (2009). A longitudinal analysis of achievement goals: from affective antecedents to emotional effects and achievement outcomes. *Journal of Educational Psychology, 101*(4), 948–963.
<https://doi.org/https://doi.org/10.1037/a0016096>
- de la Fuente, J., Lahortiga-Ramos, F., Laspra-Solis, C., Maestro-Martin, C., Alustiza, I., Auba, E., & Martin-Lanas, R. (2020). A Structural Equation Model of Achievement Emotions , Coping Strategies and Engagement-Burnout in Undergraduate Students : A Possible Underlying Mechanism in Facets of Perfectionism. *International Journal of Environmental Research and Public Health, 17*, 1–24. www.mdpi.com/journal/ijerph
- Dong, Y., & Yu, G. L. (2007). The development and application of an academic emotions questionnaire. *Acta Psychologica Sinici, 39*, 852–860. <https://psycnet.apa.org/record/2007->

15078-011

- Duffy, M. C., Lajoie, S. P., Pekrun, R., & Lachapelle, K. (2020a). Emotions in medical education: Examining the validity of the Medical Emotion Scale (MES) across authentic medical learning environments. *Learning and Instruction*, 70(May).
<https://doi.org/10.1016/j.learninstruc.2018.07.001>
- Duffy, M. C., Lajoie, S. P., Pekrun, R., & Lachapelle, K. (2020b). Emotions in medical education: Examining the validity of the Medical Emotion Scale (MES) across authentic medical learning environments. *Learning and Instruction*, 70(July), 1–13.
<https://doi.org/10.1016/j.learninstruc.2018.07.001>
- Ely, M., Anzul, M., Friedman, T., Garner, D., & Steinmetz, A. C. (1991). *Doing qualitative research: Circles within circles*. Falmer Press.
- Fong Lam, U., Chen, W. W., Zhang, J., & Liang, T. (2015). It feels good to learn where I belong: School belonging, academic emotions, and academic achievement in adolescents. *School Psychology International*, 36(4), 393–409.
<https://doi.org/https://doi.org/10.1177/0143034315589649>
- Foot, H., & Sanford, A. (2004). The use and abuse of student participants. *The Psychologist*, 17(5), 256–259.
- Freire, C., Ferradás, M. D. M., Núñez, J. C., Valle, A., & Vallejo, G. (2019). Eudaimonic well-being and coping with stress in university students: The mediating/moderating role of self-efficacy. *International Journal of Environmental Research and Public Health*, 16(1).
<https://doi.org/10.3390/ijerph16010048>
- Freire, P. (2005). *Pedagogy of the Oppressed* (30th anniv). Continuum International Publishing

Group.

- Frias-Navarro, D., Monderde-i-Bort, H., Navarro-Gonzalez, N., Molina-Palomero, O., Pascual-Soler, M., Perez-Gonzalez, J., & Longobardi, C. (2018). Statistics anxiety in university students in assessment situations. *4th International Conference on Higher Education Advances*, 1–8. <https://doi.org/10.4995/head18.2018.7990>
- Fritzsche, E. S., & Kordts-freudinger, R. (2018). *Study Motivation and Academic Emotions in Engineering Students A Case Study in German Higher Education*. 569–576.
- Goetz, T., Frenzel, A. C., Hall, N. C., & Pekrun, R. (2008). Antecedents of academic emotions: Testing the internal/external frame of reference model for academic enjoyment. *Contemporary Educational Psychology*, 33(1), 9–33.
- Goetz, Thomas, Bieg, M., Lüdtke, O., Pekrun, R., & Hall, N. C. (2013). Do Girls Really Experience More Anxiety in Mathematics? *Psychological Science*, 24(10), 2079–2087. <https://doi.org/10.1177/0956797613486989>
- Gross, J. J. (2008). Emotion Regulation. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (3rd ed., pp. 497–512). Guilford Press.
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29, 75–91.
- Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Sage Publications.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing Paradigms in Qualitative Research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research*. Sage Publications.
- Hailikari, T., Kordts-Freudinger, R., & Postareff, L. (2016). Feel the Progress : Second-year Students ' Reflections on Their First-year Feel the Progress : Second-year Students '

- Reflections on Their First-year Experience. *Internatonal Journal of Higher Education*, 5(3).
<https://doi.org/10.5430/ijhe.v5n3p79>
- Hanson, C., Ju, A., & Tong, A. (2019). Appraisal of qualitative studies. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 1013–1025). Springer Nature Singapore. <https://doi.org/https://doi.org/10.1007/978-981-10-5251-4>
- Harper, D. (2002). Talking about pictures : A case for photo elicitation. *Visual Studies*, 1, 13–26.
<https://doi.org/10.1080/1472586022013734>
- Hesse-Biber, S. N. (2017). *The Practice of Qualitative Research* (3rd Editio). Sage Publications Inc. <https://us.sagepub.com/en-us/nam/the-practice-of-qualitative-research/book240120>
- Izard, C. E. (2000). Affect. In *In Encyclopedia of Psychology* (p. 88). American Psychological Association. <https://doi.org/doi:10.1037/10516-026>
- JM, B., GD, B., & PB., K. (2021). Research ethics. In *StatPearls*. StatPearls Publishing.
<https://www.ncbi.nlm.nih.gov/books/NBK459281/>
- Joubert, G., Steinberg, W. J., & van der Merwe, L. J. (2019). An ethical perspective. *African Journal of Health Professions Education*, 11(2), 57–62.
<https://doi.org/https://www.10.7196/AJHPE.2019.v11i2.1081>
- Kim, C. M., & Hodges, C. B. (2012). Effects of an emotion control treatment on academic emotions, motivation and achievement in an online mathematics course. *Instructional Science*, 40(1), 173–192. <https://doi.org/10.1007/s11251-011-9165-6>
- Kuper, A., Lingard, L., & Levinson, W. (2008). Critically appraising qualitative research. *British Medical Journal*, 337(September), 687–692. <https://doi.org/10.1136/bmj.a1035>
- Kuratani, D. L. G., & Lai, E. (2011). *Photovoice Literature Review* (pp. 1–15).

- Lazarides, R., & Raufelder, D. (2021). Control-value theory in the context of teaching: does teaching quality moderate relations between academic self-concept and achievement emotions? *British Journal of Educational Psychology*, *91*(1), 127–147. <https://doi.org/10.1111/bjep.12352>
- Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford University Press, Incorporated.
- LeCompte, M. D., & Goetz, J. P. (1982). Problems of Reliability and Validity in Ethnographic Research. *Review of Educational Research*, *52*(1), 31–60. <https://doi.org/10.3102/00346543052001031>
- Lei, H., Xu, G., Shao, C., & Sang, J. (2015). The Relationship of Teachers' Caring Behavior and Students' Academic Development: The Mediating Role of Learning Self-efficacy. *Psychological Development and Education*, *31*(2), 188–197. <http://www.devpsy.com.cn/EN/10.16187/j.cnki.issn1001-4918.2015.02.08>
- Lei, Hao, & Cui, Y. (2016). Effects of academic emotions on achievement among mainland Chinese students: A meta-analysis. *Social Behavior and Personality*, *44*(9), 1541–1553. <https://doi.org/10.2224/sbp.2016.44.9.1541>
- Liamputtong, P. (2013). *Qualitative research methods 4th edition* (4th editio, Issue May). Oxford University Press. https://www.researchgate.net/publication/303015586_Qualitative_research_methods_4th_edition
- Liamputtong, P. (2019). Handbook of Research Methods in Health Social Sciences. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences*. Springer Singapore. <https://doi.org/10.1007/978-981-10-5251-4>

- Liamputtong, Pranee. (2019). Handbook of Research Methods in Health Social Sciences. In Pranee Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences*. Springer. <https://doi.org/https://doi.org/10.1007/978-981-10-5251-4>
- Lincoln, Y. S., & Guba, E. G. (1985). Establishing Trustworthiness. In *Naturalistic Inquiry* (pp. 289–331). Sage Publications. <https://doi.org/0803924313>
- Lincoln, Y. S., & Guba, E. G. (1986). Emerging Criteria for Quality in Qualitative and Interpretive Research. In *Naturalistic Inquiry*. Sage Publications.
- Lincoln, Y. S., Guba, Y. S. L. E. G., Guba, E. G., & Publishing, S. (1985). *Naturalistic Inquiry*. SAGE Publications. <https://books.google.co.za/books?id=2oA9aWINEoC>
- Linnenbrink, E. A. (2006). Emotion research in education: Theoretical and methodological perspectives on the integration of affect, motivation, and cognition. *Educational Psychology Review*, 18(4), 307–314. <https://doi.org/10.1007/s10648-006-9028-x>
- Loderer, K., Pekrun, R., & Lester, J. C. (2020). Beyond cold technology: A systematic review and meta-analysis on emotions in technology-based learning environments. *Learning and Instruction*, 70(July 2017), 1–15. <https://doi.org/10.1016/j.learninstruc.2018.08.002>
- Luria, A. R., Gantt, W. A. H., & New York Academy of Medicine. (1932). *The nature of human conflicts, or emotion, conflict and will : an objective study of disorganisation an control of human behaviour*. Liveright.
- Luttrell, W. (2010). “A camera is a big responsibility”: A lens for analyzing children’s visual voices. *Visual Studies*, 25(3), 224–237. <https://doi.org/10.1080/1472586X.2010.523274>
- Meece, J. L., & Eccles, J. S. (1990). Predictors of math anxiety and its influence on young adolescents’ course enrollment intentions and performance in mathematics. *Journal of*

Educational Psychology, 82(1).

- Mentis, H. M. (2007). Memory of frustrating experiences. In D. Nahl & D. Bilal (Eds.), *Information and emotion: the emergent affective paradigm in information behavior research and theory* (pp. 197–210). Information Today
- Meo, A. I. (2010). Picturing Students' Habitus: The Advantages and Limitations of Photo-Elicitation Interviewing in a Qualitative Study in the City of Buenos Aires. *International Journal of Qualitative Methods*, 9(2), 149–171.
- Metcalf, A. (2015). Visual methods in higher education. In F. Stage & K. Manning (Eds.), *Research in the college context: Approaches and methods* (pp. 111–127). Routledge.
- Miles, B. M., & Huberman, A. M. (1994). *An Expanded Sourcebook: Qualitative Data Analysis* (2nd ed.). Sage Publications Inc.
- Moors, A. (2009). Theories of emotion causation: A review. *Cognition and Emotion*, 23(4), 625–662. <https://doi.org/10.1080/02699930802645739>
- Munro, N., & Shuttleworth, T. (2021a). Visualising achievement emotions through elicitation interviews: A methodology for generating data on the dialectical tensions between pride, sadness, and hope among high achieving undergraduate students. In E. Braun, R. Esterhazy, & R. Kordts-Freudinger (Eds.), *Research on Teaching and Learning in Higher Education* (pp. 143–162). Waxmann.
- Munro, N., & Shuttleworth, T. (2021b). Visualising achievement emotions through photo elicitation interviews: A methodology for generating data on the dialectical tensions between pride, sadness, and hope among high achieving undergraduate students. In R. Korts-Freudinger, E. Braun, & R. Esterhazy (Eds.), *Research on Teaching and Learning in Higher*

Education (pp. 143–162). Waxmann.

O'Toole, V., & O'Flaherty, J. (2022). The role of emotion in higher education : exploring global citizenship education citizenship education. *Irish Educational Studies*, 1–19.

<https://doi.org/10.1080/03323315.2022.2135565>

Onwuegbuzie, A. J. (2004). Academic procrastination and statistics anxiety. *Assessment and Evaluation in Higher Education*, 29(1), 3–19.

<https://doi.org/10.1080/0260293042000160384>

Onwuegbuzie, A. J., & Wilson, V. A. (2003). Statistics Anxiety: Nature, etiology, antecedents, effects, and treatments--a comprehensive review of the literature. *Teaching in Higher Education*, 8(2), 195–209.

<https://doi.org/10.1080/1356251032000052447>

Paechter, M., Macher, D., Martskvishvili, K., & Wimmer, S. (2017). Mathematics Anxiety and Statistics Anxiety . Shared but Also Unshared Components and Antagonistic Contributions to Performance in Statistics. *Frontiers in Psychology*, 8(July), 1–13.

<https://doi.org/10.3389/fpsyg.2017.01196>

Park, C. L., & Adler, N. E. (2003). Coping Style as a Predictor of Health and Well-Being Across the First Year of Medical School. *Health Psychology*, 22(6), 627–631.

<https://doi.org/https://doi.org/10.1037/0278-6133.22.6.627>

Parker, P. C., Perry, R. P., Hamm, J. M., Chipperfield, J. G., Pekrun, R., Dryden, R. P., Daniels, L. M., & Tze, V. M. C. (2021). A motivation perspective on achievement appraisals, emotions, and performance in an online learning environment. *International Journal of Educational Research*, 108(January).

<https://doi.org/10.1016/j.ijer.2021.101772>

Pekrun, R. (1992). Expectancy-value theory of anxiety: Overview and implications. In D. G.

- Forgays, T. Sosnowski, & K. Wrzesniewski (Eds.), *Anxiety: Recent developments in self-appraisal, psychophysiological and health research* (pp. 23–41). Hemisphere.
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18(4), 315–341. <https://doi.org/10.1007/s10648-006-9029-9>
- Pekrun, R. (2018). Control-value theory: A social-cognitive approach to achievement emotions. In G. A. D. Liem & D. M. McInerney (Eds.), *Big theories revisited 2: A volume of research on sociocultural influences on motivation and learning* (pp. 162–190). Information Age Publishing.
- Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist*, 37(2), 91–105. https://doi.org/10.1207/S15326985EP3702_4
- Pekrun, R., Hall, N. C., Goetz, T., & Perry, R. P. (2014). Boredom and academic achievement: testing a model of reciprocal causation. 696–710. *Journal of Educational Psychology*, 106(3), 696–710. <https://doi.org/https://doi.org/10.1037/a0036006>
- Pekrun, R., Lichtenfeld, S., Marsh, H. W., Murayama, K., & Goetz, T. (2017). Achievement Emotions and Academic Performance: Longitudinal Models of Reciprocal Effects. *Child Development*, 88(5), 1653–1670. <https://doi.org/10.1111/cdev.12704>
- Pekrun, R., & Perry, R. P. (2014a). Control value theory of Achievement Emotions. In R. Pekrun & Linnerbrink-Garcia. L. (Eds.), *International handbook of emotions in education* (pp. 120–141). Routledge/Taylor & Francis Group.
- Pekrun, R., & Perry, R. P. (2014b). Control Value Theory of Achievement Emotions. In R. Pekrun

- & Linnerbrink-Garcia, L. (Eds.), *International handbook of emotions in education* (pp. 120–141). Routledge/Taylor & Francis Group.
- Pekrun, Reinhard. (2017). Emotion and Achievement During Adolescence. *Child Development Perspectives*, *11*(3), 215–221. <https://doi.org/10.1111/cdep.12237>
- Pekrun, Reinhard. (2019). Inquiry on emotions in higher education: progress and open problems. *Studies in Higher Education*, *44*(10), 1806–1811. <https://doi.org/10.1080/03075079.2019.1665335>
- Pekrun, Reinhard, Frenzel, A. C., Goetz, T., & Perry, R. P. (2007). The Control-Value Theory of Achievement Emotions. An Integrative Approach to Emotions in Education. In Reinhard Pekrun & P. Schulz (Eds.), *Emotion in Education* (pp. 13–36). Academic Press. <https://doi.org/10.1016/B978-012372545-5/50003-4>
- Pekrun, Reinhard, Goetz, T., Frenzel, A. C., & Barchfeld, P. (2011). Measuring emotions in students' learning and performance. *Contemporary Educational Psychology*, *36*(1), 36–48.
- Pekrun, Reinhard, Goetz, T., Frenzel, A. C., Barchfeld, P., & Perry, R. P. (2011). Measuring emotions in students' learning and performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary Educational Psychology*, *36*(1), 36–48. <https://doi.org/10.1016/j.cedpsych.2010.10.002>
- Pekrun, Reinhard, Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist*, *37*(2), 91–105. https://doi.org/10.1207/S15326985EP3702_4
- Pekrun, Reinhard, Lichtenfeld, S., Marsh, H. W., Murayama, K., & Goetz, T. (2017). Achievement Emotions and Academic Performance: Longitudinal Models of Reciprocal Effects. *Child*

Development, 88(5), 1653–1670. <https://doi.org/10.1111/cdev.12704>

Peterson, R. (2001). On the Use of College Students in Social Science Research : Insights from a Second- Order Meta-analysis. *Journal of Consumer Research*, 28(December 2001), 450–461. <https://doi.org/10.1086/323732>

Power, N. G., Norman, M. E., & Dupré, K. (2014). Rural youth and emotional geographies: How photovoice and words-alone methods tell different stories of place. *Journal of Youth Studies*, 17(8), 1114–1129. <https://doi.org/10.1080/13676261.2014.881983>

Raccanello, D., Balbontín-Alvarado, R., Bezerra, D. da S., Burro, R., Cheraghi, M., Dobrowolska, B., Fagbamigbe, A. F., Faris, M. A. I. E., França, T., González-Fernández, B., Hall, R., Inasius, F., Kar, S. K., Keržič, D., Lazányi, K., Lazăr, F., Machin-Mastromatteo, J. D., Marôco, J., Marques, B. P., ... Aristovnik, A. (2022). Higher education students' achievement emotions and their antecedents in e-learning amid COVID-19 pandemic: A multi-country survey. *Learning and Instruction*, 80(May). <https://doi.org/10.1016/j.learninstruc.2022.101629>

Raccanello, D., Balbontín-alvarado, R., Bezerra, S., Burro, R., Cheraghi, M., Dobrowolska, B., Francis, A., Inasius, F., Kar, S. K., Ker, D., Marques, B. P., Mejía-rodríguez, O., & Machin-mastromatteo, J. D. (2022). Higher Education Students ' Achievement Emotions and Their Antecedents in E-Learning Amid COVID-19 Pandemic : A Multi-Country Survey Higher education students ' achievement emotions and their antecedents in e-learning amid COVID-19 pandemic : A multi-coun. *Learning and Instruction*, May. <https://doi.org/10.1016/j.learninstruc.2022.101629>

Rania, N., Migliorini, L., Reborá, S., & Cardinali, P. (2015). Photovoice and interpretation of pictures in a group discussion: A community psychology approach. *Qualitative Research in*

Psychology, 12(4), 382–396. <https://doi.org/10.1080/14780887.2015.1019597>

Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers and Education*, 144(March 2019), 103701. <https://doi.org/10.1016/j.compedu.2019.103701>

Respondek, L., Seufert, T., Stupnisky, R., & Nett, U. E. (2017). Perceived Academic Control and Academic Emotions Predict Undergraduate University Student Success : Examining Effects on Dropout Intention and Achievement. *Frontiers in Psychology*, 8(243), 1–18. <https://doi.org/10.3389/fpsyg.2017.00243>

Rowe, Anna D., & Fitness, J. (2018a). Understanding the role of negative emotions in adult learning and achievement: A social functional perspective. *Behavioral Sciences*, 8(2), 1–19. <https://doi.org/10.3390/bs8020027>

Rowe, Anna D., & Fitness, J. (2018b). Understanding the role of negative emotions in adult learning and achievement: A social functional perspective. *Behavioral Sciences*, 8(2). <https://doi.org/10.3390/bs8020027>

Rowe, Anna D., Fitness, J., & Wood, L. N. (2015). University student and lecturer perceptions of positive emotions in learning. *International Journal of Qualitative Studies in Education*, 28(1), 1–20. <https://doi.org/10.1080/09518398.2013.847506>

Sanon, M. A., Evans-Agnew, R. A., & Boutain, D. M. (2014). An Exploration of Social Justice Intent in Photovoice Research Studies: From 2008 to 2013. *Nursing Inquiry*, 21(3), 212–226. <https://doi.org/10.1111/nin.12064>

Shao, K., Pekrun, R., Marsh, H. W., & Loderer, K. (2020). Control-value appraisals, achievement emotions, and foreign language performance: A latent interaction analysis. *Learning and*

- Instruction*, 69(September). <https://doi.org/10.1016/j.learninstruc.2020.101356>
- Sharp, J. G., Hemmings, B., & Kay, R. (2016). Towards a model for the assessment of student boredom and boredom proneness in the UK higher education context. *Journal of Further and Higher Education*, 40(5), 649–681. <https://doi.org/10.1080/0309877X.2014.1000282>
- Shenton, A. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22, 63–75. <https://doi.org/10.1111/j.1744-618X.2000.tb00391.x>
- Shohel, M. M. C. (2012). Nostalgia, transition and the school: An innovative approach of using photographic images as a visual method in educational research. *International Journal of Research and Method in Education*, 35(3), 269–292. <https://doi.org/10.1080/1743727X.2012.713253>
- Shuman, V., & Scherer, K. R. (2014). Concepts and structures of emotions. In R. Pekrun & L. Linnenbrink-Garcia (Eds.), *International handbook of emotions in education* (pp. 13–35). Routledge/Taylor & Francis Group.
- Silverman, D. (2011). *Interpreting Qualitative Data: A Guide to the Principles of Qualitative Research* (5th Editio). Sage Publications.
- Srivastava, P., & Hopewood, N. (2009). A Practical Iterative Framework for Qualitative Data Analysis. *International Journal of Qualitative Methods*, 8(1), 76–84.
- Steyn, M. G., & Kamper, G. D. (2011). Barriers to learning in South African higher education: Some photovoice perspectives. *Journal for New Generation Sciences*, 9(1), 116–136.
- The Belmont Report. (1979). *The Belmont Report: Principles, Ethics and Guidelines for the Protection of Human Subjects of Research*.
- Torre, D., & Murphy, J. (2015). A different lens: Changing perspectives using Photo-Elicitation

- Interviews. Education Policy Analysis Archives. *Education Policy Analysis Archives*, 23(111). <http://dx.doi.org/10.14507/epaa.v23.2051>
- Turner, J. E., & Schallert, D. L. (2001). Expectancy-value relationships of shame reactions and shame resiliency. *Journal of Educational Psychology*, 93(2), 320–329. <https://doi.org/10.1037/0022-0663.93.2.320>
- Tutkun, T. (2019). Statistics Anxiety of Graduate Students. *International Journal of Progressive Education*, 15(5), 32–41. <https://doi.org/10.29329/ijpe.2019.212.3>
- Ulin, P. R., Robinson, E. T., & Tolley, E. E. (2005). Qualitative Methods in Public Health. In *Jossey-Bass*. <https://doi.org/10.1249/01.mss.0000172593.20181.14>
- Villavicencio, F. T. (2011). Critical Thinking, Negative Academic Emotions and Achievement: A Mediation Analysis. *The Asia-Pacific Education Researcher*, 20(1), 118–126. https://www.academia.edu/28736915/Critical_thinking_negative_academic_emotions_and_achievement_A_mediation_analysis
- Villavicencio, F. T., & Bernardo, A. B. I. (2013). Positive academic emotions moderate the relationship between self-regulation and academic achievement. *British Journal of Educational Psychology*, 83(2), 329–340. <https://doi.org/10.1111/j.2044-8279.2012.02064.x>
- Wang, A. P., & Chen, H. S. (2005). A study on the effects of learning anxiety, learning attitude, and motivation on test performance [In Chinese]. *Psychological Development and Education*, 21(55–59).
- Wang, C., & Burris, M. A. (1997). Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment. *Health Education and Behavior*, 24(3), 369–387. <https://doi.org/10.1177/109019819702400309>

- Wang, C. C., & Redwood-Jones, Y. A. (2001). Photovoice Ethics: Perspectives from Flint Photovoice. *Health Education & Behavior*, 28(5), 560–572.
<https://doi.org/10.1177/109019810102800504>
- Wassenaar, D. R., & Mamotte, N. (2012). Ethical Issues and Ethics Reviews in Social Science Research. In A. Ferrero, Y. Korkut, M. M. Leach, G. Lindsay, & J. Stevens, Michael (Eds.), *The Oxford handbook of international psychological ethics* (Issue April 2013, pp. 1–41).
<https://doi.org/10.1093/oxfordhb/9780199739165.001.0001>
- Yin, R. K. (2016). *Qualitative Research from Start to Finish* (2nd ed). Guilford Press.
https://www.researchgate.net/publication/254392779_Qualitative_Research_from_Start_to_Finish_by_Robert_K_Yin_Book_review

Appendix 1 - Ethical Clearance Letter



25 June 2021

Ms Terry Shuttleworth (215079541)
School Of Applied Human Sc
Pietermaritzburg Campus

Dear Ms Shuttleworth,

Protocol reference number: HSSREC/00002943/2021
Project title: Visualising undergraduate students achievement emotions
Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 10 June 2021 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted FULL APPROVAL.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 25 June 2022.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

Postal Address: Private Bag X54001, Durban, 4000, South Africa

Telephone: +27 31 260 8350/4557/3587 Email: hssrec@ukzn.ac.za Website: <http://research.ukzn.ac.za/Research-Ethics>

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

Appendix 1.1 – Original Ethical Clearance Letter (HSSREC/00001062/2020)



27 February 2020

Dr Nicholas Munro (316183)
School Of Applied Human Sc
Pietermaritzburg Campus

Dear Dr Munro,

Protocol reference number: HSSREC/00001062/2020

Project title: A Photovoice project exploring (un)safe spaces related to gender based violence on and around a university campus

Non-Degree

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 25 February 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 27 February 2021.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,


Dr Sthelmila Naidoo (Deputy Chair)

/dd

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587
Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

INSPIRING GREATNESS

Appendix 1.2 – Amended Ethical Clearance Letter



21 February 2021

Dr Nicholas Munro (316183)
School Of Applied Human Sc
Pietermaritzburg campus

Dear Dr Munro,

Protocol reference number: HSSREC/00001062/2020
Project title: A Photovoice project exploring (un)safe spaces related to gender based violence on and around a university campus
Amended title: A Photovoice project exploring educationally and socio-politically relevant spaces for university students

Approval Notification – Amendment Application

This letter serves to notify you that your application and request for an amendment received on 15 February 2021 has now been approved as follows:

- Change in title
- Change in research questions and objectives
- Amendment to participant informed consent
- Amendment to data collection instrument
- Amendment to target population

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an 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.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

Best wishes for the successful completion of your research protocol.

Yours faithfully



Professor Dipane Hlalele (Chair)
/dd

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8360 / 4667 / 3687

Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

INSPIRING GREATNESS

Appendix 1.3 – Recertification Ethical Clearance Letter



23 February 2021

Dr Nicholas Munro (316183)
School Of Applied Human Sc
Pietermaritzburg Campus

Dear Dr Munro,

Protocol reference number: HSSREC/00001062/2020

Project title: A Photovoice project exploring educationally and socio-politically relevant spaces for university students

Approval Notification – Recertification Application

Your request for Recertification dated 15 February 2021 was received.

This letter confirms that you have been granted Recertification Approval for a period of one year from the date of this letter. This approval is based strictly on the research protocol submitted and approved in 2020.

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study must be reviewed and approved through the amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Wechville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8360 / 4667 / 3687

Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

INSPIRING GREATNESS

Appendix 1.4 – Gatekeeper’s Permission



30 April 2021

Dr Nicholas Munro
 School of Applied Human Sciences
 College of Humanities
 Pietermaritzburg Campus UKZN
 Email: munron@ukzn.ac.za

Dear Dr Munro

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper’s permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), provided Ethical clearance has been obtained. We note the title of your research project is:

“A photovoice project exploring educationally and socio-politically relevant spaces for university students.”

It is noted that you will be constituting your sample as follows:

- By collecting photographs and photo narratives conducted by students registered for the Psychology 201 module on the Pietermaritzburg campus
- By conducting Photo-elicitation interviews with students registered for the Psychology 201 module on the Pietermaritzburg campus (Taking in account the regulations imposed during the lockdown ie restrictions on gatherings, travel, social distancing etc. ZOOM, Skype or telephone interviews recommended).

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance approval letter;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using ‘Microsoft Outlook’ address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the PAIA and POPI Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely



DR KE CLELAND: REGISTRAR

Office of the Registrar

Postal Address: Private Bag X54001, Durban, 4000, South Africa

Telephone: +27 (0)31 260 7971 Email: registrar@ukzn.ac.za Website: www.ukzn.ac.za

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

INSPIRING GREATNESS

Appendix 2 – Introductory Research Methods Assignment



ASSIGNMENT COVERSHEET

Student Name	
Student Number	
Module Name	Psychology 201: Introduction to Research
Module Code	PSYC201P1
Module Coordinator	Ms Kershia Sunjeevan
Campus	Pietermaritzburg
Assignment	Practical assignment on qualitative research
Deadline	
Wordcount	
Assignment submission instructions	This assignment can only be submitted on Learn once you have personally logged onto your Learn account. You may not permit another student to log onto your Learn account with your log in details to submit an assignment for you.

	<p>No hard copies of the assignment are permitted.</p> <p>Once you have personally uploaded this completed assignment onto Learn, make sure you click on “Submit assignment”, and then tick the declaration that <i>“this assignment is my own work, except where I have acknowledged the use of the works of other people.”</i></p>
<p>Anti-Plagiarism Declaration</p>	<p>By uploading this completed assignment onto Learn, I confirm that I understand what plagiarism is and I am aware of the University of Kwa-Zulu Natal’s Plagiarism Policy and Procedures (Ref: CO/05/0412/09).</p> <p>I declare that this submission is my own original work. Where another person’s work has been used (either from a printed source, Internet or any other source), this has been specifically acknowledged and referenced.</p> <p>This work does not contain text, pictures, graphics, tables or other information copied and pasted from other sources, unless specifically acknowledged and referenced.</p> <p>This work does not contain other persons' writing, unless specifically acknowledged as being from other sources. Where other written sources have been quoted, then:</p> <ol style="list-style-type: none"> 1. Their words have been re-written, but the general information attributed to them has been referenced,

	<p>2. Where their exact words have been used, then their writing has been placed inside quotation marks, and referenced.</p> <p>I have checked this work to ensure that there are no instances of plagiarism contained within.</p>
--	--

Practical assignment on qualitative research: Psychology 201 2021

Assignment aims and instructions
<p>This assignment aims to develop your qualitative research skills by providing you with experience in Photovoice and thematic analysis.</p> <p>There are <u>two parts</u> to the assignment that will count towards your Psychology 201 class mark:</p> <ul style="list-style-type: none"> • Part 1 (Taking and writing about photographs): Each student takes four photographs (with his/her cellphone) and writes a 250 word photonarrative about each photograph (7 marks). • Part 2 (Analysing photonarratives): Each student conducts a thematic analysis of his/her photonarratives and then presents two of his/her findings/themes (8 marks). <p>The assignment also has <u>two optional parts</u>:</p> <ul style="list-style-type: none"> • Part 3 (Experimenting with communicative validity): Re-cap on what was covered during lectures on communicative validity in qualitative research (Kelly, 2014). Each student is encouraged to share his/her photographs, photonarratives, and findings with at least one other student in the Psychology 201 class. Students can do this via a Zoom or WhatsApp video call. Each student could take a turn to explain

and justify his/her photographs, photonarratives, and findings to the other student, and to receive feedback on these. This discussion could help students develop and refine their findings (see Part 2 of assignment) to enhance the communicative validity of their research.

- **Part 4 (Consenting to your photographs and photonarratives being used for research and awareness purposes and consenting to participate in a research interview):** See the “participant information and consent sheet” at the end of this assignment.

What is Photovoice?

Photovoice is a research technique where researchers and research participants:

- Take photographs in response to a **prompt** that reflects the concerns of a community (see “The prompt/What will I take photographs of?” below),
- May write **photonarratives** about each photograph and reflect on these photographs and photonarratives in small groups, and
- Possibly use the findings (i.e., the photographs, reflections, and photonarratives) to motivate for some change in their community (Jarldorn, 2019a).

What is a photonarrative?

For the purposes of this assignment, a photonarrative is a 250-word story, written by the photographer, about a photograph he/she took. The photonarrative is likely to explain why the photograph was taken and what the photograph symbolises.

The prompt/What will I take photographs of?

Using the camera function on your cellphone, take four photographs that represent your positive and negative learning emotions you experience or have experienced in your undergraduate studies generally. Two of the photographs should represent any positive emotions you experience in your learning activities at university. The other two photographs should represent any negative emotions you experience in your learning activities at university.

It is up to you to decide what you take photographs of, but some examples might include photographs of things that make you feel good/bad or motivated/demotivated about your studies. For example, think about the feelings you have when doing your statistics tutorials for Psychology 201 or in any of your other modules. Can you include a photograph in your collection (either positive and/or negative) which symbolises these feelings?

Why this prompt?

In its strategic plan, UKZN (2017) aims to “create a...stimulating environment which is conducive to study and scholarship for all students and staff” (p. 25). UKZN further aims to explore and implement ways to enhance student learning and academic achievement.

Positive and negative emotions have been found to play an important role in learning and academic achievement at school and university. We would like to learn more about the positive and negative emotions that Psychology 201 students experience (Pekrun et al., 2017)

Take particular notice of the ethical and privacy requirements you must abide by when taking photographs for this assignment (see below). You need to tick that you have read these requirements and that you abided by them when completing this assignment.

What ethical and privacy requirements must I abide by when taking photographs for this assignment?

Taking photographs for this assignment (and for photovoice generally) is not the same as taking photographs for social purposes (e.g., for sharing with friends, family, and/or on social media). For this assignment, please indicate that you have read and understood the following:

1. I will not take a photograph of **someone else**, or something that specifically identifies another person (e.g., a name on a door) as part of this assignment. Although some Photovoice projects include photographs of identifiable people, with their written consent, this Photovoice assignment should not include photographs of people.
2. I will not use the photographs I take as part of this photovoice assignment for **commercial gain**.
3. I understand that I **own** the photographs I take, however, I may choose to use them for this assignment.

Declaration: I have read the above ethical requirements and by ticking the box below, I confirm that I understand these requirements and will abide by these when completing the assignment. **Tick this box:**

What if the topic of this assignment causes me psychological distress?

The topic of this assignment (as with most photovoice assignments) may be perceived as

sensitive and **psychologically distressing** for some students (Jarldorn, 2019b). If you anticipate that participating in this assignment will cause you psychological distress, or if participating in the assignment does indeed cause you psychological distress, you should:

1. speak to the module coordinator about assigning you a different assignment topic, and/or
2. seek immediate assistance from one of the psychologists employed at the College of Humanities Student Support Services (033 260 5233, House 6 Milner Road) – the module coordinator can facilitate an urgent referral should this be necessary.

What is thematic analysis?

Re-cap on what was covered during lectures on interpretive analysis (Terre Blanche, Durrheim, & Kelly, 2014) and reflexive thematic analysis (Braun & Clarke, 2006). Then follow the steps explained during lectures (and in the relevant readings) to identify themes in your data (i.e., the photographs and photonarratives).

References

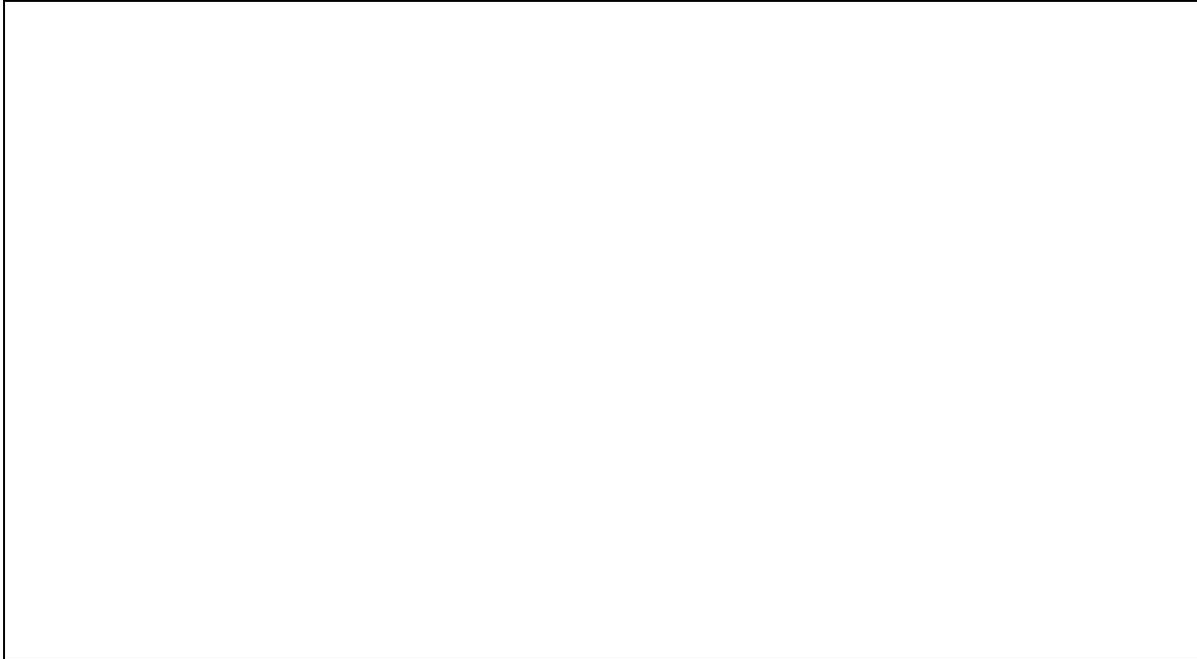
Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa

- Jarldorn, M. (2019a). Photovoice. In *Photovoice handbook for social workers: Method, practicalities and possibilities for social change* (pp. 12-14). Cham, Switzerland: Springer International Publishing.
- Jarldorn, M. (2019b). Ethics and ethical dilemmas with Photovoice and participatory action research. In *Photovoice handbook for social workers: Method, practicalities and possibilities for social change* (pp. 79-98). Cham, Switzerland: Springer International Publishing.
- Kelly, K. (2014). Calling it a day: Reaching conclusions in qualitative research. In M. Terre Blanche, K. Durrheim, & D. Painter (pp. 370-390). *Research in practice. Applied Methods for the social sciences* (2nd ed.). Cape Town: Juta.
- Pekrun, R., Lichtenfeld, S., Marsh, H. W., Murayama, K., & Goetz, T. (2017). Achievement Emotions and Academic Performance: Longitudinal Models of Reciprocal Effects. *Child Development*, 88(5), 1653–1670. <https://doi.org/10.1111/cdev.12704>
- Terre Blanche, M., Durrheim, K., & Kelly, K. (2014). First steps in qualitative data analysis. In M. Terre Blanche, K. Durrheim, & D. Painter (Eds.), *Research in practice: Applied methods for the social sciences* (2nd ed., pp. 320-344). Cape Town: University of Cape Town Press.

Part 1: Taking and writing about photographs (7 marks)

Take and write about four photographs that represent your positive and negative learning emotions.

Insert **photograph 1** here, reflecting your experience of a positive learning emotion.



Type 250 word **photonarrative** about **photograph 1** here:

(In your narrative, think about responding to the following questions: “What is reflected in the photograph? What is not reflected in the photograph? What does the photograph symbolise? How does the photograph reflect a positive learning emotion? Why did you take the photograph?).

A large, empty rectangular box with a thin black border, intended for the student to write their 250-word photonarrative.

Insert **photograph 2** here, reflecting your experience of a positive learning emotion:

Type 250 word **photonarrative** about **photograph 2** here:

(In your narrative, think about responding to the following questions: “What is reflected in the photograph? What is not reflected in the photograph? What does the photograph symbolise? How does the photograph reflect a positive learning emotion? Why did you take the photograph?).

Insert **photograph 3** here, reflecting your experience of a negative learning emotion:

Type 250 word **photonarrative** about **photograph 3** here:

(In your narrative, think about responding to the following questions: “What is reflected in the photograph? What is not reflected in the photograph? What does the photograph symbolise? How does the photograph reflect a negative learning emotion? Why did you take the photograph?)

Insert **photograph 4** here, reflecting your experience of a negative learning emotion:

Type 250 word **photonarrative** about **photograph 4** here:

(In your narrative, think about responding to the following questions: “What is reflected in the photograph? What is not reflected in the photograph? What does the photograph symbolise? How does the photograph reflect a negative learning emotion? Why did you take the photograph?)

--

Part 2: Analysing photonarratives (8 marks)

Conduct a thematic analysis of your photonarratives and present two themes from this analysis here. The themes could reflect either positive or negative emotions.

Theme 1: (Name your first theme here)
Codes (copy and paste at least three codes from your photonarratives that support theme 1 here): <ul style="list-style-type: none">• (Code 1)• (Code 2)• (Code 3)
Explain theme 1 here (2/3 sentences: remember to link to your codes and link to the positive emotions and/or achievements to the relevant space in the photograph):

Theme 2: (Name your second theme here)
Codes (copy and paste at least three codes from your photonarratives that support theme 2 here): <ul style="list-style-type: none">• (Code 1)• (Code 2)• (Code 3)
Explain theme 2 here (2/3 sentences: remember to link to your codes and link to negative emotions and/or achievements to the relevant space in the photograph):

Part 3: Experimenting with communicative validity (optional)

If you experimented with the communicative validity of your research (i.e., discussed your photographs, photonarratives, and themes with a peer), include any reflections on this here:
<ul style="list-style-type: none">• Reflection?• Reflection?• Reflection?

Part 4: Consenting to your photographs and photonarratives being used for research and awareness purposes, and consenting to participate in a research interview (optional)

INFORMATION SHEET AND CONSENT TO PARTICIPATE IN RESEARCH

Date:

Dear potential participant

Re: Invitation to consider participating in a research study on educationally and socio-politically relevant spaces for university students

My name is Terry Shuttleworth, and I am currently a master's student and researcher in the Discipline of Psychology, School of Applied Human Sciences at the University of KwaZulu-Natal (Pietermaritzburg campus) (UKZN, PMB).

You are being invited to participate in a study that explores achievement and achievement emotions undergraduate students commonly experience on the UKZN PMB campus. The title of the study is "Visualising undergraduate students' achievement emotions."

The aim of the research is to explore UKZN PMB students' achievement emotions in the achievement activities they regard as relevant to their teaching and learning. The purpose of doing this research is to document students' perspectives on a topical educational issue (e.g.,

achievement emotions and achievement trajectories in higher education), and then to use these perspectives to help create awareness on these issues with relevant UKZN stakeholders (e.g., Student Representative Council, Student Support Services, University and campus management, staff, other students). The way in which awareness could be created with relevant stakeholders is through:

- Presentations on the findings from the study
- Hosting a Photovoice display in a space on campus (e.g., Cecil Renaud Library, Students' Union Building) or on a remote platform (e.g., Learn, Instagram, and Facebook).
-

The study is expected to enrol Psychology 201 students on the UKZN PMB campus who completed the assignment on qualitative research as part of the Psychology 201 module. Should you choose to enrol in the study and remain in it, you are expected to be available for 6 months at the most. The study could involve your participation in one or more of the following ways:

1. Providing consent to the researcher to use the photographs and photonarratives that you produced for the Psychology 201 assignment on qualitative research for research and awareness building purposes (no time commitment as you have already completed the assignment),
2. Providing consent to participate in an interview (about the photographs you took and the photonarratives you wrote) with the researcher (60-90 minutes). The interviews will be done on Zoom which will be recorded, and students will be required to use their own data for the interview.

The study is funded by the researcher. If you consent to participate in the study, you will do so voluntarily. You can also opt to participate, and then discontinue your participation at any point without facing any negative consequences.

The study is unlikely to involve any physical risks for you. However, thinking about and discussing topical educational issues (achievement emotions related to learning) may involve some psychological distress. Should you require counselling as a consequence of your participation in the study, you should speak to the researcher who will refer you to a psychologist employed at the College of Humanities Student Support Services. Or you can refer yourself directly to this service as follows:

- Phone 033 260 5233 to make an appointment.
- Report directly to the Student Support Service offices (House 6, Milner Road (next to the Campus Clinic) to make an appointment.

Being part of this study is likely to result in some indirect benefits for you because the study findings could help create awareness among UKZN PMB roleplayers around relevant educational and socio-political issues that affect university students.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSSREC/00001062/2020).

In the event of any problems or concerns/questions you may contact the researcher at 033 260 5371/munron@ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, South Africa

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Participation in this research is voluntary and you may withdraw from the research process without discrimination at any time. In the event of withdrawal of participation, you will not incur any penalty or loss. You simply need to notify the researcher that you no longer wish to participate in the study.

I may terminate your participation in the study if we decide that your participation is adversely affecting you, the study, or other study participants. I will discuss this with you first though.

There are no costs that you will incur due to your participation in the study, and there are no incentives or reimbursements for participation in the study.

Any personal information you share as part of the research process will be kept confidential by me as the researcher. Your name will not be recorded in any of the data collection activities (audio or

written), and pseudonyms will be used when the findings of the study are presented. Selected postgraduate students in psychology may analyse the data from this study, and/or invite you to participate in an interview with them. These students may use this data towards their degree studies (e.g., written up in the form of a dissertation).

Transcripts of audio recordings and electronic data collected during the research will be kept in a securely locked storage facility (i.e., a filing cabinet in the researcher's university office) for five years following the study. Electronic data will be password protected and saved on the researcher's external hard drive which will be stored in the same facility as the written data. Five years after the study has been completed, electronic data on the researcher's external hard drive will be deleted, and all hard copies of data will be incinerated.

INFORMED CONSENT

I _____ (insert name) have been informed about the study entitled "Visualising undergraduate students' achievement emotions" by Terry Shuttleworth.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare my participation in this study is entirely voluntary and that I may withdraw at any time.

I have been informed about any available compensation or psychological treatment should the need arise because of my participation in the study.

If I have any further queries related to the study I understand that I may contact the researcher at shuttlebug38@gmail.com

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Name: _____

Signature_____
Date**Specific consent**

I hereby provide specific consent to:

• the researcher using the photographs and photonarratives that I produced for the Psychology 201 assignment on qualitative research for research and awareness purposes,	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
• participate in an interview with the researcher (60-90 minutes),	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
• the researcher to contact me on my email address (insert email address here) and/or cellphone (insert cell number here) to set up a time for an interview,	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
• have the interview I participate in audio recorded.	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
• the researcher using my name (a pseudonym) and my photographs in the publication of the dissertation (Appendix 3)	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>

Signature_____
Date

Appendix 3 – Informed Consent Form

INFORMATION SHEET AND CONSENT TO PARTICIPATE IN RESEARCH

Date:

Dear potential participant

Re: Invitation to consider participating in a research study on educationally and socio-politically relevant spaces for university students

My name is Terry Shuttleworth, and I am currently a master's student (researcher) in the Discipline of Psychology, School of Applied Human Sciences at the University of KwaZulu-Natal (Pietermaritzburg campus) (UKZN, PMB).

You are being invited to participate in a study that explores achievement and achievement emotions undergraduate students commonly experience on the UKZN PMB campus. The title of the study is “Visualising undergraduate students’ achievement emotions.”

The aim of the research is to explore UKZN PMB students’ perceptions of any educational spaces they regard as relevant for their teaching and learning. The purpose of doing this research is to document students’ perspectives on a topical educational issue (e.g., achievement emotions and achievement trajectories in higher education) and then to use these perspectives to help create

awareness on these issues with relevant UKZN stakeholders (e.g., Student Representative Council, Risk Management Services, University and campus management, staff, other students). The way in which awareness could be created with relevant stakeholders is through:

- Presentations on the findings from the study
- Hosting a Photovoice display in a space on campus (e.g., Cecil Renaud Library, Students' Union Building) or on a remote platform (e.g., Learn, Instagram, and Facebook).

The study is expected to enrol Psychology 201 students on the UKZN PMB campus who completed the assignment on qualitative research as part of the Psychology 201 module. Should you choose to enrol in the study and remain in it, you are expected to be available for 6 months at the most. The study could involve your participation in one or more of the following ways:

1. Providing consent to the researcher to use the photographs and photonarratives that you produced for the Psychology 201 assignment on qualitative research for research and awareness purposes (no time commitment as you have already completed the assignment),
2. Providing consent to participate in an interview (about the photographs you took and the photonarratives you wrote) with the researcher (60-90 minutes). The interviews will be done on Zoom which will be recorded, and students will be required to use their own data for the interview.

The researcher funds the study. If you consent to participate in the study, you will do so voluntarily. You can also opt to participate, and then discontinue your participation at any point without facing any negative consequences.

The study is unlikely to involve any physical risks for you. However, thinking about and discussing topical educational and socio-political issues (such as achievement emotions related to learning) may involve some psychological distress. Should you require counselling as a consequence of your participation in the study, you should speak to the researcher who will refer you to a psychologist employed at the College of Humanities Student Support Services. Or you can refer yourself directly to this service as follows:

- Phone 033 260 5233 to make an appointment
- Report directly to the Student Support Service offices (House 6, Milner Road (next to the Campus Clinic) to make an appointment

Being part of this study is likely to result in some indirect benefits for you because the study findings could help create awareness among UKZN PMB roleplayers around relevant educational issues that affect university students.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSSREC/00001062/2020).

In the event of any problems or concerns/questions you may contact the researcher at 033 260 5371/munron@ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

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Email: HSSREC@ukzn.ac.za

Participation in this research is voluntary and you may withdraw from the research process without discrimination at any time. In the event of withdrawal of participation, you will not incur any penalty or loss. You simply need to notify the researcher that you no longer wish to participate in the study.

I may terminate your participation in the study if we decide that your participation is adversely affecting you, the study, or other study participants. I will discuss this with you first though.

There are no costs that you will incur because of your participation in the study, and there are no incentives or reimbursements for participation in the study.

Any personal information you share as part of the research process will be kept confidential by me as the researcher. Your name will not be recorded in any of the data collection activities (audio or

written), and pseudonyms will be used when the findings of the study are presented. Selected postgraduate students in psychology may analyse the data from this study, and/or invite you to participate in an interview with them. These students may use this data towards their degree studies (e.g., written up in the form of a dissertation).

Transcripts of audio recordings and electronic data collected during the research will be kept in a securely locked storage facility (i.e., a filing cabinet in the researcher's university office) for five years following the study. Electronic data will be password protected and saved on the researcher's external hard drive which will be stored in the same facility as the written data. Five years after the study has been completed, electronic data on the researcher's external hard drive will be deleted, and all hard copies of data will be incinerated.

INFORMED CONSENT

I _____ (insert name) have been informed about the study entitled "Visualising undergraduate students' achievement emotions" by Terry Shuttleworth.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare my participation in this study is entirely voluntary and that I may withdraw at any time.

I have been informed about any available compensation or psychological treatment should the need arise because of my participation in the study.

If I have any further queries related to the study I understand that I may contact the researcher at shuttlebug38@gmail.com

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

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Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Name: _____

Signature

Date

Specific consent

I hereby provide specific consent to:

<ul style="list-style-type: none"> the researcher using the photographs and photonarratives that I produced for the Psychology 201 assignment on qualitative research for research and awareness purposes, 	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
<ul style="list-style-type: none"> participate in an interview with the researcher (60-90 minutes), 	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
<ul style="list-style-type: none"> the researcher to contact me on my email address (insert email address here) and/or cellphone (insert cell number here) to set up a time for an interview, 	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
<ul style="list-style-type: none"> have the interview I participate in audio recorded. 	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
<ul style="list-style-type: none"> the researcher using my name (a pseudonym) and my photographs in the publication of the dissertation (Appendix 3) 	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>

Signature

Date

Appendix 4 – Psychosocial Support Confirmation Email

The email below was addressed to the researcher's supervisor, Dr Nicholas Munro, offering counselling services to the participants of the overarching study as well as the current study's participants as it falls under the supervisor's project.

FW: Request for updated confirmation of availability of student support services linked to research study with Psych 201 students on the University of KwaZulu-Natal (PMB Campus)

2 messages

Nicholas Munro <MunroN@ukzn.ac.za>
To: Shuttlebug <shuttlebug38@gmail.com>

30 April 2021 at 12:59

Hi Terry

Please see below. You can save this email as a pdf document, and then insert as an appendix to your updated proposal. Also, the email would be loaded on rig under the section where it asks for gatekeepers.

Nick

From: Angeline Stephens <Stephensa@ukzn.ac.za>

Sent: Friday, 30 April 2021 12:40 PM

To: Nicholas Munro <MunroN@ukzn.ac.za>

Subject: Re: Request for updated confirmation of availability of student support services linked to research study with Psych 201 students on the University of KwaZulu-Natal (PMB Campus)

Hi Nick,

I am well, thanks. I hope that you are as well.

Yes, I remember this study.

And yes, I confirm that my office will be available to offer psychological support to any participants registered in the College of Humanities who may be adversely impacted through their participation in the study.

Regards,

Angeline

From: Nicholas Munro <MunroN@ukzn.ac.za>

Date: Friday, 30 April 2021 at 10:31

To: Angeline Stephens <Stephensa@ukzn.ac.za>

Subject: Request for updated confirmation of availability of student support services linked to research study with Psych 201 students on the University of KwaZulu-Natal (PMB Campus)

Appendix 5 – Turnitin Report

TShuttleworth final dissertation

ORIGINALITY REPORT

8%

SIMILARITY INDEX

8%

INTERNET SOURCES

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STUDENT PAPERS

PRIMARY SOURCES

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