

UNIVERSITY OF EDUCATION WINNEBA

**Influence of academic self-efficacy and procrastination on academic motivation
among students of University of Education Winneba**



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**INFLUENCE OF ACADEMIC SELF-EFFICACY AND
PROCRASTINATION ON ACADEMIC MOTIVATION AMONG
STUDENTS OF UNIVERSITY OF EDUCATION WINNEBA**



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(201810777)**

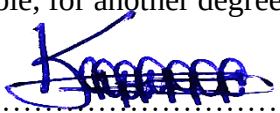
**A Thesis in the Department of Counselling Psychology,
Faculty of Applied Behavioural Science in Education, submitted
to the School of Graduate Studies in partial fulfilment
of the requirements for the award of the degree of
Master of Philosophy
(Counselling Psychology)
in the University of Education, Winneba**

JULY, 2024

DECLARATION

Student's Declaration

I, **Mercy Kudodzi**, hereby declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

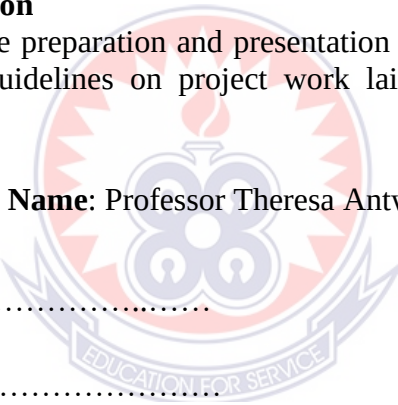
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Supervisors' Declaration

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on project work laid down by the University of Education, Winneba.

Principal Supervisor's Name: Professor Theresa Antwi

Signature:

Date:

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on project work laid down by the University of Education, Winneba.

Co-Supervisor's Name: Mr John N-yelbi

Signature:

Date:

DEDICATION

I dedicate this work to the Almighty God, my husband, Mr. Gorden Badebangna, and to all my beloved family members.



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I want to express my deepest sense of gratitude to my supervisors Prof. Theresa Antwi, and Mr John N-yelbi, for their immense contributions to the work, insightful discussion, motivation, and support during the whole period of the study, and especially for their patience and guidance during the writing process. I thank them for the systematic guidance and great deal of effort they put into training me in research and the counseling fraternity.

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ABSTRACT

The study investigated influence of academic self-efficacy and procrastination on academic motivation among undergraduate students. Level of academic self-efficacy, academic procrastination and academic motivation was also investigated among students. A sample of 360 students participated in the study. The study was significant in terms of policy decision making and behavioral change. The research was hinged on positivist paradigm and single objective reality as the philosophical underpinning. Again, the researcher adopted a quantitative approach with cross sectional design. Sampling procedure was stratified with simple random sampling. The data was analyzed using mean and standard deviation for questions 1, 2 and 3 respectively, and the last question was also analyzed using regression. The findings suggest high academic procrastination and low academic self-efficacy among undergraduate students. The study recommended that the university policy makers should collaborate with the Department of Counseling Psychology to develop standardized instrument in the form of self-report test aimed at measuring a particular trait. These recommendations have implication for educational interventions aimed at enhancing students' academic performance within the university to internally assess students who gained admission into the University of Education Winneba in order to mitigate the negative effects of high academic procrastination.



CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

It is an undeniable fact that, at one point in time, majority of us have ever been sternly warned by our parents, grandparents or people in authority to avoid procrastination for they say, “it is the thief of time”. Considering procrastination as a common phenomenon, much was not written about it because not everyone thinks delaying a Work is extremely prevalent (Manikandan, 2013). To the extent that everyone procrastinates in one way or the other, anyone who claims they have never procrastinated elicit suspicions. The claim that “numerous commitments and deadlines” led to procrastinations were views supported by (Klingsieck, 2013), who stated that procrastinations exist in all life domains such as academic, work, everyday routine, health, leisure, family, partnership and social contacts. Procrastination is so widespread that one needs some varied degrees of self-efficacy and motivation to minimize it.

Transitioning from high school to tertiary school, especially university brings many difficulties to students (Noel et al; 1985). University life can be stressful for both continuing and fresh students. They have to overcome many challenges in pursuit of academic goals. Sometimes, students tend to perceive this situation as negative which turns into an adverse effect on students’ motivation and performance (Ames, 1992). Moreover, there has been an extensive research conducted with the aim of identifying those factors which promote academic achievement such as self-efficacy and optimism, and those which inhibit academic achievement, such as academic procrastination, (Covington, 1993). Academic procrastination refers to a delaying attitude on academic tasks such as the preparation of presentations, effective

completion of assignments, preparations for examinations, adherence to punctuality in submitting assignments, and completion of projects (Manikandan, 2013).

Academic procrastination can be defined as the postponement of academic goals to the point where optimal performance becomes highly impossible, resulting in a state of psychological distress (Asude & Aynur, 2018). Academic procrastination is a multidimensional construct with behavioral, cognitive and affective components (Manikandan, 2013).

In recent times, procrastination is considered a common phenomenon among high-school, college and university student. (Pyckyl 2012) found that students with higher levels of conscientiousness showed lower levels of procrastination and social loafing. Indeed, academic procrastination can negatively affect learning, achievement, academic self-efficacy and quality of life. A large number of university students suffer from academic procrastination and its internal and external negative consequences, such as decreased learning, lost opportunities, increased health risks, and strained relationships.

Individuals who have high levels of confidence, approach difficult tasks as a challenge, in contrast to individuals who skeptics their abilities to take difficult tasks due to low level of motivation to accomplish the goals they have chosen (Shunk, 2000). Invariably Elias (2008) posits that, students who have high academic self-efficacy learn in pleasure and satisfaction. They have confidence in their ability to succeed in the tests, writing research, and are more able to manage their own educational affairs unlike students with low self-efficacy who are more likely to engage in behavioral problems such as absence from lectures and school failure. Academic self-efficacy is variably linked to the ability of the student to complete the

academic tasks successfully and achieve their objectives perfectly (Baird & Scott, 2007).

Moreover, Academic self-efficacy can be described as a students' judgment of one's capabilities to learn or master new knowledge and skills, organize and execute them to attain designated academic performance levels as well as one's belief to achieve desired level of performance in academic tasks (Sharma & Nasa, 2014). Again, Ayiku (2005) defined academic self-efficacy as a "construct where a student's intellectual performance is based on the development of cognitive skill and his or her perceived self-efficacy. Self-efficacy is an important and stable predictor of procrastination. It is the belief in ones' ability to achieve or accomplish a task. Academic self-efficacy is a special category of self-efficacy and refers to learners' judgment of their own ability and action, ability of the set learning goals to be implemented and achieved (Bandura, 1997).

Students can develop academic self-efficacy through improvement in cognitive skills that requires applying learned skills in one area to another area. The result of a study on the relationship between academic self-efficacy and academic procrastination was relatively consistent; that is, academic self-efficacy is significantly negatively correlated with academic procrastination, and academic self-efficacy negatively predicts academic procrastination (Ge et al., 2018). Academic self-efficacy beliefs are how effectively individuals believe in how they can attain their anticipated academic outcome(s), or goal(s) (Bandura, 1997, 1977; Sharma, 2014).

In addition, academic motivation is defined as students' impressive desired behavior towards academic task. In terms of education, motivation has a multi-dimensional structure which correlates with learning and academic motivation (Amrai, 2011).

Motivation is based on the individual's drive to achieve, and it is crucial to retain and enhance the curiosity, encourage students to involve continuously in academic activities in an efficient manner. There are different interpretations of motivation. In the discipline of education, motivation is considered a phenomenon consisting of an individual's desire in their ability to carry out a specific task. The emotional response concerning an academic activity being carried out depends on the need and desire to excel in academic work (Mallick et al., 2017). Lang and Bradley (2008) noted that, the reasons and goals of the individual in conducting this task is that, motivated students are more creative and discover strategies to achieve the expected level of academic performance.

1.2 Statement of the Problem

Globally, University students at all levels, from freshmen to continuing students, mostly suffer from the heightened level academic procrastination and its negative consequences. This has become a chronic problem in education and will continue to be one. This is because there were no single 'concrete' reasons why students do procrastinate, (Manikandan, 2013). It is usually characterized with the student postponing assignments resulting in late submissions, coupled with a general reduction in study time and inadequate preparation for examination (Burns et al, 2000; Onwuegbuzie, 2000). Similarly, Zeenath and Orcullo (2012) also found that university students engage in academic procrastination because of their personal characteristics as well as other factors such as lecturer's teaching style, time management issues, lack of motivation and peer influence.

On the other hand, academic self-efficacy refers to the belief and confidence students have in their abilities for success in a given academic task (Bandura, 1997). Ideally,

students after gaining admission and reporting to school are supposed to study every course that they have registered in their programme of study for that semester. But that seemed not to be the case. Sometimes, some students avoid and postpone studying courses they claimed are difficult or easy, but the reality comes when it is time for them to be assessed on those courses as well. When the time of examination is approaching and even during examination, they turn to be studying at the very last minutes and some even go to the extent of sleeping at their faculties and even the lecture halls. A typical case has to do with the course Measurement, Evaluation and Statistics. Students who construe certain courses to be difficult tend to skip lectures and assignments for such courses. These perceptions negatively affect the student self-efficacy and academic motivation leading to academic procrastination. This is a matter of concern and an issue that is likely to exist across other Departments, Faculties and even universities. It seemed to be a pressing issue therefore, cannot be overlooked; hence, the need for the study to establish the levels of academic self-efficacy and procrastination and academic motivation among students of University of Education Winneba.

Again, academic self-efficacy refers to the belief in ones competencies on academic task (Hen and Goroshit,2014) and Kandemir (2014) posited that even though, academic self-efficacy has been studied by other people in different parts of the world, most studies used the correlational design and found that academic self-efficacy and procrastination are negatively correlated. Moreover, It is sometimes very worrying to know that, students would much rather pursue recreational activities such as going to watch films, football matches or spending time with friends, than to do something that needs to be done, like studying for upcoming examination (Noran,2000) Meanwhile, Klassen et al. (2008) argued that academic self-efficacy is a

motivational aspect to learning, a view that is in line with Van Eerde (2000) who posits that, procrastination is a “motivational mechanism, serving the purpose of avoiding a threat temporarily, in order to protect one’s well-being in the short term. This view affirms Freud’s pleasure-seeking principle in the psychoanalytic theory. Contrary to these findings, Abramowski (2018) found that there exist positive forms of procrastination behavior which is associated with allocating more thinking time with attention to details in order to produce better results. Also, a study by Krispenz et al. (2019) revealed that an academic self-efficacy intervention could reduce academic procrastination. Zarrin and Garcia (2020) also opined that responsibility and the fear of failure appeared to predict academic procrastination. Even though, several studies have revealed positive forms of academic procrastination interventions. It appears that, most of these studies scarcely focused on academic self-efficacy, academic motivation and academic procrastination in a single study using cross-sectional design, this has also created a methodological lacuna to be bridged.

Nonetheless, Academic self- efficacy is engrossed on the students’ perceived academic capabilities to engage on challenging academic tasks. (Abd et al, 2019). A study by Zhang and Feng (2020) used the Temporal Decision Model (TDM), focusing on procrastination behavior: delayed decision-making. According to the model, the core of procrastination is the “do-procrastinate” or “do-not-procrastinate” decision-making process. When the negative experience of performing a task is greater than the expected outcome present, then the individual chooses to delay the task. The motivation to engage in a task comes from the result of the task, and the motivation to delay comes from the negative cognition of the process involved. Moreover, Strunk et al. (2013) used the time-oriented two-dimensional model to explore the effect of self-efficacy as a motivational factor on academic procrastination behavior. Despite

several studies, it appears these studies have rarely focused on the level in terms of academic self-efficacy, procrastination and academic motivation among undergraduate students and in the Ghanaian universities context. By extension the study would bridge population gap by focusing on undergraduate students in the University of Education, Winneba.

Again, previous studies used theories like; Psychoanalytic Theory, Temporal Decision model (TDM) and Social Learning Theory. Akinsola et al. (2007) found equal levels of academic procrastination in mathematics among males and females university students in Nigeria. Again, Abdullah (2008) found that there are statistically significant differences between the mean scores of low and high academic procrastination and motivation for achievement and self-efficacy in favor of low-academic procrastination. Again it appears much of the studies were conducted in foreign countries. However, in Ghanaian universities setting especially in University of Education Winneba, there seemed to be paucity of research work conducted on influence of academic self-efficacy and academic procrastination on academic motivation among undergraduate students. This has also resulted in the creation of theoretical lacuna which would be filled in this study by integrating social cognitive and personal construct theory, on which the study would be hinged.

1.3 Theoretical Framework

The study was underpinned by two theories. These are Bandura (1977) Social Cognitive Theory and Kelly (1969) Personal Construct Theory.

1.3.1 Social Cognitive Theory

Academic self-efficacy is basically explained in the theoretical framework of social Cognitive theory by Bandura which stated that human achievement depends on

interactions between one's behaviors, personal factors and environmental conditions Bandura, (1986). In the context of the study, the environment here is referring to the university community which the researcher believes that students' achievements depend largely on, how well students are able to interact properly within the university setting, will go a long way to influence their level of academic self-efficacy on academic task. In Social Cognitive Theory, Bandura is of the view that people are agents of their own growth and development and can determine their destiny and achievements through their actions and perception. Through verbal encouragement and physiological arousal inducement, students can raise their academic self-efficacy to achieve their academic goals. With this, academic self-efficacy for self-regulated learning leads to self-monitoring, self-evaluation, goal setting, and strategy use and self-reaction that focuses the learners during the learning process (Bandura, 2006).

It has also been noted in past research that, students who possess strong academic self-efficacy doctrine properly manage their learning and are not overtaken by enticements and social densities to engage in behavior that contravenes with social expectations to deter their academic performance (Carroll, Houghton & Wood, 2009). In this light, students with high academic self-efficacy have greater chances of achieving their academic goals than their counterparts with lower academic self-efficacy (Ahmadian, Heidari & Izadi, 2012). On the other hand, it has also been noted that students with low academic self-efficacy tend to have behavior delinquency, score lower grades and are likely to drop out of school than their counterparts who possess high academic self-efficacy (Bandura, 1997; Carroll, Houghton & Wood, 2009; Ahmadian, Heidari & Izadi, 2012).

Again, Bandura (1977) asserted that people with high academic self-efficacy have a high degree of "persistence and effort" in the implementation of the whole learning

plan. This “persistence and effort,” or self-control, means that students can constantly adjust their learning behaviors to complete goals on time and avoid procrastination. To confirm this assertion, studies have found that academic self-efficacy is positively correlated with academic self-control, and academic self-efficacy can positively predict academic self-control (Ein-Gar and Steinhart, 2017; Chen et al., 2019).

During the learning process academic self-efficacy beliefs influence learners’ task choice, efforts, persistence, resilience and their academic performance (Bandura, 1997). It has also been noted in renowned studies that academic self-efficacy is a motivational aspect to learning (Klassen, et al., 2009). Academic self-efficacy increases the learners’ chances of success and provides them with the ways for living a better life. Learners become fully confident for any type of academic challenge and also try to avoid any threat that might come in their way during the period of achieving their academic goals (Abid, Muhammad, Aaqib & Farhat, 2019).

1.3.2 Personal Construct Theory

Personal construct psychology was developed by an American psychology personality theorist George Kelly (1969). Personal construct theory refers to unique ways individuals interpret event, people, the environment and the world. Personal construct theory suggests that people develop personal constructs about how the world works then use these constructs to make sense of their observations and experiences in the environment. In this study, the unique way students view the university environment, how the university environment is experienced and events are interpreted in the university especially academic task and how the students interpret these tasks differently, determine the type of procrastination those students are likely to be engaging in. According George Kelly, personality is composed of the various

mental constructs through which each person views reality. The world we live in is the same for all of us, and the university is the same for each student but the way each student experiences it, is different from one another. The idea behind (a) why students do what they do, (b) how they do it, and (c) their confidence in being able to do it. Contextualizing this idea in the study, the researcher believed strongly that students come to the same university, spend the same number of years, meanwhile some graduate with first class and others graduate with third class or pass, even though there are several factors that account for that, personal experiences cannot be left out. Depending on how individuals experienced the university environment to some extent determine the level of student academic procrastination.

Kelly (1969) believed that, this can start by first developing a set of personal constructs, which are essentially mental representations that we use to interpret events. Kelly did not adopt an “anything goes” attitude about personal constructs; rather, he emphasized that people continually construe events so as to make sense of their personal experiences. Although Kelly did not talk about feelings while using typical affective terms, he did provide accounts for three phenomena typically viewed as affective: threat, guilt, and anxiety. He did not regard these phenomena as emotions but as “dimensional lines along which personal constructs may be plotted” Kelly (1969, p. 157). These three dimensions in the theory are relevant to this study because, as much as the researcher wants to establish the level of academic self-efficacy, procrastination and motivation in student of UEW, this dimension cannot be overlooked, because sometimes academic work is often faced with tasks which are viewed as threat which comes along with anxiety and guilt depending on how that task is being construed, interpreted and approached. When lecturers understand these three dimensions, they are able to better understand students’ academic motivation,

and consequently, be in a better position to enhance students' academic self-efficacy and academic motivation. Hence, the relevance of these theories to the study, what made these constructs so important to the study? Because according to Kelly (1969), we experience the world through the "lens" of our constructs. The students view academic task is different from one another. These constructs are used to predict and anticipate events, which in turn determine our behaviors, feelings, and thoughts.

1.3.3 Point of Convergence of the Theories

In Social Cognitive Theory, Bandura is of the view that people are agents of their own growth and development and can determine their destiny and achievements through their actions and perception. Converging with Kelly (1969) idea, we experience the world through the "lens" of our constructs. These constructs are used to predict and anticipate events, which in turn determine our behaviors, feelings, and thoughts. Again, constructs are based on our experiences and observations; these ideas also converge at Bandura's view of Social Cognitive Theory that is people learn by observing others (vicarious learning). The ideas bring the two theories to a point of convergence, because both are oriented towards experiences, observation, perception and interpretation. As Bandura used perceptions through which people can determine their achievements Kelly used thoughts to express the same view.

1.3.3.1 Points of Divergence

As Kelly (1969) also believed that all events that happen are open to multiple interpretations, which he referred to as constructive alternativism. The idea behind (a) why students do what they do, (b) how they do it, and (c) their confidence in being able to do it. On the contrary, Bandura (1977) is of the view that human achievement

depends on interactions between one's behaviors, personal factors and environmental conditions. In this context the two theorists expressed divergent views.

1.4 Conceptual Framework

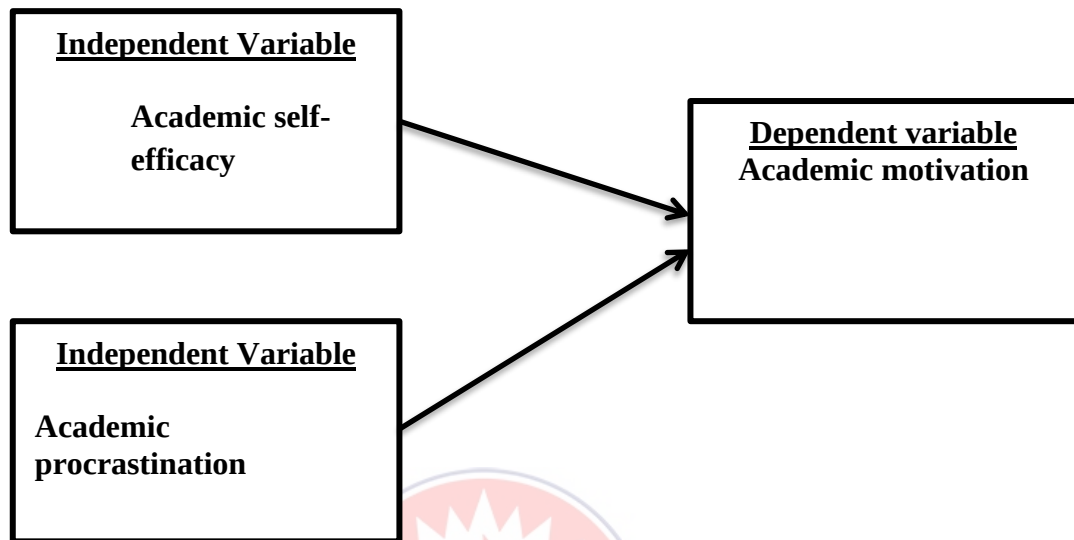


Figure 1.1: Conceptual Framework

Source: Author's Construct

From the above figure above, it can be explained that, academic self-efficacy as well as academic procrastination are the independent variables, which ever level that a student may possess; it can influence the student's level of academic motivation. With academic motivation as the dependent variable, what it means is that, the study has two independent variables and one dependent variable. The two independent variables have the potential to influence the dependent variable which is academic motivation in one way or another. It can also be understood from the figure that it does not take one to be present before the other one can influence, but rather, each of the independent variables works separately to influence the dependent variable in context. Bandura (2004) Social Cognitive Theory classifies four fundamental structures of human agency which include; intentionality, forethought, self-reactiveness and self-reflectiveness. All these structures affect the students' level of academic self-efficacy

in the learning processes. Again, Social Cognitive Theory is of the view that people are agents of their own growth and development and can determine their destiny and achievements through their actions and perception. With this the researcher is of the firm belief that, these are related variables, and that these variables can influence one another in academic settings, which also comes in different levels through verbal encouragement and physiological arousal inducement, students can raise their level academic self-efficacy to achieve their academic goals.

In line with the assertion, Academic self-efficacy for self-regulated learning leads to self-monitoring, self-evaluation, goal setting, and strategy use and self-reaction that focuses the learners during the learning process (Bandura, 2006). According to research, it has been noted that students who possess strong academic self-efficacy doctrine properly manage their learning and are not overtaken by enticements and social densities to engage in behavior that contravenes with social expectations to deter their academic performance (Carroll, Houghton & Wood, 2009).

In addition, Vallerand and Bissonnette (1992) defined seven specific subtypes of academic motivation: three types of intrinsic motivation (IM) (to Know, Toward Accomplishment, to Experience Stimulation), three types of extrinsic motivation (EM) (Identified, Introjected, External Regulation), and Amotivation. IM actions and thoughts are brought forth voluntarily with awareness of no external gain or reward; they are behaviors performed strictly for the pleasure of the behavior (Vallerand & Bissonnette, 1992). IM to Know indicates motivation out of the satisfaction from learning new material. IM toward Accomplishment indicates motivation out of the enjoyment from achieving something. IM to Experience Stimulation indicates motivation out of desiring both mind and physical sensory stimulations (Fairchild,

Horst, Finney & Barron, 2005). In contrast, extrinsically motivated actions and thoughts are brought forth for goals or rewards extending past the act itself (Vallerand & Bissonnette, 1992). EM Identified indicates motivation from the person feeling as if they will benefit from it in the future. EM Introjected indicates motivation from an internalization of feelings such as guilt for not completing or pride in completing work. EM External Regulation indicates motivation from an external person applying incentive or limitation to an activity. Amotivated behaviors are characterized by a lack of self-determination, purpose, and care for internal or external rewards (Vallerand & Bissonnette, 1992).

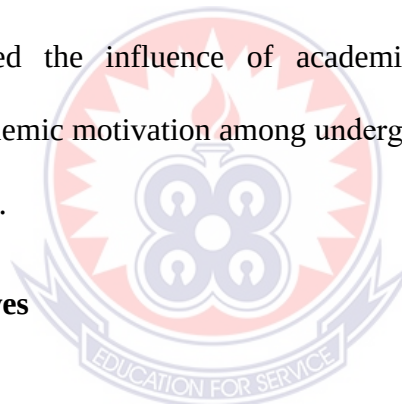
1.5 Purpose of the Study

The study investigated the influence of academic self-efficacy and academic procrastination on academic motivation among undergraduates' students of University of Education, Winneba.

1.6 Research Objectives

The study sought to:

1. Examine out the level of academic self-efficacy among students of University of Education, Winneba
2. Identify the level of academic procrastination among students of University of Education Winneba
3. Establish the level of academic motivation among students of University of Education Winneba
4. Examine the influence of academic self-efficacy and academic procrastination on academic motivation among students of University of Education Winneba.



1.7 Research Questions

The research questions of this study are;

1. What is the level of academic self-efficacy in students of University of Education Winneba?
2. What is the level of academic procrastination in students of University of Education Winneba?
3. What is the level of academic motivation in students of University of Education Winneba?
4. What is the influence of academic self-efficacy and academic procrastination on academic motivation in students of University of Education Winneba?

1.8 Significance of the Study

The results of the study sought;

1.8.1 To provide important cues for university policy makers in developing new relevant intervention programs that may be effective in reducing the negative effects of academic procrastination and low self-efficacy among students, they are awareness of the levels of student possess.

1.8.2 Consequently, it was meant to be significant for students who would like to practically enhance their academic self-efficacy as well as motivation on an academic task and possibly reduce their tendency of academic procrastination.

1.8.3 The findings sought to provide valuable information to lecturers. To practically identify students with various levels of academic self-efficacy, procrastination and academic motivation and what to expect from such students and possibly how to handle them at lectures if the need be.

1.8.4 Another significance of this study was that, it sought to contribute new and relevant information regarding the role academic motivation plays on academic self-efficacy and procrastination among university students in the perspective of the two theories that underpinned the study that is Social Cognitive and Personal Construct Theory.

In conclusion, the study would be relevant in terms of policy making decision by the university authority, and also provide a comprehensive understanding on the interventions that would mitigate the negative effects of low academic self-efficacy and high academic procrastination on students. When this is properly implemented, it could also minimise students' tendency of tagging lecturers for giving them weak grades.

1.9 Delimitation of the Study

The study was restricted to academic self-efficacy, academic procrastination and academic motivation. The study further focused on undergraduates' students. Again, the study was carried out within 2022 to 2023 time frame. Furthermore, in terms of methodology, the study focused on cross sectional design and also used the probability sampling technique in selecting the respondents for the study, particularly the stratified and simple random sampling (lottery). Finally, the researcher adapted only academic self-efficacy scale, academic procrastination scale and academic motivation scale as the instruments for data collection respectively.

1.10 Operational Definitions of Terms

Academic self-efficacy; This can be explained as students' confidence in their ability on a given academic task.

Academic procrastination; This is the tendency of students' delaying their academic task for other activities which intend hinder productivity.

Academic motivation; This is also explained as the student's internal and external drive to achieve an academic task successfully.

1.11 Organization of the Study

This study covered five chapters. Chapter one focused on the introduction which discusses the background of the study, statement of the problem, theoretical framework, conceptual framework, purpose of the study, research objectives, research questions, significance of the study, delimitation, operational definition of terms, and organization of the study. Chapter two dealt with review of related literature. Chapter three also focused on the methodology of the study and which included paradigm, approach, design, population, sample and sampling procedures. It further discussed data collection procedure, the research instruments, validity and reliability of the instruments. Chapter four talked about the analysis of data and discussion of results. Finally, chapter five also talked about the summary of the findings, conclusions, recommendations, counselling implications, suggestions for further research, and contribution to body of knowledge.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The purpose of this literature review is to provide an overview of previous research that supports this thesis “academic self-efficacy and academic procrastination: the mediating role of academic motivation”. This review contains related concepts of self-efficacy and agency as they relate to student academic achievement. Again, this chapter provides an overview of academic motivation along with forms of academic motivation - internal motivation, external motivation, and amotivation. The review also contains procrastination and its related topics.

2.1 Definition and Description of Self-Efficacy

Self-efficacy, also called perceived ability, refers to the confidence people have in their abilities for success in a given task (Bandura, 1997). If they possess the ability to successfully perform, then that task will be attempted. The task will be avoided if it is perceived to be too difficult (Bandura, 1986, 1997). Although inefficient individuals usually avoid challenging tasks, when they do attempt them they give up more easily than individuals with high self-efficacy. When inefficient individuals fail, they attribute the unsuccessful result to a lack of ability and tend to lose faith in their capabilities. When they succeed, they are more likely to attribute their success to external factors (Bandura, 1986, 1997). If students master a challenging task with limited assistance, their levels of self-efficacy will rise (Bandura, 1986). Individuals who possess a high degree of self-efficacy are more likely to attempt challenging tasks, to persist longer at them, and to exert more effort in the process. If highly efficient individuals fail, they attribute the outcome to a lack of effort or an adverse environment. When they succeed, they credit their achievement to their abilities. It is

the perception that their abilities caused the achievement that affects the outcome rather than their actual abilities (Bandura, 1986).

Again, four factors determine self-efficacy: enactive mastery experience, vicarious experience, verbal persuasion, and physiological and emotional states (Bandura, 1986, 1997). The most influential of these factors is enactive mastery experience, which refers to individuals' experiences with success or failure in past situations. Information gathered from these experiences is then internalized. Past successes raise self-efficacy and repeated failures lower it, which is an indication to individuals their levels of capability (Bandura, 1986, 1997).

In a vicarious experience, individuals compare themselves to peers whom they perceive are similar in ability and intelligence to themselves. Watching peers succeed raises observer self-efficacy and seeing them fail lowers it. Exposure to multiple successful role models helps increase self-efficacy in observers (Bandura, 1986, 1997). Verbal persuasion tries to convince individuals, who may doubt their capabilities, that they possess the skills needed for success at a given task. In education, verbal persuasion delivered by teachers often takes the form of verbal feedback, evaluation, and encouragement. Persuasion must be realistic, sincere, and from a credible source; otherwise it can negatively affect student self-efficacy beliefs (Bandura, 1986, 1997). Physiological state implies that failure, or some degree of performance impairment, can result if a person fearing failure is in a hyperactive state (Bandura, 1986, 1997). A physiologically hyperactive state includes symptoms experienced during "fight and flight" responses of the autonomic nervous system, such as increases in heart rate, breathing rate, and sweating. Emotional state refers to

the mood and feelings experienced by an individual, such as anxiety depression or stress.

Depending on the mood, emotional state can either positively or negatively affect interpretation of an event's outcome (Bandura, 1986, 1997). In addition to the four factors that determine general self-efficacy, aptitude, attitudes, and attributions are found to predict science self-efficacy (Smist & Owen, 1994). These factors outlined by Smist and Owen (1994) can be embedded in (Bandura, 1997) factors that influence a person self-efficacy.

Meanwhile, academic self-efficacy beliefs vary between individuals and will actually fluctuate within an individual for different tasks (Bandura, 1997). In many activities, self-efficacy contributes to self-esteem (Bandura, 1986). Self-efficacy beliefs affect how people approach new challenges and will contribute to performance since these beliefs influence thought processes, motivation, and behaviour (Bandura, 1997). Self-efficacy is not static and can change over time resulting from periodic reassessments of how adequate one's performance has been (Bandura, 1986). For example, in a college population, chemistry lab self-efficacy increased over the course of a school year whereas biology self-efficacy decreased over the same duration (Smist, 1993). Again, it is determined by enactive mastery experience, vicarious experience, verbal persuasion, and physiological and emotional states. Of these factors, enactive mastery experience has the most influence. Self-efficacy beliefs vary between individuals, fluctuate under different circumstances, and can change over time. Self-efficacy also contributes to performance. The connections between academic self-efficacy and academic performance are especially of interest to educators.

Consequently, in this study the researcher is also of the view that, academic self-efficacy is likely to fluctuate either low or high, when examination is approaching. This is the more reason why students would have to study a course that was initially construed to be difficult or easy. When that happen students' emotional state is also destabilized in one way or the other, which eventually affects performance academically. This view has no bearing with any gender or the course being pursued but rather on the levels of academic self-efficacy.

2.2 Self-Efficacy and Academic Achievement

Academic achievement is influenced by a multitude of factors. For example, attitude leads to achievement (Schibeci & Riley, 1986), and aptitude is needed for successful performance (Schunk, 1991). Academic performance is a result of intellectual capability and motivation as well (Bandura, 1997). Based on replicable findings from several studies, Bandura (1997) states that gender and attitude influence academic performance to some extent through their mediating effects on an individual's self-efficacy beliefs. Numerous studies (Andrew, 1998; Bandura, 1997; Chemers, Hu, & Garcia, 2001; Greene & Miller, 1996; Miller, et al., 1996; Silver, Smith, & Greene, 2001) have found that self-efficacy is one of the influences on both general academic achievement and science achievement.

Additionally, many studies (Bandura, 1997; Chemers, Hu, & Garcia, 2001; Greene & Miller, 1996; Miller, et al., 1996; Silver, Smith, & Greene, 2001) link self-efficacy to academic achievement. Meanwhile, Pajares (1996) has criticized several self-efficacy studies that failed to find a connection to academic performance for not being specific enough in the measurement of self-efficacy and for not corresponding with the outcome that best measured performance. Even though a generalized measurement of

self-efficacy can nullify its effect, Pajares (1996) also stated that research findings support to general measurement of self-efficacy as a good predictor of grades, choice of academic major, and intent to enrol in a specific course, achievement measures like grades do not correspond well with overly specific self-efficacy measures.

Again, self-efficacy predicts intellectual performance better than skills alone, and it directly influences academic performance through cognition. Self-efficacy also indirectly affects perseverance (Bandura, 1997; Multon, Brown, & Lent, 1991). Although past achievement raises self-efficacy, it is students' interpretation of past successes and failures that may be responsible for subsequent success. Perceived academic self-efficacy predicts future achievement better than past performance (Bandura, 1986; Chemers, Hu, & Garcia, 2001; Miller, et al., 1996; Pintrich & DeGroot, 1990). Academic self-efficacy beliefs also contribute to performance since they influence thought processes, motivation, and behavior (Bandura, 1997). Fluctuations in academic performance may be explained by fluctuations in academic self-efficacy. For example, varying beliefs in academic self-efficacy may alter academic task outcome, whether it involves two similarly-skilled individuals or the same person in two different situations (Bandura, 1997).

Additionally, individuals with high academic self-efficacy attempt challenging tasks more often, persist longer at them, and exert more effort. Highly efficacious individuals attribute their failure to a lack of effort or an adverse environment. When they succeed, they credit their achievement to their abilities. The perception that their abilities caused the achievement affects the outcome rather than their actual abilities (Bandura, 1986). Those who regard themselves as inefficacious shy away from difficult tasks, slacken their efforts and give up readily in the face of difficulties,

dwelling on their personal deficiencies. Individuals with lower aspirations, suffer much anxiety and stress. Such self-misgivings undermine performance (Bandura, 1986). Conversely, individuals with high self-efficacy frequently persevere despite difficult tasks or challenging odds and often succeed because perseverance usually results in a successful outcome (Bandura, 1986).

Numerous studies (Bandura, 1997; Chemers, Hu, & Garcia, 2001; Greene & Miller, 1996; Miller, et al., 1996; Multon, Brown, & Lent, 1991; Pajares, 1996; Pintrich & DeGroot, 1990; Silver, Smith, & Greene, 2001) link self-efficacy to academic achievement. For example, in seventh grade science and English classes, self-efficacy was positively related to cognitive engagement and academic performance (Pintrich & DeGroot, 1990). Self-efficacy, self-regulated learning, and test anxiety also were found to be the best performance predictors (Pintrich & DeGroot, 1990).

In a meta-analysis of 39 studies from 1977 to 1988, positive and statistically significant relationships were found between self-efficacy, academic performance, and persistence for a number of disciplines (Multon, Brown, & Lent, 1991). Out of the studies analysed, 28.9 % involved higher education. Four factors affected the link between self-efficacy and academic performance. One factor was the time period when the two were assessed. A stronger relationship resulted post-treatment meaning that experimental manipulations to change self-efficacy beliefs were successful not only in raising self-efficacy but in enhancing academic performance as well. Another factor involved a stronger link between self-efficacy beliefs and performance for low-achieving students. A third aspect involving age found stronger relationships between self-efficacy and performance for high school and college students than for younger students. It is believed that older students can more accurately assess and report their

levels of self-efficacy. Finally, stronger effects were found between self-efficacy and basic skills than when self-efficacy was compared to grades or standardized achievement tests (Multon, Brown, & Lent, 1991).

On the contrary, Greene and Miller (1996) found a positive correlation between perceived ability, learning goals, and meaningful cognitive engagement which then influenced academic achievement in college students enrolled in educational psychology. Additional analysis supported this causal model of perceived ability and learning goals leading to meaningful cognitive engagement which then led to academic achievement (Greene & Miller, 1996). They cautioned that the variables of rewards and penalties, strategies, and other self-regulatory activities, not specifically addressed by their study, could have influences on achievement (Greene & Miller, 1996). One criticism of their research is they measured achievement by only using one midterm exam score from the course. Also, they administered their instrument immediately before students took the midterm exam. Test anxiety may have affected the outcome.

In two studies conducted by Miller et al (1996), perceived ability was the best predictor of achievement for high school math students. Many studies support a link between academic self-efficacy and academic achievement, especially for junior high and high school students. The connection is less clear in higher education with some studies supporting a connection and others not finding one.

2.2.1 Self-Efficacy in Higher Education

Few studies have investigated the relationship between self-efficacy and academic achievement in higher education. For example, no self-efficacy studies were found that compared traditional (18 to 24 years old) to non-traditional (greater than 24 years

old) college students. Of the college studies mentioned here, most (Chemers, Hu, & Garcia, 2001; Greene & Miller, 1996; Multon, Brown, & Lent, 1991; Silver, Smith, & Greene, 2001) support a connection between academic self- efficacy and academic achievement.

In general, students at the college level need to be self-directed and take greater responsibility for their learning. Students possessing a high degree of self-efficacy are more successful at accomplishing these tasks and as a result, perform better academically (Bandura, 1997). Accordingly, self-efficacy beliefs are "crucial" when applied to the cognitive demands of higher education (Bandura, 1997).

Academic self-efficacy general academic self-efficacy and optimism in first-year college students were strongly related to academic performance and expectations (Chemers, Hu, & Garcia, 2001). These researchers also believe that self-efficacy can predict student academic success. Their results are difficult to generalize though due to a 25 % response rate. Unconventional grading methods utilized by the university studied, such as narrative evaluations instead of letter grades, also make generalization difficult. The researchers created several instruments for the study and no mention was made about whether these instruments possessed adequate validity and reliability.

Stronger relationships were found between self-efficacy and performance for high school and college students when compared to younger students in a meta-analysis of 39 self-efficacy studies (Multon, Brown, & Lent, 1991). Out of the studies included, 28.9 % involved higher education. However, from the list of studies analyzed, it was unclear how many, if any, involved science classes. The previously mentioned Greene and Miller (1996) study found a positive correlation between perceived ability,

learning goals, and meaningful cognitive engagement which then influenced college achievement.

Two different studies measured self-efficacy in two-year college students and reported conflicting results. In non-traditional associate degree nursing students, self-efficacy was not found to predict academic achievement (Jeffreys, 1998). Academic variables, such as study hours, study skills, and absenteeism, were the only statistically significant contributors to nursing achievement. Reliability for academic variable measurement in Jeffreys' study, however, was slightly below an acceptable limit (Jeffreys, 1998). In contrast, Silver et al (2001) found self-efficacy positively related to achievement in social science classes for community college students. The main purpose of the study, however, was to refine a self-efficacy instrument.

A study of college students found academic self-efficacy to be significantly more predictive of career choice than academic achievement (Kennedy, 1996). The study also found semester academic performance was positively influenced by perceived goals and previous academic experience, instead of self-efficacy (Kennedy, 1996). The researcher stated her findings do not negate self-efficacy's mediating influence on past achievement and thus, self-efficacy could contribute to academic achievement via this mediatory role. Other studies (Greene & Miller, 1996; Miller, et al., 1996; Pintrich & DeGroot, 1990) support the mediating effects self-efficacy has on academic achievement.

2.3 Historical Overview of Academic Self-Efficacy

Coined by Albert Bandura in 1977, the term self-efficacy is defined as a person's belief in his or her ability to succeed in specific situations (Strive, 2017). Academic Self-efficacy may affect academic motivation, performance, and even persistence. As

central to social cognitive theory, encompassing a balance of observational learning, social experience, and reciprocal determinism, it is seen as necessity for personality development (Cherry, 2017). Through these foundational theories, the concept of academic self- efficacy was formed. Just as mind-set and academic motivation theorists have extrapolated that these factors impacting academic success are malleable, Bandura (1977) also posited that academic self-efficacy is malleable and, based on certain factors, can be strengthened or weakened (Dweck, 2010; Mehrabi, Behzadi, Sabouri & Alavi, 2016).

2.3.1 Level of Academic Self-Efficacy

Bandura (1977) further postulated that one's self-efficacy beliefs can impact one's outlook related to a situation, impact commitment, and task orientation. Lennon (2010) also noted that self-efficacy is "a cognitive assessment of one's capabilities" (p. 93). This component of Social Cognitive Theory reinforces the fact that creating a viable path to complete a task is cognitively developed prior to execution, leading to the understanding that those with high levels of academic self-efficacy most often visualize themselves achieving success in specific task areas. Even if setbacks occur, such high levels of academic self-efficacy will allow an individual to forge on through adversity (Lennon, 2010). Bandura theory of self-efficacy argued that, human behavior can be predicted by an individual's level of confidence in their ability to succeed in a specific task (Bandura, 1997). Self-efficacy is one of the important aspects of Social Cognitive Theory because most of the individual levels of academic self-efficacy are from external experiences and self-perception which it determines the results of tasks and circumstances they encountered. The application of self-efficacy theory in this present study is that, students who possessed a high level of

academic self-efficacy believed were more likely to attempt most of the academic challenges tasks, resist longer at them and exert more efforts in the academic process.

In a detailed description of the characteristics and common behaviours specific to students with high levels of academic self-efficacy, Bandura (1997) further theorized that these students tend to look at failure as a lack of effort, rather than an academic shortcoming. They commit to task completion, take constructive critique and apply it, and when faced with failure, they increase their effort to forge on to success.

Lennon (2010) found that many studies with an experimental model rather than a correlational model, reported stronger relationships between academic self-efficacy and academic performance. Elementary school children presented with lower levels of relevance than high school and college students. However, there were weaker effect sizes when it was compared to classroom-based measures and standardized assessments. Therefore, based on the aforementioned studies, it can be assumed that a college major or a specific college course could be reliably analysed for levels of academic self-efficacy.

Self-efficacy is a key component of Social Cognitive Theory. Academic self-efficacy is an individual's belief in his or her ability to successfully achieve an academic goal (Bandura, 1977). Bandura (1986) defined self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). Academic Self-efficacy has been linked to motivational constructs like persistence and goal setting (Multon et al., 1991; Schunk & Ertmer, 1999), self-regulated learning (Pintrich & DeGroot, 1990), achievement (Pajares & Miller, 1995), and affective behaviours such as stress, distress, and anxiety (Finney & Schraw, 2003).

Efficacy beliefs operate with other socio-cognitive factors governing human adaptation and change (Bandura, 1993). Effective functioning requires both skills and efficacy beliefs, meaning that a person must continuously adapt their sub-skills to manage ever-changing situations. Self- efficacy is not viewed as a trait, but as a differentiated set of self-beliefs that link to different situations. Efficacy beliefs determine a person's actions in connection with the self-regulation of thought processes, motivation, and affective and physiological states (Bandura, 1997).

People gain self-knowledge about their efficacy from four sources of information: performance attainments, vicarious experiences of observing performance of others, verbal persuasion, and their own physiological state (Bandura, 1986). Actual performance offers the most valid source for knowledge about self-efficacy. A person may also acquire knowledge about their own self-efficacy by observing others succeeding. Observing similar others succeed raises the observer's self-efficacy and motivates them to try tasks (Schunk, 2004).

2.4 Relationship Between Academic Self-Efficacy and Academic Achievement

Chemers et al. (2001) conducted a longitudinal study of college freshman that examined the impact of self-efficacy and optimism on academic performance, stress, health, and persistence, specifically academic expectations. While the study questionnaire was sent to over 1600 college freshmen at the University of California, Santa Cruz, only 373 and 256 students respectively responded (as noted above) during both waves of the survey.

The gender distribution was about 80% female and 20% male. The racial distribution was approximately 57% White, 15% Hispanic, 16% Asian and 14% other. Academic self-efficacy was measured by utilizing an eight-item Likert scaled measure that

would eventually become the Academic Self-Efficacy Rating Scale. Chemers et al. (2001) also noted that "the measure was designed to reflect a variety of specific skills pertinent to academic achievement, including scheduling of tasks, note taking, test taking, and included general statements regarding scholarly ability" (p. 59). To test optimism, the Life Orientations Test (Scheier & Carver, 1985) was utilized.

The results of the study indicated a strong correlation between self-efficacy and optimism in the success and adjustment of the first-year college students specific to their academic performance. Academic self-efficacy was also directly linked to academic expectations and was described as the student's "expectations for future academic performance" (Scheier & Carver, 1985, p. 59). The data revealed strong indications that high academic self-efficacy was a predictor of high college self-efficacy. Scheier and Carver (1985) concluded that students who enter college with confidence in their ability to perform well academically do perform significantly better than do less confident students. Likewise, students who have higher expectations for academic success show higher performance. Some of these effects may be caused by superior academic ability, which could be related to both confidence and performance. (p. 61). This study suggests that previous academic experiences, as well as current experiences played a significant role in academic self-efficacy.

In a comparable 2013 pilot study, Kahn considered the relationship between academic self-efficacy, coping skills, stress, and academic performance. Sixty-six undergraduate students consisting of 74% females and 26% males, 2% Black/African-Americans, 3% Hispanics, 9% bi-racials, and 86% White participated in the study. Another question the study sought to answer was whether there was an association

between academic self-efficacy and academic performance. The Academic Self-Efficacy Scale was utilized to measure self-efficacy. The researcher utilized the Pearson Product Moment Correlation to explore the link between the two variables and concluded that there was a relationship between academic self-efficacy and performance, specifically GPA. This study along with Chemers et al.'s (2001) findings clearly leads to positive correlation between students' academic performance (GPA) and academic self-efficacy.

While Chemers et al. (2001) purported that a positive relationship exists between academic self-efficacy and academic achievement; they did not suggest possible reasons for this correlation. Tang and Westwood (2007), however, attempted to correlate levels of academic self-efficacy with self-reported reasons for worrying. The study attempted to investigate what self-reported issues were impacting achievement. It also attempted to determine whether students had positive self-efficacy beliefs based on various situations, and if there was a difference in the self-efficacy of higher- and lower-achieving students. It also sought to investigate the relationship between self-efficacy, academic achievement level, and level of worry. The researchers found that (1) a large number of students reported experiencing moderate levels of worry; (2) self-efficacy ratings were fairly high; (3) lower-achieving students reported lower self-efficacy in areas such as concentration, meeting the expectations of their teachers, and reliability, but this was not statistically significant when compared to higher achieving students; and (4) there was no significant association found among academic self-efficacy, degree of worry, and academic achievement. Several important limitations were noted, including the appropriateness of using a qualitative, rather than a quantitative model to measure

worry. The researchers noted that the results of the study may have been impacted by the encapsulation of both academic and non-academic measures of self-efficacy.

Ozer and Akgun (2015) conducted a study concerning the effects of irrational beliefs on academic motivation and self-sufficiency. They hypothesized that "irrational beliefs have various effects on certain characteristics of the students" (p. 1289). They studied a sample group of 161 second- and third-year post-high school students studying to become teachers in the areas of computer technology and instructional technology. The independent variable (irrational beliefs) and the dependent variables (academic motivation and academic self-sufficiency) were analysed through a cross-sectional approach. All three variables were measured by utilizing three subject-specific surveys. The study confirmed a positive relationship between irrational beliefs and academic motivation. This means that when levels of academic motivation increased, irrational beliefs also increased. Ozer and Akgun (2015) also confirmed that when academic motivation increased, there was a moderate increase in academic self-sufficiency.

However, there were no significant findings on the relationship between irrational beliefs and academic self-sufficiency. Ozer & Akgun (2015) claimed that their study was not meant to imply that one variable caused the other, but to show that there was a descriptive relationship between the variables.

2.5 Historical Overview of Academic Motivation

Theories of motivation have been developed, analysed, and applied in order to understand people's interests better. In reference to motivation and human development, Deci and Ryan (2002) noted that "endowed with an innate striving to exercise and elaborate their interests, individuals tend naturally to seek challenges, to

discover new perspectives, and to actively internalize and transform cultural practices" (p. 3).

The historical path to motivation can be traced to Sigmund Freud, who suggested that two basic needs which exist are life and death (Qadeer, 2009). However, Maslow's hierarchical structure of motivation and personality focused on the importance of the lower level needs such as food and nourishment, to growth needs which are achieved when one realizes one's potential. Descartes, a well-known French philosopher and scientist, offered the first identifiable theory of motivation. He believed that the body is an inactive factor in motive, hence, leaving the will as the active factor of motivation (Pakdel, 2013; Qadeer, 2009).

2.5.1 Forms of Academic Motivation

Bandura's (1977) development of the Social Cognitive Theory and the relationship to self-efficacy and agency, begs the larger question of the role of academic motivation in student success. Social Cognitive Theory argues that motivation affects both learning and academic performance (Bandura, 1997). Motivation is an important factor in learning, but it is not essential. However, when motivators are weak or not present during learning, students may not perform well academically (Schunk et al., 2014). Academic motivation is a complex concept with high interest among higher education professionals.

Researchers (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992; Deci and Ryan, 1985, 1991) use such terms as "curiosity, persistence, learning and performance" and would say that behaviour can "be intrinsically motivated, extrinsically motivated, and amotivated".

The researcher is of the firm believe that, understanding how to promote more autonomous forms of intrinsic motivation in students, so they can proactively perform academic tasks that are not inherently interesting, should be a high priority strategy for the university authority as well as lecturers. One purpose of this research was to establish the influence of academic motivation on academic self-efficacy and academic procrastination in undergraduate students. Specifically, participating in learning assistance support programs which may not be perceived as interesting or attractive option when faced with academic task can be a highly motivating intervention for students generally. The researcher is also interested in considering whether low academic motivation is a learner characteristic that can be assessed, addressed, and leveraged in the academic environment with any external influence.

2.6 Relationship Between Academic Motivation and Academic Achievement

In order to achieve specific needs, and goals in life, human beings acquire sufficient motivation to see them through. Motivation as an innate phenomenon exists as a result of influence from external/ internal stimuli, environmental factors, goals, and internal conditions (Amrai, Elahi, Azizi & Parhon, 2011). Motivation for academic achievement plays a crucial role with respect to students. Through motivation, individuals are stimulated to effectively complete assignments in an effort to achieve a goal, degree, or further their professional career (Mohamadi, 2006). Consequently, motivation defines underlying reasons for human behaviour, governing why people behave the way they do. Motivated behaviours are permanent, oriented and energetic (Amrai et al., 2011).

Moreover, motivation is one of the most essential factors affecting the speed, intensity, direction and permanence of human behavior (Fırat, Kılınç & Yüzer, 2018).

Self-determined individuals highly engaged in competence, relatedness, and autonomy factors in an activity will contribute to motivation and thus enhance individuals' performance on tasks (Childers & Jones, 2017). Self-Determination Theory, which explains intrinsic and extrinsic motivation deeply (Hartnett, St-George & Dron, 2011) is a contemporary motivation theory based on learner autonomy. This theory argues that all people have an inherent need to be self-determined/autonomous, feel competent and connected to other people. According to the theory, if environmental conditions are such as to support an individual's autonomy, more autonomous forms of motivation can be exhibited (Ryan & Deci, 2000). Self-Determination Theory is unique as it examines different subtypes of motivation and self-regulation (Malinauskas & Požėrienė, 2020). This theory details the balance between intrinsic motivators, extrinsic motivators, and amotivation, and how these dynamics interact in an instant social context (Loizzo et al., 2017). According to this particular theory, motivation is classified as intrinsic, extrinsic and amotivation (Deci & Ryan, 2000). Intrinsic motivation is a type of motivation that encourages activities in which individuals experience inner satisfaction and makes these activities interesting and enjoyable (Ryan & Deci, 2017). Intrinsic motivation is a crucial factor affecting the learning process as a concept that means doing something for inner satisfaction (Shonfeld & Magen-Nagar, 2020).

On the contrary, extrinsic motivation is the drive of individuals to perform their behavior depending on external factors. Students are willing to learn to gain recognition, reward, or avoid negative criticism (Ryan & Deci, 2000). In other words, extrinsic motivation is defined as the motivation of the individual with external influences, that is, fulfilling the given task in order to gain the praise or appreciation of the teacher or to avoid the teacher's reaction. Again, Ryan and Deci (2000) assert

that intrinsic motivation and extrinsic motivation are not mutually opposed and not mutually exclusive. They emphasize that the learner should be positioned on a continuum that extends from being "motivated" at one end to being "amotivated" at the other end. According to Ryan and Deci (2000), amotivated learners lack the intention to act. Amotivation, that is being unmotivated, takes part at the lowest level of Self-Determination Theory and it refers to behaviors that are not motivated by either internal or external factors and lack willingness stemming from a sense of inability (Deci & Ryan, 1985). Amotivated individuals are neither intrinsically nor extrinsically motivated because they feel can't they control a situation (Goulimaris, 2015). That notwithstanding, in this study the researcher also argued that, in the context of the university environment, due to the fact students want to get good grades in their portal, intrinsic and extrinsic academic motivation are indispensable as it would help accomplish the required results that students need. It also means that students motivation be placed on a continuum with academic (intrinsic and extrinsic) motivation at one end and amotivation at the other end. Then it would come to light that, no matter the factors that hinders academic work, amotivation is least talked about in this context.

Various interpretations regarding the concept of motivation exist. In the field of education, motivation is often described as being a tri dimensional phenomenon comprising of an individual's reasons and goals, emotional responses, and beliefs in ability and competence to successfully complete a specific task (Amrai et al., 2011). While external motivation drives an individual towards pursuing a specific independent goal activity, internal motivation provides further deeper incentives for completing a given task (Mohamadi, 2006).

Previous research has noted the importance of motivation in the context of education due to its relationship with behaviours, learning strategies as well as learning abilities. Motivation for academic achievement therefore attributes to behaviours which lead to learning. Masaali (2007) suggests that academic motivation is such a pervasive inclination towards successfully pursuing a task, and spontaneously assessing performance. Accordingly, internal motivation for academic achievement is considered a psycho-cognitive condition, acquired once an individual perceives themselves as having autonomy. This is further supported by the bulk of academically driven behaviour involving insistence on hard work, choosing difficult tasks which may involve effort, as well as learning to achieve mastery (Amrai et al., 2011).

There is no doubt that academic motivation can significantly impact academic outcomes, persistence, and academic success. Vallerand et al. (1992) noted that "Indeed, much research has shown motivation is related to various outcomes, such as curiosity, persistence, learning, and performance" (p. 1004). One measure that has been used to study academic motivation is the Academic Motivation Scale (AMS). Renamed and adapted from the French Version *Echelle de Motivation en Education*, it is divided into three key major areas of intrinsic motivation, extrinsic motivation, and amotivation, and is employed to measure academic motivation. This measure is supported by the self-determination theory, which is concerned with motivation and personality traits that drive people's choices and inherent growth through self-motivation. Intrinsic motivation, extrinsic motivation, and amotivation are further divided and utilized to gain a better understanding of what motivates the student (Deci & Ryan, 2000; Vallerand et al., 1992).

Vallerand et al. (1992) described intrinsic motivation as engagement in an activity or learning experience for the gratification and fulfilment it brings. Extrinsic motivation was described as a form of motivation in which activities are engaged in as "means to an end and not for their own sake" (Deci, 1975, p. 23). Finally, motivation was described as a lack of motivation when one is neither intrinsically nor extrinsically motivated. Individuals who are motivated are often plagued by feelings of inadequacy and inability (Vallerand et al., 1992).

Hegarty (2010) used the AMS to investigate graduate students' levels of academic motivation. Hegarty's sample consisted of 240 business and education graduate students from a northeast United States university. The study, which had a larger sample of females than males (154:86), found that the graduate students presented with greater levels of extrinsic motivation on the continuum levels of motivation. The mean for this study was 7.30 which was considerably lower than the mean of 10, typically reflected in other studies. The results revealed that graduate students have higher levels of extrinsic motivation than elementary, high school, and undergraduate students, leaving one to conclude that graduate students' motivation is much more performance-based than mastery-based. Hegarty mentioned that one limitation of the study was its generalizability or external validity, since the sample population was small and confined to students from one institution.

In an attempt to understand better which type of motivation may impact a student's success or failure, Maurer, Allen, Gatch, Shankar & Sturges (2012) studied a group of students who were enrolled in an allied health course. He found that there was a significant relationship between intrinsic motivation, motivation, and student success or failure. Students with higher levels of motivation tended toward failure in the

course, while students with higher intrinsic motivation tended toward success. Extrinsic motivation was high in this population. However, no significant relationship between extrinsic motivation and academic success was found.

Isiksal (2010) sought to determine whether there were significant differences between Turkish and American students' intrinsic motivation, extrinsic motivation, motivation, and self-concept. Differing from self-efficacy, self-concept refers to the image that individuals have about themselves. It relates not only to ability, but to overall strengths, weaknesses, and status (Self-concept, n.d.). The study did not merely look at the comparative data between the two groups, but also tested for significance based on number of years in schools. The US respondents (76% female) were from various undergraduate majors with a racial demographic of 89.8% White/Caucasian, 3.9% African-American, 2.8% Asian, and 1% Hispanic. The Turkish respondents (47% female and 53% male) also represented various academic majors. The academic levels represented were freshman, sophomore, junior, and senior.

Results of the study confirmed that US students had higher levels of extrinsic motivation than their Turkish peers. However, the US students' level of extrinsic motivation declined as they progressed through undergraduate programs, but there was an increase in their intrinsic motivation. This could be explained by the fact that as the students progressed, they developed more personal self-interest in the topics being studied. In the area of self-concept, US students had higher levels when compared to their Turkish peers.

These findings contradicted Hegarty's (2010) study, which showed that US students exhibited greater levels of extrinsic motivation at the undergraduate levels. Because of

the malleable nature of academic motivation, as well as its variability across various subjects, content areas, and activities (Deci & Ryan, 1985), such findings are possible. The results of Isiksal's (2010) study leave obvious questions about the cultural variation between the two groups, as well as the age levels of those in the various programs. It was unclear whether the typical undergraduate students in the United States were comparable in age to undergraduate Turkish students.

Using a descriptive design, Durso, Da Cunha, Neves, and Teixeira (2016) studied the level of student motivation to search for and pursue a graduate degree. The study consisted of accounting and economics students from public universities in Brazil. The researchers hypothesized that accounting students were less intrinsically motivated to pursue a graduate degree in accounting, when compared to their peers pursuing degrees in economics. They intended to utilize these findings to justify the chronic shortage of accountants with advanced Master and/or Doctoral level degrees in the area of accounting. The results of the study revealed that there were no statistically significant differences between the two groups, thereby rejecting the research hypothesis. Durso, DaCunha, Neves and Teixeira noted that "the reason why there are fewer students in accounting who pursue a Master's degree is not related to motivation to keep studying" (p. 255). The study concluded that those in the workforce in accounting were more self-determined to pursue a graduate degree than their peers who were not a part of the workforce.

Mehrabi et al. (2016) hypothesized that academic motivation can be adjusted through cognitive behavioural methodologies. They investigated the malleability of intrinsic motivation by conducting a pre-test/post-test study of 120 Persian nursing students. The respondents, along with a control group, completed a Persian version of the

AMS. As expected, there was no difference at the point of pre-test between the control group and the test group. The subjects then engaged in cognitive behavioural therapy sessions that addressed automatic thought prevention, cognitive reconstruction, stress management, and communication management. The subjects were then retested and found to improve their intrinsic motivation significantly. It was also noted that after the one-month post intervention period, there was very little change to the post-test results. These researchers concluded that academic motivation is malleable if appropriate interventions are applied.

Investigating academic motivation among students in undergraduate and graduate institutions provides meaningful outcomes for educational stakeholders regardless of the fact that the sample populations in a majority of studies conducted have been predominantly White/Caucasian. This, however, is consistent at all academic levels researched from elementary to graduate school (Cokley 2003; Hegarty, 2010; Vallerand et al., 1992), making the shift of generalizing findings to the Non-White (ethnically diverse) students somewhat challenging.

While the study conducted by Durso et al. (2016) included Brazilian students who are citizens of a country whose population is reported to be over 50% African descent (Phillips, 2011), there are cultural components that are vastly different from that of the Black/African-American population of the United States. According to the Communication Sciences and Disorders Education Trend Data Undergraduate Programs (n.d.), at least 27% of communication sciences and disorders students are non-White. However, this small percentage of students still makes up a critical cross-section of the US population. Very little data is available on the academic motivation of Non-White students in college, hence the need for researchers to construct research

studies in academic environments intentionally where there is a strong representation of minority student groups.

Long, Monoi, Harper, Knoblauch, and Murphy (2007) examined the relationship between self-efficacy and motivation in a group of African-American 8th- and 9th-grade students. Operating on Bandura's premise, Schunk (1991) noted that "self-efficacy affects an individual's choice of activities, effort, and persistence" (p. 208), this study examined the students while they transitioned from middle to school to the higher academic demands of the high school. The sample consisted of 87% African-American, 10% Caucasian students, and 3% which included Hispanics, Native Americans, and Asians. The researchers found that among the African-American population of 8th-grade students, domain interests and achievement were lower and more insignificant than with 9th graders. African-American students presented with moderate levels of the motivational variables (self- efficacy, domain interest, and personal goal orientation). They also presented lower levels of the motivational study variables when they entered high school. African-American students also demonstrated higher levels of self-efficacy to domain interests. This was found to be lower in their White peers.

The social disparities of both groups cannot be ignored and should be considered a possible contributing factor to any observed differences. African-American students are often made to adopt an "oppositional identity" (Long et al., 2007, p. 214). This phenomenon is noted when the students are seen negatively by their peers and social group for demonstrating academic interests. Long et al. (2007) noted that some students may be able to manoeuvre through these issues by behaving in a socially acceptable manner toward academic endeavours while still performing adequately. It

is likely that because of the school programming, students who had a vocational interest may have experienced difficulty in nurturing it. When compared to the typical undergraduate college student who is more likely to be pursuing a field of interest, elementary/high school students have fewer choices and academic options that may truly have peaked their interest (Long et al., 2007).

Further investigation into academic motivation and its effects on the African-American student is addressed by Cokley (2003), who was interested in looking at motivation as an explanation for the African-American student's underachievement. Note that conflicting levels of extrinsic motivation can adversely affect levels of intrinsic motivation (Deci & Ryan, 1985). Cokley (2003) confirmed (p. 536) that the AMS was validated and utilized in the assessment of the academic motivation of students identified as predominantly White/Caucasian (Hegarty, 2010; Vallerand et al., 1992).

The respondents in Cokley's study consisted of 687 students (396 African-American and 291 Caucasian) attending three historically Black colleges and universities and one predominately White/Caucasian college and/or university. Along with the AMS, the researchers utilized the Academic Self-Concept Scale, Rosenberg Self-Esteem Scale, and academic performance. The study found that African-American students at historically Black colleges and universities reported higher intrinsic motivation and self-concept than African-American respondents attending predominantly White colleges and universities. The study also revealed that while African-American students at predominantly White colleges and universities reported higher extrinsic motivation and self-esteem than White students at predominantly White colleges and universities, they reported lower GPAs. Research has confirmed that further

investigations of the link between academic achievement and academic self-efficacy could further lead to the understanding of student academic achievement and/or under-achievement (Chemers et al., 2001; Kahn, 2013).

2.7 Procrastination

Procrastination comes from the Latin "pro," which means forward, and "crastinus," which means of tomorrow (Ferrari, 1992). It is a tendency to put off, avoid or delay activities. It has also been characterized as "delaying task completion to the point of experiencing subjective discomfort" (Ferrari, 1992, p. 315), an "intentional delay of an intended course of action" (Klassen, Krawchuk & Rajani, 2008, p. 916) or as a stable personality trait with negative consequences (Choi & Moran, 2009). There seems to be agreement on procrastination as consistently delaying behaviours regardless of consequences (Van Eerde, 2003). In most cultures, especially the American culture in which people strive for performance and results, procrastination can be detrimental for individuals. In fact, studies have reported that 20% of adults experience chronic procrastination (Klassen et al., 2008).

Procrastination occurs when one delays beginning or completing an intended course of action (Beswick & Mann, 1994; Ferrari, 1993; Lay & Silverman, 1996; Milgram, 1991; Silver & Sabini, 1981). Most definitions of procrastination have in common a postponing, delaying, or putting off of a task or decision. Academic procrastination can best be understood as the expression of procrastination in an academic situation. Academic procrastination is defined as failing to perform an academic activity within a desired timeframe or postponing until the last minute activities one needs to complete (Wolters, 2003). Most procrastination behaviours in an academic situation concern the completion of academic assignments such as preparing for exams, doing

homework, and writing papers (Schouwenburg, Lay, Pychyl & Ferrari, 2004). An alternative definition includes the postponement of academic goals to the point where optimal performance becomes highly unlikely (Ellis & Knaus, 2002).

Authors of the instrument most widely used to measure academic procrastination, the Procrastination Assessment Scale-Students (Solomon & Rothblum, 1984), defined procrastination as the act of needlessly delaying tasks to the point of experiencing subjective discomfort. This definition identifies procrastination with dilatory behaviour (procrastination in the strict sense) but also emphasizes needlessly and subjective discomfort (Ferrari, Johnson & McCown, 1995), reflecting that academic procrastinators tend to experience problematic levels of anxiety associated with their procrastination (Rothblum, Solomon, & Murakami, 1986).

The Latin origin for the term procrastination includes the word *pro* meaning forward, forth, or in favour of and *crastinus* meaning of tomorrow (Klein, 1971). Procrastination behaviours have existed throughout history. In Latin texts the term *procrastinus* was used in reference to military battles indicating that deferred judgment and waiting out the enemy demonstrated a wise course of action. The term procrastination continued to be used commonly in the early 1600s as wisely chosen restraint (Ferrari et al., 1995). By the late 1600s the topic of procrastination began to emerge in religious sermons as ministers described it as a moral sin and rallied their congregations against such evil (Steel, 2007). It was not until around 1750 with the onset of the Industrial Revolution that procrastination took on an even more negative connotation (Ferrari et al., 1995). The more industrialized a society with its need to adhere to schedules and punctuality, the more that society casts procrastination negatively (Milgram, 1992). In 1749 Lord Chesterfield wrote, "No idleness, no

laziness, no procrastination; never put off till tomorrow what you can do today" (Steel, 2007, p. 66).

Procrastination is a personality trait (Schouwenburg et al., 2004). There is even support to indicate that genetic factors may be involved. In a study conducted with 118 sets of identical and fraternal twins, Arvey, Rotundo, Johnson, and McGue (2003) found that 22% of the variance on an item concerning procrastinators was associated with genetic factors. An additional study Elliot (2002) obtained long-term test-retest data for 281 respondents who took the Adult Inventory of Procrastination (AIP; McCown & Johnson, 1989). In the time period of 10 years, the correlation was .77, an indication that procrastination is stable enough to be a trait. Academic procrastination occurs because of individual differences factors and is most often related to the Conscientiousness factor in the Big Five model of personality (Costa & McCrae, 1992). The Big Five model of personality includes the factors of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness. The Conscientiousness factor includes the facets of order, dutifulness, self-discipline, achievement striving, competence, and deliberation.

Causes and correlates of procrastination have been studied extensively. Steel (2007) reported in a meta-analysis that the causes and correlates for procrastination are divided into four areas: task characteristics, individual differences, outcomes, and demographics. Research looking at task characteristics examines procrastination with an understanding that people who procrastinate voluntarily choose one behaviour or task over another. Factors associated with task characteristics of procrastination (task aversiveness) include timing of rewards and punishments.

Procrastination behaviours relating to demographic factors such as age, gender, and year (progression of time) have yielded common views. It is believed that people may tend to procrastinate less as they age and learn to adapt new behaviours because they develop schemes to overcome procrastination (O'Donoghue & Rabin, 1999). People also learn to avoid procrastination. Ainslie (1992) and Baumeister, Heatherton, and Tice (1994) both found that people tend to procrastinate less with repeated practice. This belief suggests that self-regulation and reduction of procrastination can be improved through exercise, just as a person can strengthen muscles. Self-regulation can be the trump card of personality. If a person's behaviour reflects a lack of self-control, regular exertions of self-regulation in the form of activities (i.e., daily diaries, tracking food eaten, and consciously improving posture, can lead to steady reduction in these tendencies (Baumeister et al., 1994).

Studies about gender differences in procrastination yield mixed results (Feingold, 1994). Reviews of the literature and research in a meta-analysis indicate girls score higher on effortful control than boys and thus may procrastinate less (Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006). There is also a possibility that procrastination may be on the rise similar to other forms of self-regulatory behaviour failure, e.g., obesity, gambling, and excessive debt (Kachgal, Hansen, & Nutter, 2001; Steel, 2007). Researchers should remain cautious, as with any other self-reported behavioural tendencies, because a trend could represent an overall greater willingness to admit procrastination rather than a true change in behaviour within society (Steel, 2007).

Research has even supported the notion of procrastination being relatively stable across an individual's lifetime. In a meta-analysis on aspects of procrastination, Steel

(2007) mentioned that high test-retest reliabilities in previous studies over a span of 42 days and as long as 10 years are indicative of the stability of procrastination across an individual's lifetime. Consequently, levels of procrastination tend to show consistency across time.

2.7.1 The Prevalence of Procrastination

Procrastination has been widely noted since before the dawn of industrial civilization. John Lyly, an English novelist, mentioned as early as 1579 that there is "nothing as perilous as procrastination" (Steel, 2007, p. 66). Hesiod, a Greek poet, mentioned the perils of putting off work until tomorrow as early as 800 B.C. Famous people in history such as Thucydides, an Athenian general, and Cicero, a consul of Rome, have also been cited as speaking extensively against procrastination. Such widespread assent towards the existence of procrastination supports its persistence in human behaviour (Steel, 2007).

Procrastination affects almost every single individual at some point in his or her life. Some researchers have even stated that nearly one-quarter of the adult population is affected by procrastination (Ferrari, 1994). Delaying departure only to be late to work or an appointment, talking to friends instead of working on schoolwork and putting off diet or exercise are all examples of how procrastination can affect a person's everyday life. All of these examples have financial, psychological and/or biological implications. In fact, Klassen, Krawchuk and Rajani (2008) established that procrastination, in most cases, has an inverse relationship with variables such as self-esteem, self-efficacy and motivation. Overall, it would seem that procrastination results in negative consequences and is very rarely noted as a positive behavioural tendency.

Procrastination is present in the work setting as well, where employees tend to delay projects and activities until the last minute. According to two leading human resource management consultants, procrastination is even considered the number one killer of leading businesses (Caruth & Caruth, 2003). "Putting off until tomorrow, next week, next month, or next year has killed more ideas, innovations, improvements, and human initiative than all other faults combined" (Caruth & Caruth, 2003, p.1). Those who procrastinate can needlessly delay the implementation of new services or products to consumers and place companies in bad financial or competitive positions.

It is shocking at how much sparse scientific research has been conducted regarding procrastination (Steel, 2007). It would seem that "procrastination is a relatively unexplored psychological construct" (Klassen, Krawchuk & Rajani, 2008, p. 916). Sparse research is astonishing considering the fact that procrastination affects nearly 1 in 4 adults and has experienced a general increase in the population (Ferrari, 1994). Combine rising rates of procrastination with increasingly self-structured and unstructured jobs in the U.S. and it would seem that procrastination has the ability to become an unbridled distracter to work (Steel, 2007). If workers procrastinate more and are also not directed on the job, problems may arise. If companies were able to develop a reliable scale that identifies procrastinators, massive amounts of money could be saved through hiring, retention or training programs targeting procrastination.

2.7.2 Defining Academic Procrastination

For the purposes of the current study, it is believed that academic procrastination is an overarching factor comprised of the various interrelated components previously discussed. Moreover, it is believed that although procrastination tends to be relatively

stable over time, given proper interventions or contextual factors, these tendencies can be modified. Thus, as previously discussed, training interventions may be beneficial for students identified as high in academic procrastination. Finally, it is believed that academic procrastination is related to overall procrastination, but that it is a unique outlet that can be affected by contextual cues and interventions, thus warranting its own line of research.

Views about academic procrastination in student populations evolved from behavioural theories (Ferrari et al., 1995). A behavioural interpretation views academic procrastination as a task specific avoidance behaviour. More specifically are Skinner's (1953) ideas about learning and reinforcement theories. Reinforcement theories view learning as the "reassortment of responses in a complex situation" (p. 65). In this view, academic procrastination depends on both punishments and rewards. Procrastination occurs most frequently in students who have either been rewarded for it or who have not been punished enough for the behaviour (Ferrari et al., 1995). Students who procrastinate have a history of successful procrastination or at least finding more reinforcing tasks to do than studying (Bijou, Morris, & Parson, 1976).

Over time, ideas about academic procrastination have evolved to include cognitive components and cognitive-behavioural explanations. The first explanation of procrastination from a cognitive-behavioural perspective came from Ellis and Knaus (1977), who related procrastination tendencies to irrational fears and self-criticism (Ferrari et al., 1995). Cognitions that relate to academic procrastination behaviours in students include false estimates of time needed to complete a study task, misconceptions about the influence of discounting on study motivation, and low self-efficacy. These behaviours may be responsible for contributing to continued

procrastination. Counsellors who adopt this view believe that interventions aimed at changing student's cognitions could break these reinforcing effects (Schouwenburg et al., 2004). Most academic procrastination intervention methods used in colleges today have a basis in psychotherapy and rely on a cognitive-behavioural perspective.

Fear of failure and task averseness has received considerable support as two general primary motives for academic procrastination (Blunt & Pychyl, 1998, 2000; Milgram, Batori, & Mowrer, 1993; Schouwenburg, 1993; Solomon & Rothblum, 1984). Task aversiveness is defined in terms of how unpleasant or unenjoyably a task is to perform (Blunt & Pychyl, 2000). Factors associated with fear of failure include anxiety about meeting others' expectations, concerns about meeting one's own standards, and lack of self-confidence (Solomon & Rothblum, 1984). It seems evident that both the nature of the work tasks and students' personal attributes interact to produce a pattern of avoidance in academic procrastination (Schouwenburg, et al., 2004; Walker, 2004).

Academic procrastination is a behaviour that is common among college students. Solomon and Rothblum (1984) found that 46% of undergraduates participating in their study procrastinated on writing term papers, 27.6% when studying for exams, and 30.1% when reading weekly assignments. Onwuegbuzie (2004) reported even higher percentages using the Procrastination Scale-Students (PASS; Solomon & Rothblum, 1984), with 41.7% procrastinating on term papers, 39.3% when studying for exams, and 60% when reading weekly assignments. Academic procrastination also has been associated in college students with depression (Solomon & Rothblum, 1984), guilt (Pychyl, Lee, Thibodeau, & Blunt, 2000), anxiety (Rothblum et al., 1986), neuroticism (Watson, 2001), irrational thinking (Bridges & Roig, 1997), cheating (Roig & De Tommaso, 1995), and low self-esteem (Ferrari, 1992, 2000).

Much research indicates that academic procrastination has a negative impact on academic achievement including lower grades and grade point averages (Beck, Koons & Milgram, 2000; Clark & Hill, 1994; Ellis & Knaus, 2002; Harriott & Ferrari, 1996; Solomon & Rothblum, 1984; Wesley, 1994).

Low self-efficacy is also highly related to academic procrastination (Blunt & Pychyl, 2000; Ferrari, 2004). A current view of academic procrastination examines a pattern in which frequent delays in tasks is a way of life across settings and situations (Ferrari et al., 1995; Ferrari & Pychyl, 2000). It is believed that procrastination occurs in a variety of students with a wide range of characteristics. In short, there may be no typical profile of academic trait procrastinators to which one might address interventions because the network of psychological variables is so complex. Instead, there may be classes of typical profiles of procrastinators in academic settings such as underachiever procrastinators or perfectionist procrastinators (Ferrari, 2004).

More research about academic procrastination is needed to clarify antecedent factors that predict who will engage in academic procrastination, the role of social systems, and situations that promote the behaviour. Additional development of the theoretical models is needed to explain why academic procrastination exists and what to do to help students. Since most of the research on academic procrastination has relied on self-report measures, it will be important in the future to examine academic procrastination using other objective behavioural indexes and outcomes in the classroom like the time it takes to return class assignments, hours spent working on projects, cheating, and plagiarism as it relates to student performance (Ferrari, 2004).

2.7.2.1 Nomological Network

As evidenced by the multiple proposed characteristics and dimensions of procrastination, procrastination can be related to multiple different facets of behaviour, personality and psychological concepts. To garner a better understanding of the construct of academic procrastination, a nomological network was proposed on which the Academic Procrastination Scale (APS) was to be constructed. A nomological network is a means by which to evaluate the interrelatedness of a construct to other constructs and facets by observing their relationships and expected associations (Cronbach & Meehl, 1955). Identifying the nomological network also helps in identifying the construct and developing items for the creation of a scale.

Van Eerde (2003) conducted a meta-analysis on procrastination in an attempt to discover the relationship procrastination has to various personality variables and behavioural characteristics. The results supported the notion that procrastination fits lawfully into a nomological network. Observing a wider array of performance indicators such as academic performance and grade point average (GPA) and personality variables such as neuroticism and conscientiousness, Van Eerde (2003) found that the largest (negative) correlation occurred between procrastination and conscientiousness. Such things as self-image and self-confidence exhibited high correlations with procrastination, as well. As a precursor to scale development, the current study incorporated results from Van Eerde (2003), as well as novel ideas and behaviours, into a working nomological network in which theory would drive scale development. Academic procrastination has the potential to be related to various other constructs, measures and outcomes. For example, the relationship between conscientiousness and procrastination and the effect of procrastination on academic performance has been documented in previous research (Steel, 2007).

Perhaps the easiest studied and most prevalent of all outlets of procrastination is academic procrastination. Academic procrastination is the tendency to put off or delay school- related activities and behaviours. Academic procrastination occurs with students of all ages, whether those students are attending grade school or pursuing some type of educational attainment or degree. Research has suggested, however, that procrastination is extremely common among college students (Schraw et al., 2007). Moreover, due to the wide availability of students in a college setting, research on academic procrastination can be more easily studied.

It should be noted that academic procrastination is a unique outlet for procrastination. People procrastinate on a wide variety of activities and in a wide variety of circumstances, whether it is putting off completing a project, grading papers, or leaving for a meeting. Nevertheless, unique outlets of procrastination, such as in academics, can exist where individuals tend to delay activities in certain areas. Unique outlets of procrastination have been of interest to researchers concerned in narrowing the behavioural and dependent outcomes of procrastination (Tuckman, 1991). Specific outlets of procrastination can be more easily studied, as well.

Moreover, although it does appear that individuals have a tendency towards procrastinating or not, which in turn affects the likelihood of demonstrating procrastinatory behaviours in these specific outlets, other factors can come into play which weaken this relationship. For example, individuals who do not typically procrastinate in their everyday lives may procrastinate in their academic endeavours because of a lack of understanding of the complexities of meeting numerous deadlines, inadequate beliefs regarding studying habits or because of a false belief that their high abilities allow them to do so.

Procrastination among undergraduate students in college is more common and some studies have even found that over 70% of university students admit that they procrastinate regularly (Schraw et al., 2007). Academic procrastination occurs when students needlessly delay completing activities, projects or assignments. Such procrastination can place undue stress or anxiety upon individuals as they hasten to meet deadlines and complete assignments. Putting things off can not only affect one's psychological well-being, but can also affect one's relationship with others. As individuals fail to meet deadlines and commitments, relationships become strained. However, research is somewhat mixed on the effects of procrastination. For example, Schraw et al. (2007) argue that procrastination might have a useful adaptive advantage that allows students to garner better use of available study time. However, other studies have established that procrastination corresponds to less success in life (Ferrari, 1992). The concentration of this research, like most others, is on the negative form of procrastination.

Colleges have become overly reliant on predictors of academic success such as scores on the Scholastic Aptitude Test (SAT) to the point where scores on the SAT are used in extremely important selection decisions (Wesley, 1994). However, studies have shown that "procrastination is capable of accounting for variance in college grades beyond what is explainable by the SAT" (Wesley, 1994, p. 407). Therefore, procrastination can possibly be distinguished as a particularly vital predictor of success in college. As a result, a valid and reliable scale of academic procrastination could be quite profitable and of great importance to colleges and universities.

Such a scale can prove valuable in remediating students. Those students who exhibit higher levels of academic procrastinatory tendencies could be given lessons in

studying effectively and keeping deadlines and goals. If identified early enough, students can be given the right tools for overcoming procrastination and succeeding in college.

2.7.3 Conceptualizing Academic Procrastination

Regardless of the effects of procrastination, there appears to be numerous conceptualizations and components of academic procrastination. For example, Choi and Moran (2009) discussed what they referred to as active procrastination, which was comprised of four distinct characteristics. Specifically, it was proposed that those who actively procrastinate 1) prefer time pressure and 2) *intentionally* procrastinate. They are also 3) able to meet deadlines, and 4) are satisfied with the outcome. Later studies have discounted these four distinct characteristics of academic procrastination (Chu & Choi, 2005). However, numerous dimensions or facets of academic procrastination have been identified through past literature. Identifying those possible dimensions of academic procrastination, therefore, is one step towards the creation of a valid and reliable scale. Six unique facets or characteristics of academic procrastination are exemplified in the literature. It is believed that these six characteristics describe those who procrastinate in academics. The six characteristics of academic procrastination are psychological beliefs about abilities, distractions, social factors, time management, personal initiative and laziness. Each will be discussed briefly.

2.7.4 Psychological Belief about Abilities

Although other studies have failed to validate the four-factor approach to active academic procrastination, studies have found that procrastinators tend to rationalize their tendencies to put things off and their ability to work under pressure (Wohl,

Pychyl & Bennett, 2010). Therefore, one aspect of procrastination involves psychological beliefs about the ability to work under pressure. This has been defined in similar studies as sensation-seeking (Steel, 2010). In other words, academic procrastinators seek, either actively or passively, to work under pressure. Those who procrastinate have an undeniable belief in their ability to work under pressure.

In fact, this belief in ability might have some basis in other psychological research. Students have what Sokolowska (2009) phrased as an academic self-concept. This self-concept is a self-reflective view individuals hold of themselves and students either believe themselves to be effective or ineffective students. The more students believe that they are effective, the more likely they are to procrastinate and "cram" before tests due to their self-confidence in their abilities and positive view of themselves. "Cramming" for tests is when students procrastinate, or wait until the night or hours before an exam or project to begin studying.

Schraw et al. (2007) cite research which found that "crammers" experience a greater sense of challenge and excitement when waiting until the last minute to study. This challenge might promote an emotional allure for some students in which they feel more compelled to study during these sessions. However, research indicates that those who "cram" or procrastinate perform poorly in school (Steel, 2007). Nevertheless, a facet of procrastination might entail this emotional allure or psychological belief in the ability to work under pressure.

2.7.5 Distractions of Attention

Studies on procrastination have determined that those who procrastinate are easily distracted by more interesting or fun activities. Thus, individuals who procrastinate take part in self-handicapping (Steel, 2007). That is, they intentionally place more

pleasing activities ahead of appointments or deadlines. Procrastinating individuals tend to sleep, watch television or play instead of working on more important things in order to distract or distance themselves from responsibilities.

One reason students tend to distract themselves with other things instead of deadlines and schoolwork stems from the fact that, typically, tasks such as projects and assignments are aversive to students. "Consistently and strongly, the more people dislike a task the more they procrastinate" and tend to choose more interesting activities instead of working on schoolwork (Steel, 2007, p. 75). This task aversiveness to important responsibilities is a hallmark of procrastinators. Those who procrastinate consistently turn to other activities and behaviours rather than concentrating on an intended course of action (Klassen, Krawchuk & Rajani, 2008).

Distracting one from responsibilities also gives "an out" if one fails at that task (Steel, 2007). For example, if a student has an extremely difficult test or project due and is afraid of failing, he or she can protect self-worth or self-esteem by giving an outside excuse or external distracter for failing. Thus, the student instead distracts him or herself with another activity, blaming failure on said activity. Therefore, a unique characteristic of procrastinators is that they tend to immerse themselves in distractions.

2.7.6 Social Factors of Procrastination

Research on procrastination has established that procrastinators tend to fail in self-regulation of behaviours in times of high stress (Klassen, Krawchuk & Rajani, 2008). Self-regulation involves the ability to adapt or regulate one's performance under varying circumstances. Thus, procrastinators tend to disregard deadlines or projects when placed in stressful situations. Social factors, such as friends or family could

keep one from keeping timelines or deadlines. This task aversion to school work was recognized by Brownlow and Reasinger (2000) as one of the major reasons procrastinators put off school work.

Social factors can promote task aversiveness or task avoidance, both of which are dimensions of procrastination mentioned by Schraw et al. (2007). Traditional college students are those in their early adulthood and late adolescence, aged 18-23 years of age. Such an age is characterized by social adjustment and independence. Students attempt to juggle and schedule time with family, friends and work. Add a newfound sense of independence and autonomy to this struggle and college students can turn away from school work and deadlines and choose instead to work or socialize with friends. Therefore, social factors are indicative and promotive of procrastination.

2.7.7 Time Management Skills

Steel (2010) provided support for a three-factor model of procrastination. Two of these factors could be labelled as time management and fall under the realms of promptness and appointment keeping. Time management can be defined as having an ability to consciously control activities and behaviours so as to maximize one's available time (Mish, 1994). Procrastinators tend to have an inability to manage their time and experience a wide discrepancy between their actual intent and their realized behaviours. Difficulty in managing one's time was discovered in previous studies as a reason why students academically procrastinate (Solomon & Rothblum, 1984).

Time management skills are not an inherent trait, but a learned characteristic within individuals. Time management is "a critical contributor to procrastination in academic settings" (Sokolowska, 2009, p. 18). To succeed in an academic environment, students must show up on time to classes and keep deadlines. They must also

complete assignments and tests by predetermined dates. Juggling a large course load, homework, projects and assignments usually requires an individual to maximize his or her free time. Poor time management could result in forgetting to turn in an assignment, unintentionally putting off studying until the last minute or working on other, less important activities instead of academic work. Thus, failing to manage time effectively could be a defining characteristic of academic procrastinators. This assertion is in line with Schraw et al. (2007) who opined that, Students attempt to juggle and schedule time with family, friends and work. Add a newfound sense of independence and autonomy to this struggle and college students can turn away from school work and deadlines and choose instead to work or socialize with friends. Therefore, social factors are indicative and promotive of procrastination.

Personal Initiative: Some researchers have characterized procrastination as a "dysfunctional delay" (Steel, 2010, p. 929). Such a delay can occur not only because of social or situational variables but also because of attitudinal or personality characteristics such as initiative. Initiative is a general readiness or ability to begin or carry out tasks energetically (Mish, 1994). If a student lacks initiative, he or she will not have a certain drive to complete a task or assignment on time. Lack of motivation or personal initiative was mentioned by Caruth and Caruth (2003) as a reason for procrastination. Generally, students are more effective academically when they are motivated. Motivation is a drive to succeed and can either be internal or external.

Those students who have an internal drive to complete academic work also procrastinate less. Conti (2000) found that students with intrinsic reasons for completing academic work procrastinate less while those who are externally motivated to complete academic work experience high procrastinatory tendencies.

Fear of failure, as well, could be a potential reason behind some forms of procrastination (Steel, 2010). Academic procrastinators might be prone to not carrying out tasks for fear of failing at that task. In fact, Solomon and Rothblum (1984) performed a factor analysis on the reasons why students' procrastinated and found that fear of failure accounted for approximately 49.40% of the variance. Thus, fear of failing could quite possibly be one of the reasons why students procrastinate. Students might lack initiative and have an absence of motivation and enthusiasm to complete school work because they fear failing at those tasks. Thus an academic procrastination scale must assess a student's personal initiative.

2.7.8 Laziness

Meanwhile, various other studies on academic procrastination have found a variety of up to three factors of academic procrastination. These factors include "fear of failure, task aversiveness, and laziness" (Schraw et al., 2007, p. 13). Laziness is a tendency to avoid work even when physically able (Mish, 1994). Aversiveness and laziness were factors that accounted for 18% of the variance in reasons for students' procrastination according to Solomon and Rothblum (1984). If students are physically avoiding school work, they are merely putting off all of this work until the end of the semester. Thus, they are exhibiting a degree of laziness and task aversiveness.

According to a recent theoretical study on procrastination, up to 40% of students stated that they would drop a college course if the professor expected too much of students or was too rigid on due dates or deadlines (Schraw et al., 2007). Thus, academic procrastination might involve the tendency to avoid a great deal of school work, or laziness.

Other studies, however, have indicated that procrastination does not necessarily correspond to problems (Schraw et al., 2007). Thus, by summing up the scores on both questions, the authors are not adequately assessing procrastination but procrastination and negative consequences of procrastination, which is seen as an entirely separate construct. Nevertheless, Solomon and Rothblum (1984) wrote a seminal article relating to the development of a self-report measure of academic procrastination and is even still in use today.

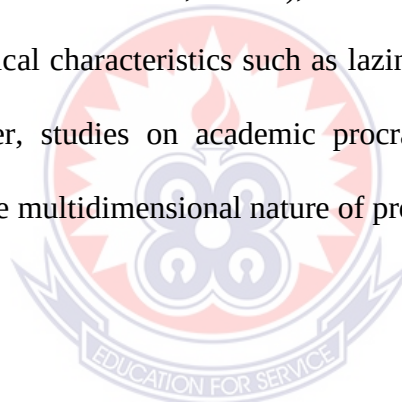
Chu and Choi (2005) proposed two different constructs related to procrastination. Active procrastinators were those who chose to put things off until the last minute while passive procrastinators were those who had an inability to keep prior schedules. In line with, the active procrastination scale consisted of an alpha reliability of .67. The study also did not provide theoretical proof on the development of the two types of procrastination nor did they provide support for the dimensions of procrastination.

However, Choi and Moran (2009) attempted to reconcile the shortcomings of the active procrastination scale. In a seminal article, an exploratory and confirmatory factor analysis indicated a multidimensional construct. Theoretically, the first dimension represented outcome satisfaction and those who are satisfied with the products of their procrastination. The second dimension represented those who prefer the time pressures associated with procrastination. The third dimension consisted of identifying those who made an intentional decision to procrastinate while the fourth dimension identified the ability to meet deadlines.

The Choi and Moran (2009) scale consisted of 16 items with an overall reliability (Cronbach's alpha) of .80. The reliability of the four dimensions of procrastination ranged from .70 to .83. However, convergent validity diagnostics revealed that active

procrastination was a unique construct and did not relate to traditional procrastination. Thus, the scale was excellent at identifying the multidimensionality of procrastination. However, the scale developed by Choi and Moran (2009) consisted of general lifestyle questions rather than identifying specific outlets of procrastination, such as academic. It is proposed that procrastination can manifest its intent in specific arenas, such as actively procrastinating on schoolwork or projects.

Nevertheless, the preceding scales helped pave the way for future research on procrastination. Through scaling procedures, the definition of procrastination has grown from consisting of solely a behavioural dimension such as a tendency to delay activities (Solomon & Rothblum, 1984), to a multidimensional-perspective considering psychological characteristics such as laziness and fear of failure (Schraw et al., 2007). However, studies on academic procrastination have failed to fully indicate and explore the multidimensional nature of procrastination.



CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methodology used for the research. It presents the research paradigm, approach and design, population of the study, sample and sampling techniques. It also discusses instrumentation, its validity, piloting and reliability. The chapter finally presents data collection procedures, its analysis, and ethical issues.

3.1 Research Paradigm

Paradigms play a fundamental role in scientific studies. The term “paradigm” originated from the Greek word *paradeigma*, which means pattern; and can be attributed to Thomas Kuhn in his 1962 book titled “*The Structure of Scientific Revolution* (Mouton, 2006). Paradigm, according to Kuhn (1977) refers to the entire theoretical research framework, and involves the beliefs, values, practices, culture, etc. shared by a community of researchers regarding the nature and conduct of research. For instance, Mouton (2006) refers to paradigm as the established research traditions in a particular discipline which serve as a philosophical framework. Further, Glăveanu (2010) defines paradigm as the beliefs, values, practices, and culture shared by a group of people in a community.

Furthermore, Neuman (2014a) explains paradigm to mean a whole system of thinking. In the views of van der Roest, Spaaij, and van Bottenburg (2015), a paradigm is an interpretative framework, which is guided by a system of beliefs and feelings about the world and how it should be understood and studied. In more specific terms, a paradigm is seen by some authors to include the accepted theories, traditions, approaches, models, frame of reference, body of research and

methodologies; and as well as a model or framework for observation and understanding (Babbie, 2011, 2010; Donkor, 2018).

In this study, the researcher's philosophical underpinning, taking into perspective ontology and epistemology, the researcher's ontological view is single objective reality. This is because the researcher believes that there is an objective truth on the constructs that are being studied in other words, knowledge about academic self-efficacy, academic procrastination and academic motivation that the researcher sought to establish, already exists with the respondents and the truth is one out there, the researcher only uses scientific methods to discover and adopt an objective means to report it as it is. The researcher has no influence on whatever knowledge that has been discovered, as was affirmed by Mensah (2015). A consideration of an appropriate paradigm must be a central feature of any study of social science as it gives shape and meaning to the conduct of a research into a social phenomenon Mensah (2015).

Furthermore, the way one views the constructs of social reality and knowledge influences how that person goes about uncovering knowledge of relationships among phenomena and social behavior and how that person interprets or gives meaning to reality Mensah (2015), Burrell and Morgan (2017) who asserted that to be in a particular paradigm is to view the world in a particular way. In conducting social research, the use of appropriate paradigm is pivotal as it influences the social phenomena being investigated. The choice of research methodology is dependent on the paradigm that underlines the research work especially the researcher's beliefs about the nature of reality and humanity and the nature of what constitutes knowledge and how such knowledge can be acquired (Donkor, 2018).

The research process has three main dimensions, namely: ontology, epistemology and methodology (Amankwah, 2018). Indeed, the foundation upon which all research lie includes its ontological, epistemological and methodological positions (Bryman, 2004). This, together with other factors such as the theoretical foundation, researcher's values and other practical considerations has some appreciable implications on the entire research process (Amankwah, 2018; Bryman, 2004). The use of appropriate paradigm or philosophy is important in research or studies to reduce the implications of factors such as time constraint, budget constraint, availability of data and social phenomenon being investigated (Amankwah, 2018). All these are grounded in ontological, epistemological and methodological approaches of the study (Mensah, 2015). It must also be stated that the ontological and epistemological assumptions inter-depend on each other. There have been different views by scholars as to which paradigm should come first in conducting social research Donkor (2018). For instance, Scotland (2012) argues that researchers can choose which stage to start from – ontological, epistemological, methodology or methods. This view has been widely supported by other scholars (Donkor, 2018).

Nonetheless, the study also aligns with the viewpoint that, a research study should be guided first and foremost by the ontological position of the researcher which consequently influenced the researcher's epistemological and methodological approaches (Donkor, 2018). Therefore, the researcher indeed agreed with the literature that, paradigm influence the choice of methodology. The succeeding subsections discuss the ontological, epistemological and methodological approaches employed by the researcher in this study.

3.1.1 Ontological Perspective

Ontology examines the nature of reality. Ontology is the study of being, which is concerned with what actually exists in the world about which human can acquire knowledge. Ontology helps researchers recognize how certain they can be about the nature and existence of objects and phenomena they are researching (Moon et al; 2014). Who decides what real? Based on this explanation in relation to the study, the researchers' ontological perspective was realism (objective reality). The researcher recognizes the existence of one single reality which can be studied, understood and experienced as an absolute truth. The researcher adopted this ontological stance because; first the researcher believes that reality exist independent of human experience and manipulation. Similarly, the researcher believes that the truth is absolute about the constructs; that is academic self-efficacy, academic procrastination and academic motivation. Therefore taking an objective means to discover that truth and reality was deemed appropriate.

Unlike relativism which posits that reality is constructed within the human mind, such that no one truth exists. Instead, reality is relative according to how individuals experience it at any given time and place (Moon. et al, 2014).

3.1.2 Epistemology Perspective

Epistemology this is the study of knowledge which concerns itself with all aspect of validity, scope and method of acquiring knowledge and how an individual understand knowledge, how they understand their thinking process and how they think others know (Moon. et al 2014). Linking the philosophy to the study on; academic self-efficacy, academic procrastination and academic motivation, the researcher's epistemological stance was positivism. Based on that, knowledge can be quantified

and measured using questionnaires instead of interviews. The choice was relevant to the study because; first, the knowledge that the researcher sought to discover was regarding academic self-efficacy, academic procrastination and academic motivation was independent of the researcher influence and therefore the study was intended to yield the results that can be generalized to the larger population without manipulation from the researcher. Again the study was conducted with a position that suggests, knowledge which was discovered was not directly influenced by the researcher but rather through an objective position to knowing. In addition, the researcher adopted this stance because it was a guide on how to frame the research questions in an attempt to discover knowledge in the study relative to academic self-efficacy, academic procrastination and academic motivation. Also, the researcher agreed to the view that, reality exists independent of human interference on academic self-efficacy, academic procrastination and academic motivation. This viewpoint was central to the conviction on the choice positivism.

Also, from the objectivists' viewpoint therefore, the world is real and exists outside of the individual. Hence, there is a real world which is absolutely independent of knowledge and upon which life is built Bryman,(2004). Similarly, Scotland (2012) describes epistemology as the theory of knowledge entrenched in the hypothetical viewpoint and the procedure of gathering knowledge but also addresses the pedigree, methods, nature and limits of human knowledge. Where there is a separation, the researcher tends to distance him/herself from the object under study, whereas in cases where there is no separation, the researcher gets involved with the object under study in the process of knowledge gathering (Amankwh, 2018).

The epistemological position of the study is mostly embedded in its theoretical perspective; and explains its beliefs about how one might discover knowledge about the world (Amankwah, 2018; Donkor, 2018). In most cases, a researcher's epistemology position is informed by their ontological view of the nature of reality - objective or subjective (Amankwah, 2018).

The study was hinged on positivism because positivism provides a framework to explain reality as a criteria-given entity which can be understood objectively and believe in the possibility to observe and describe reality from an objective viewpoint (Kroeze, 2012). The study applied the positivism/objectivism paradigm in gathering knowledge on academic procrastination, academic self-efficacy and academic motivation. In view of that, the study employed natural sciences, precisely quantitative approach, in carrying out this study. According to Mack (2010), the characteristics of a positivist paradigm include an emphasis on the scientific methods, statistical analysis and generalizability of findings. According to a positivist epistemology, science is seen as a way to get at the truth, to understand the world well enough so that it might be predicted and controlled (Krauss, 2005).

The truth is determined through the verification of predictions (Tien, 2009). The study sought to identify influence of academic self-efficacy and procrastination on academic motivation among undergraduates' students of University of Education, Winneba. Therefore, the researcher adopted positivism because it rests on fact that the only way to verify that knowledge is true is if it was created using a scientific method (McGregor & Murnane, 2010). The purpose of using science to prove facts is to observe and measure (Krauss, 2005). The present study was scientific as it was

objective, used statistics in the analysis of data and emphasized the generalization of results; hence, the appropriateness of a positivist paradigm.

In the current study, the researcher maintained minimal interaction with respondents when collecting data. Respondents completed the questionnaire in their own time. Positivists go forth into the world impartially separating themselves from the world they study (Krauss, 2005) and discovering knowledge which is directed at explaining relationships (Creswell, 2009). The use of questionnaires in the current study allowed the researcher to deal with facts provided by the respondents rather than feelings and emotions as used in other research paradigms. The paradigm that argued that, truth and reality are free and independent of the viewer and observer (Crossan, 2016). As such, it was appropriate for the current study that sought to establish influence of academic self-efficacy and procrastination on academic motivation among undergraduates' students of University of Education, Winneba.

The positivism paradigm is also referred to as scientific paradigm. The positivist paradigm of exploring social reality is based on the philosophical ideas propounded by the French Philosopher August Comte (Amankwah, 2018; Babbie, 2011). Who believed that reality could be observed (Donkor, 2018). At the ontological level, positivists believe that the reality is objectively given and is measurable using properties which are independent of the researcher and his or her instruments (Thomas, 2010). In other words, knowledge is objective and quantifiable (Amankwah, 2018). Positivism is therefore concerned with uncovering truth and presenting it by empirical means (Amankwah, 2018). Observation, according to Vosloo (2014) means accepting only empirical evidence as valid evidence. Valid evidence is thus produced through the senses of sight, smell, touch, taste and hearing. Therefore, to the

positivist, empirical facts exist independent of personal thoughts or ideas which are dictated by the laws of cause and effect (Bryman, 2004). To the positivist, the reality is not influenced by our senses; and that meaning resides solely in objects, not in the conscience of the researcher, and it is the aim of the researcher to acquire this meaning objectively (Scotland, 2012).

This is similar to the view expressed by Aliyu et al. (2014) to the effect that positivism is based on the principle that the researcher's view does not affect the truth and reality of the situation. Thus, reality is independent and free of views of the researcher. In other words Furlong and Marsh (2002) argued that, positivists normally employ quantitative methods as their research tool. Again, McNiff (2013) maintains that theories can never provide the absolute truth but can only get closer to the truth.

3.2 Research Approach

3.2.1 Quantitative Approach

Quantitative research can be understood as a research approach that places emphasis on quantification in data collection and also views reality as an external and objective reality (Bryman 2012). The quantitative approach has been criticized as reductionist since it relies on preconceived or half-understood concepts, which leaves it vulnerable to bias or manipulation (Grix, 2018). Furthermore, when it comes to some aspects of human behavior, such as behavioral phenomena, numerical measurement, which is so fundamental in quantitative research, is thought to be problematic (Bryman, 2004). In relation to the study, the researcher adopted the quantitative approach taking into consideration the variable under studied which were academic self-efficacy, academic procrastination and academic motivation, these are all psychological constructs which can be measured through the use of standardized scales therefore, there was no need

for interviewing participants. Quantitative researchers operate under the assumption of objectivity (Johnson & Christensen, 2012) and that there is a reality to be observed and that rational observers who look at the same phenomenon will agree on its existence (Johnson & Christensen, 2012).

Nonetheless, the researcher chooses quantitative approach instead of qualitative and mixed methods approach because; regardless of weakness the researcher was to investigate the level of academic self-efficacy, academic procrastination and academic motivation first these are psychological constructs which can be measured using standardized scales to establish the levels. It was evident of the fact that, this approach presented an objective finding that validated the results of the study.

Again, because there was no manipulation or interference from the researcher, there were factual results based on the findings from the field, as the researcher remained distance from the respondents. This approach also offered the researcher a great deal of opportunity to make inferences of the findings and generalization of the results of the study to the larger population. As suggested by renowned researcher (Creswell, 2003). A quantitative approach was used in this study as it allowed the researcher to carry out an objective analysis and generate factual knowledge through measurement. Researchers who use quantitative tools and techniques that emphasize measuring and counting are positivists in nature; positivist approach depends on quantifiable observations that lead to the statistical analysis of data (Krauss, 2005; Mack, 2010).

Quantitative data is analyzed using statistics (Punch, 2005). It is the numerical representation and manipulation of observations to describe and explain the phenomena (Tewksbury, 2009). Quantitative research methods are characterized by the collection of information which can be predicted, be analyzed numerically and

presented in tables for easier analysis and interpretation. Again, since the study sought to investigate influence of academic self-efficacy and procrastination on academic motivation among undergraduates' students of University of Education, Winneba. All these are psychological variables and can be measured using standardized instrument like questionnaires; the researcher was able to quantify the information and made inferences from the study. Hence, the choice of quantitative approach was best suited for the study. This affirmed the assertion by Rasinger (2008), who argued that the main characteristic of quantitative data is that it consists of quantifiable information. This allowed the researcher to quantify the magnitude and scope of the problem under investigation. Consistent with Hoy (2010) who also stated that quantitative research is useful to quantify opinions, attitudes and behaviors and find out how the whole population feels about a certain issue. The research also used the results to make generalization of the findings to the larger population.

3.3 Research Design

A research design also called a research strategy is a plan to answer a set of questions (McCombes, 2019). The design of research influences the type of data to be gathered and, consequently, its results. Research design also defines all other constituent parts of a study, such as variables, hypotheses, experiments, methodology, and statistical analysis (Creswell et al., 2018).

In view of this, the researcher's design for the study was cross-sectional design. A cross-sectional design is a type of observational study design that seeks to gather data from a group of subjects at only one point in time (Schmidt and Brown 2019). Considering the meaning of the design, in relation to academic self-efficacy, procrastination and academic motivation in the study, it offered the researcher a great

deal of opportunity to collect data from respondents at a single point in time. Also, the data collected in cross-sectional study involved respondents who have similar characteristics in all the variables the researcher was working with. It was imperative for the researcher to gather data at only one point in time as it allowed, the researcher to measures the outcome in the study at only one point in time. Again, it also allowed the researcher to use questionnaires to gather data from respondents within the defined population without manipulation. It is on this basis that the researcher considered it suitable and relevant to use cross-sectional design instead of experimental, descriptive survey or correlational design or any other design.

3.4 Setting

The research was conducted in the Effutu Municipality in the Central Region of Ghana. The population of Effutu Municipality, according to the 2021 Population and Housing Census is 107,798 representing 3.8% of the region's total population of 2,859,821; with 50.8% males and 49.2% females (Ghana Statistical Services, 2021). The municipality is characterized by a youthful population since one-third of the population fall below age 15 years and in terms of occupation, majority of the populace (31.4%) are engaged in craft and related trades, followed by service and sales (24.9%); about 27% of the male population are into agriculture (Ghana Statistical Services, 2021). Manufacturing is the most dominant industry in the Municipality, followed by retail services, then agriculture, forestry and fishing. The Municipality has 60 Nurseries/Kindergarten, 52 Primary Schools (24 Public and 28 Private), 32 Junior High Schools and 7 Senior High Schools.

The Winneba Senior High School is the public second cycle institution in the municipality. There is one major tertiary institution, the University of Education,

3.5 Population

Saunders et al (2007) defined a population as a well-defined collection of individuals with similar characteristics. The population of the study comprised of University of Education Winneba students. The target population included first year to fourth year regular undergraduate students and the number was 38,885 which comprises 23,353 males and 15,532 females respectively. The accessible population consisted first year to third year students in the Faculty of Educational Studies. The distribution was indicated in Table 3.1.

Table 3.1: Sample Frame for the Study

Department	Males	Females	Total
Special Education	406	440	846
Basic Education	894	463	1357
Early Grade Department	326	642	968
Counseling Psychology	251	202	453
Total	1,877	1,747	3,624

Source: Researchers' Data (2022)

3.6 Sample, Sample Size and Sampling Procedure

3.6.1 Sample

A sample is defined as a subset or collection of some units of the universe or population (Amoah & Eshun, 2015). Again, Kothari (2011) define sample as the number of items to be selected from the universe. In this study the sample was one department from the Faculty of Educational Studies.

3.6.2 Sampling Procedure

The sampling procedure is a description of the strategies the researcher employed to select representative subjects or respondents from the target population (Oso & Onen,

2009). In this study, because the departments already existed in their strata, the researcher used stratified random sampling together with simple random sampling techniques specifically the lottery method as the sampling procedure to select the sample for the study. As the researcher indicated, simple random sampling gave each member of population an equal chance of being included in a sample. More importantly, this sampling technique helped the researcher to make statistical inferences about the general population in relation to the constructs academic self-efficacy, academic procrastination and academic motivation. Again, stratified was also used because, it ensured that specific characteristics were proportionally represented in the sample (Thomas, 2023).

However, if it is done correctly, the resulting sample is, by definition, unbiased, yet it may still contain sampling errors, which are errors created by chance (i.e., created by the random sampling process) (Thomas, 2023). The technical term for discussing the magnitude of sampling errors is precision. Results are more precise when researchers reduce sampling errors. The two major ways to reduce sampling errors are to increase sample size and to use stratification in conjunction with random sampling, which is called stratified random sampling. A stratified random sample is a way of modifying the methods one has already seen. Strata are layers. When one stratifies a random sample, he or she creates layers in the random or systematic selection of the sample. Stratified samples first create homogeneous groups from the population, and then make a proportional but random selection from each of the groups. This can help with several difficulties found in the previous methods, especially improving the representation of specific groups from the population. To obtain a stratified random sample, first divide a population into strata. For example, researchers can easily divide a population into men and women because gender is typically identifiable.

Once the two homogeneous groups are formed, the researcher draws randomly from the men, and then from the women. This is a very simple version of a stratified random sample. Researchers usually draw samples by considering the total number of individuals they wish to have in the sample as a percentage of the population, and drawing the same percentage from each group rather than drawing the same number of people from each group, Patten and Newhart (2018). With this, the researcher selected the sample randomly by giving every department equal chance of being selected. That is the reason why this sampling procedure is best suited for this study.

3.6.3 Sample Size

Sample size is a research term used for defining the number of individuals included in a research study to represent a population Amoah & Eshun (2015). The sample size references the total number of respondents included in a study, and the number is often broken down into sub groups by demographics such as age, gender and location so that the total sample achieves represent the entire population. If the sample size is too small it will not yield valid result or adequately represent the realities of the population being studied. On the other hand, larger sample yield smaller margin of error (confidence interval and confidence level) and are more representative. Confidence interval measure the degree of certainty or uncertainty in sampling, it tells how confident you can be that the result of the study reflect the entire population. Whiles confidence level refers to the certainty that the confidence interval would contain on the true population. The larger the sample size, the more confident one can be that, answers truly reflect the population (Kibuacha, 2021). From the explanation above, the researcher used 360 students as the sample size. Krejcie and Morgan (1970) sample size determining table was used to determine the sample size for the study. As shown in appendix A. The table suggests that if the population is 3,500 the

equivalent sample size should be 346. But in the study, the population was 3,624 and a sample size of 360 was used estimative. Because the researcher wants to be certain of the results that would reflect the entire population understudied.

Again the researcher's intention was to get a number that would accurately represent the target population and also accurately generalize the results of the study to population. By that the researcher sought to provide important cues to for the University policy makers on this seemingly sensitive issue of academic procrastination, self-efficacy and academic motivation. It was based on this reason, which informed the choice of the above sample size for the study.

3.7 Instrumentation

The researcher adapted three instruments for data collection, namely; Academic Procrastination Questionnaire (APQ), academic self-efficacy scale (ASES) and academic motivation scale (AMS). A structured questionnaire (of close-ended items) was the research instrument employed for the study. The structured questionnaire was personally administered to reduce errors and to ensure a high response rate.

3.7.1 Academic Procrastination Questionnaire (APQ)

The APQ was developed by Abu-Ghazal (2012) to measure undergraduate Jordanian university student's academic procrastination. The APQ is a one-dimensional Likert-type questionnaire consisting of 21 items, all items are scored on the five-point Likert scale ranging from totally disagree 1 to totally agree 5. High scores indicate the subjects have a high level of academic procrastination. The APQ is a standardized scale which has a Cronbach alpha reliability coefficient of 0.90. The original scale was developed to assess the academic procrastination of Jordanian university students. Though the original population for which the scale was developed was the

same as the population in present study, the environment and the cultural background was different, hence the needs for pilot study. The study was piloted at a Technical University. This institution was used because the students share similar characteristics with the population of the study in terms academic self-efficacy, academic procrastination and academic motivation This was selected using the convenience sampling technique, with a total population of 36 students, given the researcher a reliability coefficient of 0.85 was achieved at the end of the pilot study using 4-point likert scales ranging from Strongly Disagree (SD) to Strongly Agree (SA).

3.7.2 Academic Self-Efficacy Scale-2006

Academic Self-Efficacy Scale was developed by Abdul et al, (2006) to assess the academic self-efficacy of secondary school students based on the Self-Efficacy theory of Bandura (1977) who placed it within the framework of Social Cognitive theory. The scale was based on the idea that the efficacy of the students in each of the dimensions of academic work would contribute to the overall academic self-efficacy. The selected dimensions of academic work were: Learning process, Reading, Comprehension, Memory, Curricular Activities, Time Management, Teacher Student relationship, Peer Relationship, Utilization of resources, Goal Orientation, Adjustment and Examination. There are 20 each positive and negative statement in the total 40 statements in all. This scale was adapted because, the original scale was meant to assess academic self-efficacy of secondary school students. For the purpose of this study, the scale was being adapted to suit the population in the study. The researcher focused on five dimensions in the study specifically learning process, Reading comprehension, Memory, Time Management, Adjustment and Examination. These dimensions were selected because statements under each can elicit from the respondents their various levels of self-efficacy in terms the population under study.

Academic self-efficacy scale was also adapted and piloted in a technical university that shares similar characteristics as that of the study population. The researcher sampled 36 students for the pilot test. A reliability coefficient of .85 was achieved at the end of the pilot study using 4-point likert scales ranging from Strongly Disagree (SD) 1 being the lowest to Strongly Agree (SA) 4 as the highest. Content validity was ensured through the expert judgments of the face validity and inclusion of representative items from all the five dimensions of the construct.

3.7.3 Academic Motivation Scale (AMS)

Academic Motivation Scale: Another instrument that was adapted for the purpose of the study, was Academic Motivation Scale developed by; Vallerand et al., 1992). It was based on self-determination theoretical concepts. The AMS is a 28 item instrument that measures motivation towards education specifically with college students using seven subscales including amotivation, three types of extrinsic motivation (external regulation, introjected regulation, and identified regulation), and three types of intrinsic motivation (to know, toward accomplishment, and to experience stimulation) (Vallerand et al., 1992). The AMS-C 28 was translated to English from the French language version of the Echelle de Motivation en Education (EME) and cross-culturally validated (Vallerand et al., 1992). It is a 7-point Likert scale ranging from (1 = does not correspond at all to 7 = corresponds exactly).

In the AMS- 28, motivation is operationalized as the underlying "why" of behaviour and focus on the perceived reasons for engaging in the activity. Thus, the scale asks the question why you do and items represent possible answers to that question, thus reflecting different types of motivation (Vallerand et al., 1992, p. 1008). The AMS-C 28 results provide researchers with a valid and reliable research instrument for use in

educational research on motivation (Vallerand et al., 1992). This instrument was adapted and piloted in a technical university that shares similar characteristics as that of the study population. The researcher sampled 36 students for the pilot test. A reliability coefficient of .85 was achieved at the end of the pilot study using 4-point likert scales Strongly Disagree (SD) to Strongly Agree (SA).

3.8 Validity and Reliability

The researcher embarked on the process of validation to ensure that the instruments measure what they ought to measure and reliability to ensure the internal consistency of the instruments

3.8.1 Validity

Nitko, (2005) defined validity as the soundness of the interpretation and use of student's assessment results. In other words it refers to the extent to which a test measures what it purported to measure.

Validity is essential for evaluating the quality and acceptability of research. Generally, researchers use different instruments to collect data. Therefore, the quality of these instruments is very crucial because the conclusions researchers draw is based on the information they obtain using these instruments (Frankel & Wallen, 2003). Thus, it is imperative that, the instruments to be validated. To ensure content, construct and the face validity of research instruments used, the questionnaire was adapted with close consultation with the researcher's supervisors to help eliminate or revise unclear and ambiguous items while rewording complex items.

Additionally, content validity refers to how representative and relevant the tasks or items on an instrument are (Dzakadzie, 2017). Content validity of the questionnaire was obtained by presenting them to two expert people, including the researcher's

supervisor because content and construct validity are determined by expert judgment (Punch, 2005).

However, construct validity refers to how well the assessment results can be interpreted as reflecting an individual's status regarding a trait or attributes (Dzakadzie, 2017). It was also very essential to note that, because all the instruments were developed for different samples, population and settings, the researcher adapted the instrument for the study to reflect the traits of the population.

3.8.2 Reliability

The extent to which results are consistent over time and an accurate representation of the total population under-study can be reproduced under a similar methodology, then the research instrument is considered to be reliable (Joppe, 2000). This attribute of the instrument is actually referred to as stability. A high degree of stability indicates a high degree of reliability, which means the results are repeatable. The reliability of the test was checked by KR-20 estimates. These procedures were used to regulate the internal consistency of the items on the questionnaire. Reliability was checked after piloting and after the main study. A reliability coefficient of .85 and .84 was achieved for the pilot study and the main study respectively. Gay, Mills, and Airasian (2011) suggested that, a test is a good measure if its reliability coefficient surpasses 0.60. The value indicated a good degree of reliability of the instrument. The result also suggests that the instrument, to some extent, were free from errors. The results therefore suggest that the instrument was reliable and suitable for establishing the influence of academic self-efficacy and academic procrastination on academic motivation in students of UEW.

3.8.3 Piloting of Instrument

The instrument was piloted in a setting which had similar characteristics as the study area. The instrument was piloted at Sunyani Technical University. This was because it shared similar characteristics as the population for the study. This was done to determine reliability, of the instrument and the researcher to identify the possible setbacks of the instrument as well as make the necessary corrections before they are administered to the actual sampled population for the study. The corrections made included reducing the number of items and also ensuring that the items were less ambiguous as much as possible. The piloting enabled the researcher to determine the validity and reliability coefficient of the instrument at the end of the pilot study, the researcher arrived at a reliability coefficient of .85. Content and construct validity were ensured through experts' judgment of questionnaire for use in UEW.

3.9 Data Collection Procedures

3.9.1 Permission

Permission was sought using an introductory letter from the Head of Department; Counseling Psychology, University of Education, Winneba. The researcher first visited all the departments in the faculty to establish rapport with them and also explain the purpose of the study to them. The researcher again, elicited their views on the time and duration suitable for the administration of the questionnaire. The questionnaire was administered to three hundred and sixty students present at that time. The researcher printed the questionnaires in excess to ensure maximum response rate. The instructions and the various items on the questionnaire were explained to the respondents. Eventually the researcher retrieved three hundred sixty (360) responses. This helped to obtain desired number of responses due to the high response rate.

3.10 Data Analysis Procedures

Data analysis is important for interpreting raw data, in order to obtain the meaning and pattern from data (Bell, 2010). The answered questionnaires were grouped according to the categories of respondents. The demography of the respondents was analyzed using simple frequency counts and percentages. Questionnaires for the respondents were numbered serially to ensure easy coding and checked for blank options and out of range responses. The coding of the items was done in line with the scale provided. Academic procrastination scale, academic self-efficacy scale as well as academic motivation scale, were all rated on a four (4) point-Likert scale respectively. In section B, it dealt with academic procrastination: Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA), SECTION C: also talked about academic self- efficacy Totally Disagree(TD) ,Disagree(D), Agree(A), Totally Agree(TA) and finally, SECTION D centered on academic motivation: Strongly Disagree =1, Disagree(D) =2, Agree(A) =3, Strongly Agree=4. The coded responses were fed into the computer using the SPSS version 23 for Windows, which is capable of analyzing data keyed into it. The data was summarized into tables using descriptive statistics (mean and standard deviations). Finally, the researcher's views based on the data gathered from the respondents was elaborated and supported with related literature.

3.11 Ethical Considerations of the Study

Research ethics are about identifying certain norms and standards of behavior that researchers are expected to follow (Connolly, 2003). In carrying out this research, the researcher took cognizance of the ethical guidelines in order to protect the respondents and the researcher. The following ethical issues were addressed:

3.11.1 Informed Consent

According to Taylor, Peplau and Sears (2012), informed consent implies the agreement to participate in research after learning about the study, including possible risks and benefits. This implies that, the respondents must be aware of what the research entails and how they are going to benefit from the research. The respondents were given time to consider the risks and benefits of being involved in this research and decide whether to take part without being coerced. Because the respondents were not under pressure to submit their responses immediately, some did not return it leading to the researcher unable to retrieve all the questionnaires administered.

3.11.2 Confidentiality

Cohen et al. (2011) defined confidentiality as not disclosing information from the respondent in any way that might identify that individual or that might enable the individual to be traced. The researcher used coding abstracted data with unique identifiers rather than names and masking features of specific cases, institutions or settings that may make them recognizable even without names (WHO, 2013). The researcher considered the way the data was to be protected from unauthorized persons. Passwords were also used to protect the data on soft copies.

3.11.3 Anonymity

Anonymity means that we do not name the person or research site involved but in research it is usually extended to mean that we do not include information about any individual or research site that will enable that individual or research site to be identified by others (Walford, 2005). In the current study, numbers were used on questionnaires in place of respondents instead of names.

Finally, those who participated in the research were informed of the risks and the benefits of participating in the research and consent to participate, knowing that some can refuse to answer specific questions or withdraw at any time. This represents the principle of autonomy, in which all individuals are free to make choices and participate in research voluntarily as suggested by Patten and Newhart, (2018). In relation to the study, all the above ethical considerations were strictly adhered to by the researcher.



CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.0 Introduction

The main purpose of the study was to identify the mediating role of academic motivation on academic self-efficacy and procrastination in undergraduates' students of University of Education, Winneba. The chapter four of this research work focused on presentation, analysis and discussion of the responses from the respondents of the study. Mean and standard deviation were used to analyze research question 1, 2 and 3 respectively. Whiles research question 4 was also analyzed using regression statistical tool. The presentation of the results was done in two sections, namely; the respondents' demographic results and the presentation of results to address the research questions not left out. In the quest of findings answers to the research problem, the following questions were formulated in line with related literature to guide the study:

1. What is the level of academic self-efficacy in students of University of Education, Winneba?
2. What is the level of academic procrastination in students of University of Education, Winneba?
3. What is the level of academic motivation in students of University of Education, Winneba?
4. What is the influence of academic self-efficacy and procrastination on academic motivation in students of University of Education, Winneba?

4.1 Demographic Characteristics of Respondents

This section gives a summary of the demographic characteristics of the students who were involved in the study. The demographic compositions of the respondents examined include gender, level of study and department. The descriptive statistics are summarized in Table 4.1 to 4.3.

Table 4.1: Gender of Respondents

Gender	Frequency	Percentage (%)
Male	210	58.3
Female	150	41.7
Total	360	100

Source: Field Data 2023

The result of the demographic characteristics of respondents as shown in Table 4.1 indicated that out of the three hundred and sixty (360) respondents, 210 (58.3%) of them were males while 150 (41.7%) were females. It can be interpreted from this result that more males responded to the questionnaire than females. The pictorial representation below shows the respondents' gender with their respective percentage.

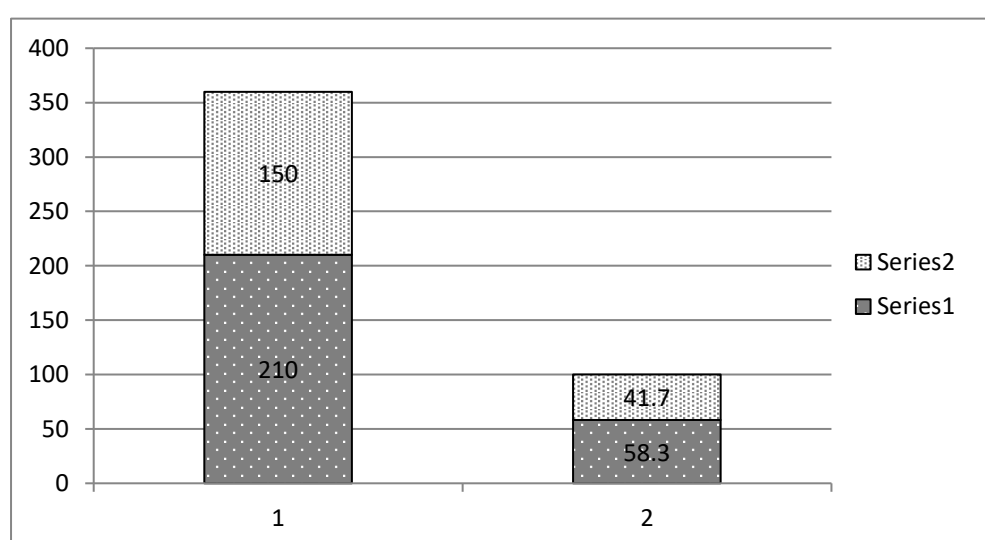


Figure 4.1: Gender of respondents

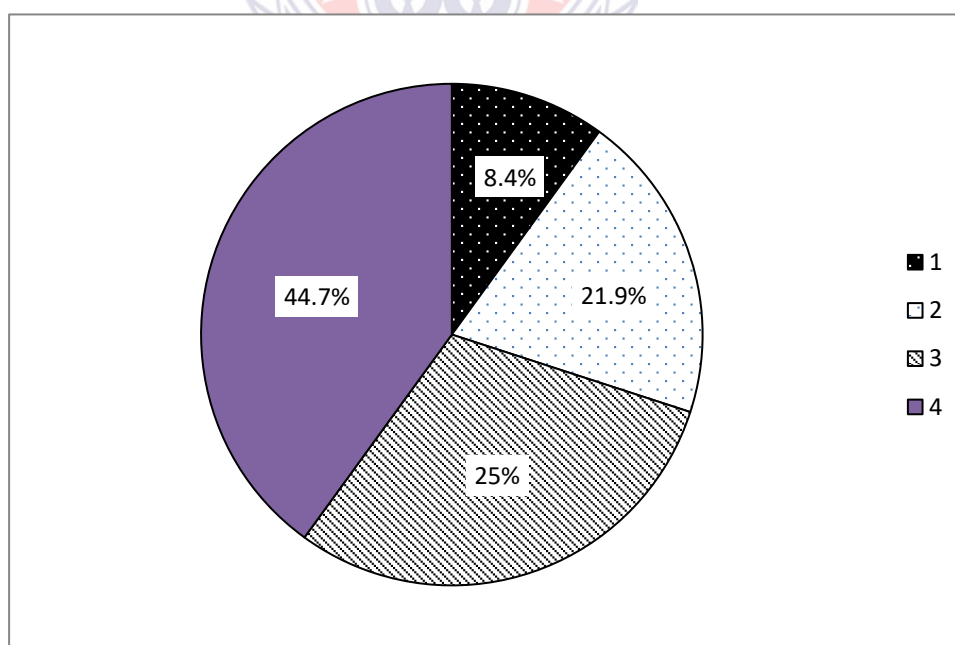
Source: Field Data (2023) N = 360

Table 4.2: Level of Study of Respondents

Level	Frequency	Percentage (%)
100	161	44.7
200	90	25.0
300	79	21.9
400	30	8.4
Total	360	100

Source: Field Data 2023

Again, majority of the students who took part in the study were in level 100. This suggests that out of the three hundred and sixty (360) respondents, 161 (44.7%) were in level 100, 90 (25.0%) were in level 200, 79 (21.9%) were in level 300 and 30 (8.4%) were in level 400. This means that majority of the respondents who took part in the study were in level 100. Below is a pictorial view of the level of students.

**Figure 4.2: Level of study of respondents**

Source: Field Data (2023)

4.2 Analysis of Research Questions

Four research questions were formulated to guide this study. In this regard, the analysis of the data was done in line with the research questions.

4.2.1 Research Question 1: What is the Level of Academic Self-Efficacy in Students of UEW?

The first research question aimed to establish the level of academic self-efficacy in student of the University of Education, Winneba. For the purpose of interpretation, a criterion threshold of 2.50 was established by finding the average mean of the numbers based on a range of responses on the likert scale ($1+2+3+4=10 \div 4=2.50$), the items of the questionnaires were rated on a four point likert scale where 1=Strongly Disagree (SD), 2=Disagree (D), 3=Agree (A) and 4=Strongly Agree (SA). Based on the threshold of 2.50, mean score of 2.50 and above was accepted as high level of academic self-efficacy, and mean scores below 2.50 was considered as low level of academic self-efficacy. The results of the analysis are presented in Table 4.4.

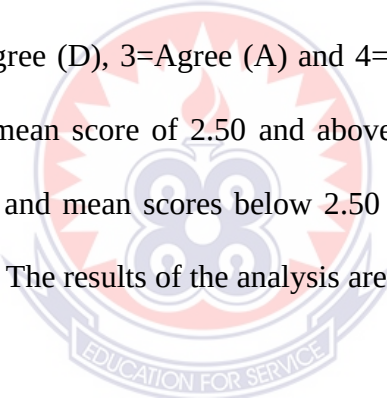


Table 4.3: The Level of Academic Self-Efficacy in Students of UEW results

S/N	STATEMENTS	SD		D		A		SA		M	SD	MM
		F	%	F	%	F	%	F	%			
1.	Irrespective of the subject, I am competent in learning.	92	25.6	160	44.4	27	7.5	18	5	2.2	1.06	
2.	I can reach out for help from lecturers during learning	30	8.3	28	7.8	78	21.7	194	53.9	3.2	1.29	
3.	I can usually find out quite a few solutions when I am confronted with problems in my study	23	6.4	40	11.1	86	23.9	151	41.9	1.8	1.26	
4.	During examinations, I can recollect what I have learnt	81	22.5	177	49.2	16	4.4	69	19.2	2.5	1.39	
5.	Often, I fail to comprehend the actual meaning of what I study.	161	44.7	50	13.9	58	16.1	7	1.9	2.2	1.21	
6.	I can develop the skills required to succeed in the university program.	74	20.6	161	44.7	32	8.9	47	13.1	2.5	1.27	
7.	I can barely answer the essay type questions well.	75	20.8	162	45.0	35	9.7	65	18.1	2.4	1.39	
8.	If I miss some classes for some reason, I can compensate the loss fairly well.	13	3.6	32	8.9	213	59.2	40	11.1	3.6	0.92	
9.	I can be calm at time of exam as I am conscious of my ability to learn	16	4.4	39	10.8	193	53.6	85	23.6	2.6	1.05	
10.	If a sudden test is conducted for us without prior notice, I can answer it well	8	2.2	37	10.3	139	38.6	141	39.2	2.0	1.05	

2.5

Source: Field Data (2023)

Pertaining to Academic Self-Efficacy the mean score of 2.2 indicates that on average, students in the study agree to some extent that they are competent in learning irrespective of the subject (M=2.2, SD=1.06), I can reach out for help from lecturers during learning (M=2.3, SD=1.29) indicates to a large extent they Disagree, I can usually find out quite a few solutions when I am confronted with problems in my study (M=1.8, SD=1.26) indicate students, to some extent Strongly Disagree in the study, During examinations, I can recollect what I have learnt (M=2.5, SD=1.39) this suggests that, to a large extent students Agree, Often, I fail to comprehend the actual

meaning of what I study ($M=2.4$, $SD=1.21$) this indicates that students Disagree to some extent, I can barely answer the essay type questions well ($M=2.6$, $SD=1.39$) this suggest that to a large extent students Strongly Agree, I can develop the skills required to succeed in the university program ($M=2.5$, $SD=1.27$) also indicates that to some extent Agree , If I miss some classes for some reason, I can compensate the loss fairly well ($M=3.6$, $SD=0.92$) this also suggests students to a very large extent Strongly Agree, I can be calm at time of exam as I am conscious of my ability to learn ($M=2.0$, $SD=1.05$) this also indicates that to some Strongly Disagree, If a sudden test is conducted for us without prior notice, I can answer it well ($M=2.4$, $SD=1.05$) this means that, to a large extent students Disagree. The mean of means for academic self-efficacy is $(2.2+3.2+1.8+2.5+2.2+2.5+2.4+3.6+2.6+2.0=25.2\div 10=2.50)$.

4.2.2 Research Question 2: What is the Level of Academic Procrastination in Students of UEW?

The second research question aimed at finding out the level of academic procrastination in student of the University of Education, Winneba. For the purpose of interpretation, a criterion threshold of 2.50 was established by finding the average mean of the numbers based on range of responses on the four point Likert scale $(1+2+3+4=10\div 4=2.50)$. the items on the questionnaires were rated on a Four- point likert scale where 1=Totally Disagree (TD), 2=Disagree (D), 4=Agree (A), 5=Totally Agree (TA).based on the threshold of 2.50, mean scores of 2.50 and above was accepted as high level of academic procrastination, and mean scores below 2.50 was considered as low level of academic procrastination.

Table 4.4: The Level of Academic Procrastination in Students of UEW

S/N	STATEMENTS	TD		D		A		TA		M	SD	MM
		F	%	F	%	F	%	F	%			
11.	I do my assignments daily and regularly, so I am punctual with my course work	90	25	102	28.3	53	14.7	37	10.3	1.6	1.29	
12.	I usually hurry to complete academic missions before the deadline	145	40.3	106	29.4	33	9.2	49	13.6	3.7	1.42	
13.	I always say to myself that I will complete my assignments tomorrow	54	15	39	10.8	122	33.9	128	35.6	3.6	1.44	
14.	I usually start doing study duties immediately after being assigned them	127	35.3	96	26.7	35	9.7	18	5	1.2	1.17	
15.	I finish my duties before the deadline.	146	40.6	143	39.7	31	8.6	12	3.3	2.9	1.06	
16.	I postpone my duties till the last moment.	95	26.4	154	42.8	40	11.1	16	4.4	3.2	1.10	
17.	I try to find excuses to justify my delay in doing study assignments	20	5.6	28	7.8	181	50.3	59	16.4	3.6	1.02	
18.	I always waste time than to start and meet challenges.	14	3.9	42	11.7	130	36.1	114	31.7	3.8	1.12	
19.	I always finish the important assignments and I have extra time.	118	32.8	110	30.6	68	18.9	57	15.8	1.5	1.46	
20.	I say to myself that I will do my duties, suddenly I change my mind.	33	9.2	23	6.4	178	49.4	124	34.4	3.9	1.19	

2.9

Source: Field Data (2023)

Pertaining to academic procrastination, mean scores of 2.60 on this item: I do my assignments daily and regularly, so I am punctual with my course work (M=1.6, SD=1.29), indicates that on average students in the study Agree to some extent, they have high level of academic procrastination. I usually hurry to complete academic missions before the deadline (M=3.7, SD=1.42), also indicates that to some extent students Agree. I always say to myself that I will complete my assignments tomorrow (M=3.6, SD=1.44), this suggests that; to a very large extent students totally Agree. I usually start doing study duties immediately after being assigned them (M=1.2, SD=1.17), this indicates students Disagree to some extent. I finish my duties before

the deadline (M=2.9, SD=1.06), indicates students Totally Disagree to a large extent. I postpone my duties till the last moment (M=3.2, SD=1.10), this suggests that students Agree to some extent. I try to find excuses to justify my delay in doing study assignments (M=2.9, SD=1.02), this also suggests that; to a very large extent students totally Agree. I always waste time than to start and meet challenges (M=3.2, SD=1.12), again indicates to a very large extent students totally Agree. I always finish the important assignments and I have extra time (M=3.6, SD=1.46), this also this suggests that students Agree to some extent. I say to myself that I will do my duties, suddenly I change my mind (M=3.8, SD=1.19), this also suggests students Totally Agree to very large extent. Postponing academic duties is actually a real problem which I suffer from (M=1.5, SD=1.20), this indicates students Totally Agree to a large extent. I stop studying early in order to do more pleasurable things (M=3.9, SD=0.99), this indicates students Totally Agree to a large extent. The mean of means for academic procrastination is $(1.6+3.7+3.6+1.2+2.9+3.2+3.6+3.8+1.5+3.9) \div 10 = 2.9$

In conclusion, the high standard deviation and mean of means also suggests that, responses are clustered around this means on the level of academic procrastination in students of UEW. This suggests that student stop studying in order to do more pleasurable things, seemed to be the predominant factor accounting high level of academic procrastination in students.

4.2.3 Research Question 3: What is the Level of Academic Motivation in Students of UEW?

The third research question aimed at establishing the level of academic motivation in student of the University of Education, Winneba. For the purpose of interpretation, a criterion threshold of 2.50 was established by finding the average mean of the

numbers based on a range responses on likert scale ($1+2+3+4=10\div4$). The items of the questionnaires were rated on a four- point likert scale, 1=Strongly Disagree, 2=Disagree, 3=Agree and 4=Strongly Agree. Based on the threshold of 2.50, mean score of 2.50 and above was accepted as high academic motivation, and mean score below 2.50 was considered as low academic motivation.

Table 4.5: The Level of Academic Motivation in Students of UEW

S/N	STATEMENTS	SD		D		A		SA		M	SD	MM
		F	%	F	%	F	%	F	%			
21	With only a high-school certificate I cannot find a high-paying job later on.	38	7.8	29	5.3	221	61.4	63	14.7	3.7	1.04	
22	Honestly, I don't know; I really feel that I am wasting my time in school.	92	25.6	173	48.1					2.1	8	
23	In order to obtain a more prestigious job later on.	37	10.3	31	8.6	185	51.4	66	18.3	3.6	1.18	
24	I once had good reasons for going to university; however, now I wonder whether I should continue.	147	40.8	70	19.4	65	18.1	33	9.2	2.3	1.40	
25	I can't see why I go to university and frankly, I couldn't care less.	151	41.9	86	23.9	42	11.7	36	10.0	2.2	1.36	
26	I think that university education will help me better prepare for the career I have chosen.	23	6.4	23	6.4	160	44.4	133	36.9	3.4	1.12	
27	I feel satisfied when I am in the process of accomplishing difficult academic activities.	39	10.8	24	6.7	117	32.5	169	46.9	3.9	1.32	
28	I believe that a few additional years of university education will improve my competence as a student	14	3.9	31	8.6	177	49.2	113	31.4	3.9	1.03	
29	I really like going to school because I can succeed in my studies.	16	4.4	38	10.6	126	35.0	152	42.2	2.1	1.15	
30	University environment allows me to experience a personal satisfaction in my quest for excellence in my studies.	12	3.3	21	5.8	225	62.5	85	23.6	4.0	0.90	
												3.12

Source: Field Data (2023)

Pertaining academic motivation the mean score of 3.7 indicates that on average students in the study agree to some extent that they have high level of academic motivation on this item, With only a high-school certificate I cannot find a high-

paying job later on ($M=3.7$, $SD=1.04$), Honestly, I don't know; I really feel that I am wasting my time in school ($M=2.1$, $SD=1.08$). This also students Disagree to some extent that they have low academic motivation, I want to prove to myself that I am capable of completing my university degree ($M=3.6$, $SD=1.11$) point to high level of academic motivation, meaning students Agree to some extent, In order to obtain a more prestigious job later on ($M=2.3$, $SD=1.18$) indicates to some extent in the study students agree to be having high level of academic motivation. I think that university education will help me better prepare for the career I have chosen ($M=3.2$, $SD=1.12$).

I feel satisfied when I am in the process of accomplishing difficult academic activities ($M=3.9$, $SD=1.32$) point to the fact that students agree to large extent. Because of the fact that when I succeed in the university I feel important ($M=3.4$, $SD=1.05$) shows that students agree to some extent. I believe that a few additional years of university education will improve my competence as a student ($M=3.9$, $SD=1.03$) also suggests that students agree to some extent. I really like going to school because I can succeed in my studies ($M=2.1$, $SD=1.15$) this indicates that, students Agree to a very large extent to have high level of academic motivation. University environment allows me to experience a personal satisfaction in my quest for excellence in my studies ($M=4.0$, $SD=0.90$) suggests that students Agree to a very large extent to have high level of academic motivation. The mean of means for academic motivation is $(3.7+2.1+3.6+2.3+2.2+3.9+3.4+2.1+3.9+4.0=31.2\div 10=3.12)$. In conclusion, the standard deviation and mean of means suggests that responses are also clustered around this means in terms of academic motivation.

4.2.4 Research Question 4: What is the Influence of Academic Self-Efficacy and Academic Procrastination on Academic Motivation in Students of UEW?

The fourth research question aimed at examining the influence of academic self-efficacy and academic procrastination on academic motivation in student of the University of Education, Winneba. To analyze this research question, the researcher used regression to examine if there is a significant difference between the variables. The results of the analysis are presented in Table 4.6.

Table 4.6: Influence of Academic Self-Efficacy and Academic Procrastination on academic motivation

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.864	.178		10.484	.000
Academic Self-Efficacy	.449	.058	.453	7.778	.000
Academic Procrastination	.010	.061	.009	.161	.872

a. Dependent Variable: Academic Motivation

Source: Field Data (2023)

The result in Table 4.6 shows that academic self-efficacy ($M=3.4$, $SD=0.38$) influences academic motivation ($M=3.3$, $SD=0.38$). The result shows that, academic self-efficacy has statistically significant influence on academic motivation; t (7.778), B (0.449), $Std\ Err$ (0.058), $p = 0.000$). The sig. values is less than 0.05, therefore, it is concluded that academic self-efficacy has statistically significant influence on academic motivation.

Again, the result shows that academic procrastination ($M=3.4$, $SD=0.38$) does not influence academic motivation ($M=3.3$, $SD=0.36$). Academic procrastination does not statistically significant influence academic motivation; t (0.161), $B(0.010)$, $Std\ Err(0.061)$, $p = 0.872$). The sig. values is greater than 0.05, therefore, it could be concluded once a student procrastinate in his or her academic work it does not matter whether he or she is motivated because academic procrastination no significant influence on academic motivation.

4.3 Discussion of Findings

4.3.1 Level of Academic Self-Efficacy in Students of University of Education Winneba

The findings from research question one affirmed Dabi (2017); Al-Jihuriah and Al-Zufairi (2019); Karwowski and Koufman (2017) who attested that academic self-efficacy is influenced by various variables such as ability to compensate loss lesson, ability to tackle difficult courses and situations, ability to recollect what is been learnt in an examination among others.

In addition, Omar (2011); Bowels and Pearman (2017) reveled in their study that, self-efficacy also influences how a given activity is performed, the amount of perseverance gained once the results are known, and the amount of effort which is put in the future. However results in Table 4.3 revealed students' self-efficacy is low as results of their inability to perform a given activity and the amount of effort put into it varies. Such activity include low confidence during competitive examination, inability to accomplish challenging task and problems, inability to answer and score well in short answer type-test and essay-type test. It was also revealed in the present study that, students with low self-efficacy are not always motivated intrinsically and sometimes turns to procrastinate. Even though, the researcher sampled 360 students

for the study, and maximum response from students, some of the items on the questionnaire were not answered. This brought some disparities in the totals regarding the number of items on each instrument. This applies to question one to three of the results represented on each table.

4.3.2 Level of Academic Procrastination in Students of University of Education Winneba

The findings from research question two in the study revealed that students engage in a lot of entertaining activities which makes them not to have enough time to concentrate on academic activities. This align with Steel (2007) postulated that, those who procrastinate are easily distracted by more interesting or fun activities. Thus, individuals who procrastinate take part in self-handicapping. Similarly, Klassen, Krawchuk and Rajani (2008) opined that those who procrastinate consistently turn to other activities and behaviours rather than concentrating on an intended course of action. This align with the study which revealed that postponing academic work till last minute and delay in attending to academic duties without justification, stop studying early in order to do more pleasurable things were the prevalent factors among students that accounts for the high level of academic procrastination. It could be concluded that, if student intentionally delay academic task and do more pleasurable things waiting for examinations to approach. It is therefore suggested that assessment should be used as learning. This is where students would be assessed right after learning to alleviate the tendency of putting off academic task until the last minutes.

In conclusion, therefore the low standard deviation and mean of means suggests that, responses are clustered around this mean regarding academic self-efficacy. Because

of students unpreparedness for academic task, was one of the major factors that accounted for low academic self-efficacy due to the fact that students seemed not conscious of their ability and that could result to examination anxiety, threat for not getting the required results, and guilt for coming this university, because these students felt they could do better if they were to be in a different university. This Kelly (1967) viewed as affective a dimensional line along which personal construct may be plotted rather than emotions.

4.3.3 Level of Academic Motivation in Students of University of Education

Winneba

The findings of research question three show that the construct academic motivation has intrinsic and extrinsic aspects which do not stand in conflict with each other. Even if students are intrinsically motivated, an additional selective incentive does not destroy the intrinsic motivation. On the contrary, these intrinsic and extrinsic aspects of academic motivation, comes as the reason to decide for and continue with a university study complement each other. On one side there is no crowding effect at this level. On the other side there are still some influencing factors (field of study and vocational orientation) which have a lasting effect on extrinsic and intrinsic motivation. The findings of the study reveal that, there is high level of academic motivation among students of University of Education, Winneba. According to Wilkesmann and Virgillito (2015), students' motivation is aroused intrinsically or extrinsically. This is also a mechanism that affects extrinsic and intrinsic academic motivation differently. For instance a student who expects to be trained for a lucrative job or who earns well is extrinsically motivated and this may not be in isolation with the intrinsic motivation that comes with it.

Students who go to university for the love of a particular discipline or who do not expect great financial rewards from their studies are not intrinsically motivated. This may not be very surprising but the researcher thinks behind these obvious findings some wisdom can be found. Expectations are related to knowledge about university in general. This leads to the fact that, the more students know about studying - not the contents of certain disciplines but the more general information on what, why, where, and how-the more they are motivated in general.

4.3.4 Influence of Academic Self-Efficacy and Academic Procrastination on Academic Motivation in Students of University of Education Winneba

The findings from last research question of this study correspond to that of Chemers et al. (2001) who purported that a positive relationship exists between academic motivation and academic procrastination they did not suggest possible reasons for this correlation. The results of the study contradict the findings of Tang and Westwood (2007), who conducted a study to correlate levels of self- efficacy and academic motivation. The researchers found that a large number of students reported experiencing moderate levels of worry; self-efficacy ratings were fairly high; lower-achieving students reported lower self-efficacy in areas such as concentration, meeting the expectations of their teachers, and reliability, but this was not statistically significant when compared to higher achieving students; and there was no significant difference found among self-efficacy and academic motivation.

Again, the result of the study aligned with Kahn (2013) who conducted a study on the influence of academic motivation on academic procrastination. He found out that, there was no statistically significant difference between academic motivation and academic procrastination.

CHAPTER FIVE

SUMMARY, CONCLUSION, RECOMMENDATION, COUNSELING IMPLICATIONS, CONTRIBUTION TO EXISTING KNOWLEDGE AND SUGGESTION FOR FURTHER RESEARCH

5.0 Introduction

In this chapter presented; the summary, conclusions, counselling implications, recommendations, contribution to knowledge and suggestions for further research. The study sought to identify the mediating role of academic motivation on academic self-efficacy and procrastination in undergraduates' students of University of Education, Winneba (UEW). The following research questions guided the study:

1. What is the level of academic self-efficacy in students of UEW?
2. What is the level of academic procrastination in students of UEW?
3. What is the level of academic motivation in students of UEW?
4. What is the influence of academic self-efficacy and academic procrastination on academic motivation in students of UEW?

5.1 Summary of key Findings

The following key findings emerged from the study:

1. The first research question aimed to establish the level of academic self-efficacy in student of the University of Education, Winneba. The study revealed that generally, most undergraduate students of University of Education, Winneba have low level of academic self-efficacy.
2. The second research question aimed to establish the level of academic procrastination in student of the University of Education, Winneba. The study revealed that undergraduate students of the University of Education, Winneba have very high level academic procrastination

3. The third research question aimed to establish the level of academic motivation in student of the University of Education, Winneba. The study revealed that undergraduate students of the University of Education, Winneba are highly motivated in terms of academic work.
4. The fourth research question aimed to establish influence of academic self-efficacy and academic procrastination on academic motivation in student of University of Education, Winneba. The study revealed that undergraduate students of University of Education, Winneba. Has their academic self-efficacy to a large extent is influencing academic motivation, meanwhile academic procrastination was not found to be influencing academic motivation.

5.2 Conclusions

It could be inferred from the findings that, there is low level of academic self-efficacy among undergraduate students. It is therefore concluded base on the findings that, greater chunk of undergraduates student really struggles with the issue of academic self-efficacy which eventually affects their academic motivation to some extent.

Additionally, most undergraduate students have high level of academic procrastination which does not really affect them in terms of academic motivation. It could also be deduced from the findings of the study that students who have high level of academic motivation are also the ones having high academic procrastination to some extent. Invariably where academic motivation is high, academic self-efficacy is low. It also means that academic self-efficacy has a direct influence on academic motivation. And therefore academic self-efficacy is statistically significant to academic motivation.

5.3 Counseling Implications

In an attempt to minimize the tendency of academic procrastination among students and optimizing their roles in academic environment, the following counseling implications have been put forward based on the findings of the study.

First, it is imperative for academic counselors to help students by providing training, psycho-education, and counseling on a more regular basis. Academic counselors need to choose Guidance and Counseling techniques, strategies and skills capable of leveraging on cognitive, affective, aspects students' academic endeavors in a single service so as to enhance students' academic self-efficacy.

In addition, In terms of individual concern and planning, academic counselors need to ensure the availability of instructional media for services that are in accordance with the characteristics of students. The results of this research may be used by academic counselors as initial information material to assist students in making a strategic decision related to academic work and also boost academic self-efficacy and minimize the tendency of academic procrastination in students.

Again based on the findings of the study, academic counselors should be actively involved to play a significant role during orientation in assisting students to properly recognize their potentials and areas of improvement. Therefore, in the future, students are able to make realistic decisions. The information in the study was carefully elaborated with the supporting data on students' level of academic self-efficacy, procrastination and academic motivation to obtain a comprehensive understanding on academic performance.

Finally, the component of responsive service cannot be over looked; the results of the study would be used to provide initial information on students that require further

assistance in terms of academic self-efficacy and academic procrastination. Academic counselors are encourage to design responsive services in the form of individual or group counseling services by applying suitable approaches for the counselee's characteristics and needs. This aligned with the argument by (Aydogan et al, 2018) who stated that school counselor stand to assist students by providing training on how to keep up with academic assignments, psycho-education, or counseling.

5.4 Recommendation

1. First and foremost, the finding revealed that there was low level of academic self-efficacy in undergraduate students of University of Education Winneba. It is therefore recommended based on the findings that, the University policy makers should work closely with the department of counselling psychology to structure relevant intervention in the form of questionnaires to elicit some responses from students who have gained admission. This will help to select, classify and do proper placement of students in terms of ability and areas of improvement.
2. Again, the second findings revealed high level of academic procrastination. It is therefore recommended based on the findings that; the university in collaboration with the department of counseling psychology should develop standardized instrument in the form of self-report test aimed at measuring a particular trait. This instrument should be tried and tested intervention within the university to internally assess students who gained admission into University of Education Winneba. This would inform the university policy makers on students' level of academic procrastination before entry. There should be proper orientation for students on the effects of academic procrastination. It is imperative to know that, it would also be helpful to

students who consciously and relentlessly want to minimize academic procrastination to alleviate the negative effects on them. When this happens students may not always attributes their failure and weak grades to any lecturer at the end of assessment.

3. The third findings reported high level of academic motivation in undergraduate students of University of Education Winneba. It is therefore recommended based on the findings that; the University authority should classify students in terms of mixed ability, to practically understand and have fair ideas on students motivation being it intrinsic, extrinsic and amotivation. The University should provide psycho education, proper orientation targeted at low self-efficacious and amotivated students during orientation even before they register their courses.
4. The fourth findings of the study revealed that; academic self-efficacy has statistically significant influence on academic motivation; instead; there is no statistically significant influence of academic procrastination on academic motivation. It is therefore recommended based on the findings that; the University should resource lecturers very well in terms of logistics, good internet access, to load at least ten questions after every lecture for students to answer before the following day. Adding to that, the formative assessment should not be optional but rather compulsory after every lecture, when this is achieved students cannot skip any course or lecture. By that the University authority should reduce the work load on over burden lecturers if there is. All lecturers should be given limited number of credit hours if possible to make it easy for lecturers; this will pave way for the achievement of this task on the daily basis.

5.5 Contribution to Body of Knowledge

The study has significant contribution to the body existing knowledge with related literature on academic self-efficacy, procrastination and academic motivation. Most undergraduate students irrespective of their gender, age or level have high level of academic procrastination and low level of academic self-efficacy which established the fact that; students with high level of academic procrastination are also more likely to engage themselves with the various forms of examination malpractices; because these students also need to succeed in their various areas of study.

Again, most students who procrastinate their academic work excessively without justification are more likely to undergo personal bullying; that is they risk their health at the expense of examination by intentionally denying themselves from the basic necessities of life that are required for normal body functioning. Such as; sleep, food among others. That is the more reason why some collapse before and during examinations. Nonetheless, most students who procrastinate their academic work due to low academic self-efficacy, begins to learn so many concepts when examination is approaching within a short period of time. Eventually, they put undue pressure on themselves trying to be apart with colleagues who started learning from the beginning. These students may pass their examinations alright, but in terms of applying the concepts to their daily life becomes a challenge, because they did not really understood and grasped what was taught. That is the more reason why most of these students are more likely to be prone a lot of psychological disorders such as; stress, anxiety and so on. Finally, it also came to light in the study that; academic procrastination is a multidimensional construct with so many variables that can contribute to students' reasons for delaying an academic task. In that same vein, some students do not really see academic procrastination as a big deal to worry about.

Instead, they consider it a normal lifestyle, a coping strategy as well as a defense mechanism.

5.6 Suggestions for Further Research

The following suggestion were made based on the limitation of the study, the researcher suggests that: future research should extend the population to cover post graduate students. Also future research should do a comparative study by extending their work to other universities. Finally, in terms of methodology, future research should adopt mixed methods approach.



REFERENCES

- Abd, A. S., Elhafyan, E., Siddiqui, A. R., Alnoush, W., Blunt, M. J., & Alyafei, N. (2019). A review of the phenomenon of counter-current spontaneous imbibition: Analysis and data interpretation. *Journal of Petroleum Science and Engineering*, 180, 456-470
- Abdul Azis, M. A., & Abdul Rasit, Z. Wee, S. H (2006). Motivated Strategies for Learning Questionnaire (MSLQ): an empirical analysis of the value and expectancy theory/Wee Shu Hui, Maz Ainy Abdul Azis and Zarinah Abdul Rasit. *Social and Management Research Journal (SMRJ)*, 3(1), 47-65.
- Abdullah, N., & Gibb, F. (2008). Students' attitudes towards ebooks in a Scottish higher education institute: part 1. *Library review*, 57(8), 593-605.
- Abramowski, A. (2018). Is procrastination all that “bad”? A qualitative study of academic procrastination and self-worth in postgraduate university students. *Journal of Prevention & Intervention in the Community*, 46(2), 158–170.
- Abu Ghazal, M. (2012), Academic procrastination: its prevalence and causes from the perspective of university students. *Jordanian Journal of Educational Sciences*, Amman, 8(2) 131-150.
- Ainslie, G. (1992). *Picoeconomics: The strategic interaction of successive motivational states within the person*. Cambridge, England: Cambridge University Press.
- Akinsola, M. K., Tella, A., & Tella, A. (2007). Correlates of academic procrastination and mathematics achievement of university undergraduate students. *Eurasia Journal of Mathematics, science and technology education*, 3(4), 363-370.
- Al-Johuria, F. & Al-Zafari, S. (2019). The relationship between academic self-efficacy and psychological coordination among 7-12th grade students in the Sultanate of Oman. *Journal of Educational and Psychological Studies*, 12(1), 163-178. <https://doi.org/10.24200/jeps.vol12iss1pp163-178>
- Amankwah, G., Ofori-Abebrese, G., & Kamasa, K. (2018). An empirical analysis of the sustainability of public debt in Ghana. *Theoretical Economics Letters*, 8(11), 2038-2054.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261-271.
- Amoah, C. A. & Eshun, E. (2018). Assessing the reasoning skills of biology students in selected senior high schools in the central region of Ghana. *International Journal of Scientific Research and Management*, 6(04), 299-304.
- Amrai, K., Motlagh, S. E., Zalani, H. A. & Parhon, H. (2011). The relationship between academic motivation and academic achievement students. *Procedia Social and Behavioral Sciences*, 15, 399-402.

- Andrew, S. (1998). Self-efficacy as a predictor of academic performance in science. *Journal of Advanced Nursing*, 27(3), 596-603.
- Arvey, R. D., Rotundo, M., Johnson, W., & McGue, M. (2003). *The determinants of leadership: The role of genetics and personality*. Paper presented at the 18th annual conference of the Society for Industrial and Organizational Psychology, Orlando, FL.
- Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. (2006). *Introduction to research in education* (7th Ed.). Canada: Thomson Wadsworth Publishers.
- Astin, H. S., & Sax, L. J. (1996). Developing scientific talent in undergraduate women. In C. Davis, A. B. Ginorio, C. S. Hollenshead, B. B. Lazarus, P. M. Rayman, & Associates (Eds.), *The equity education: Fostering the advancement of women in the sciences, mathematics, and engineering* (pp. 96-121). San Francisco: Jossey-Bass Publishers.
- Asude, M., & Aynur, K. M. (2018). Academic self-efficacy and academic procrastination: Exploring the mediating role of academic motivation. *Universal Journal of Educational Research*, 6(10), 2087-2093, 2018.
- Aydogan H. & A. Akbarov, "A Case Study on Academic Procrastination in EFL Settings in Turkey.," *Acta Didact. Napocensia*, vol. 11, pp. 79–88, 2018.
- Ayiku, T. Q. (2005). The relationships among college self-efficacy, academic self-efficacy, and athletic self-efficacy for African American male football players.
- Babbie, E. (2010). Research design. *The practice of social research*, 12, 90-123.
- Babbie, E. (2011). The Use of Formative Research in Entertainment-Education. *Using the Media to Achieve Reproductive Health and Gender Equity*, 39.
- Baird, G.L., & Scott, W.D. (2007). Cognitive self-regulation in youth with and without learning disability: Academic self-efficacy, theories of intelligence, learning vs performance goal preferences, and effort attributions. *Journal of Social and Clinical Psychology*, 28 (7), 881-908.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational psychologist*, 28(2), 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman and Company.
- Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds). *Self-efficacy beliefs of adolescents*. Greenwich, CT: Information Age Publishing.

- Barker, C., Pistrang, N., & Elliott, R. (2015). *Research methods in clinical psychology: An introduction for students and practitioners*. John Wiley & Sons.
- Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1994). *Losing control: How and why people fail at self-regulation*. San Diego, CA: Academic Press.
- Beck, B. L., Koons, S. R., & Milgram, D. L. (2000) Correlates and consequences of behavioral procrastination: the effects of academic procrastination, self-consciousness, self-esteem, and self-handicapping. *Journal of Social Behavior and Personality*, 15, 3-13.
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The clearing house*, 83(2), 39-43.
- Bernard, V., Lombard-Bohas, C., Taquet, M. C., Caroli-Bosc, F. X., Ruzsniowski, P., Niccoli, P., ... & French Group of Endocrine Tumors. (2013). Efficacy of everolimus in patients with metastatic insulinoma and refractory hypoglycemia. *European Journal of Endocrinology*, 168(5), 665-674.
- Beswick, G., & Mann, L. (Eds.). (1994). *State orientation and procrastination*. Gottiingen, Germany: Hogrefe & Huber.
- Bijou, S., Morris, E., & Parsons, J. (1976). A PSI course in child development with a procedure for reducing student procrastination. *Journal of Personalized Instruction*, 1, 36-40.
- Blunt, A. K., & Pychyl, T. A. (1998). Volitional action and inaction in the lives of undergraduate students: State orientation, procrastination, and proneness to boredom. *Personality & Individual Differences*, 24, 837-846.
- Blunt, A. K., & Pychyl, T. A. (2000). Task aversiveness and procrastination: A multidimensional approach to task aversiveness across stages of personal projects. *Personality & Individual Differences*, 28, 153-167.
- Bowels, A. F. & Pearman, J. K. (2017). *Self-efficacy in Action: Tales from The Classroom for Teaching, Learning and Professional Development*. NY: Rowman & Littlefield. Available on: https://books.google.com.qa/books?id=cdGIDgAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- Bridges, K. R., & Roig, M. (1997). Academic procrastination and irrational thinking: A re-examination with context controlled. *Personality and Individual Differences*, 22, 941-944.
- Brownlow, S., & Reasinger, R. D. (2000). Putting off until tomorrow what is better done today: academic procrastination as a function of motivation toward college work. *Journal of Social Behavior & Personality*, 15(5).
- Bryan, L. A. (2012). Research on science teacher beliefs. *Second international handbook of science education*, 477-495.

- Bryman, A. (2004). Encyclopedia of social science research methods. *Encycl. Soc. Sci. Res. Methods*, 1143, 1144.
- Burns, L., Dittman, K., Nguye, N., Mitchelson, J. (2000) Academic procrastination, perfectionism, and control: Associations with vigilant and avoidant copying. *J Soc Behav Pers*, 15, 35-46.
- Carden, R., Bryant, C., & Moss, R. (2004). Locus of control, test anxiety, academic procrastination, and achievement among college students. *Psychological reports*, 95(2), 581-582.
- Carroll, A., Houghton, S., & Wood, R. (2009). Self-efficacy and academic achievement in Australian high school students: The mediating effects of academic aspirations and delinquency. *Journal of Adolescence*, 32, 797-817.
- Caruth, D., & Caruth, G. (2003). A company's number one killer: Procrastination. *Innovative Leader* 577, 12(5).
- Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology*, 93(1), 55-64.
- Chemers, M. M., Hu, L., & Garcia, B. F. (2011). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology*, 93(1), 55-64.
- Cherry, K. (2017). What is reciprocal determinism? Retrieved from <https://www.verywell.com/what-is-reciprocal-determinism-2795907>
- Childers, G., & Jones, M. G. (2017). Learning from a distance: high school students' perceptions of virtual presence, motivation, and science identity during a remote microscopy investigation. *International Journal of Science Education*, 39(3), 257-273. <https://doi.org/10.1080/09500693.2016.1278483>
- Choi, J. N., & Moran, S. V. (2009). Why not procrastinate? Development and validation of a new active procrastination scale. *The Journal of social psychology*, 149(2), 195-212
- Chun Chu, A. H., & Choi, J. N. (2005). Rethinking procrastination: Positive effects of "active" procrastination behavior on attitudes and performance. *The Journal of social psychology*, 145(3), 245-264.
- Clark, J., & Hill, O. (1994). Academic procrastination among African American college students. *Psychological Reports*, 75, 931-36.
- Cohen, L., Manion, L. & Morrison, K. (2011). Research methods in education. London: Routledge.
- Cohen, L., Manion, L., & Morrison, K. (2013). The ethics of educational and social research. In *Research methods in education* (pp. 99-128). Routledge

- Cokley, K. (2003). What do we know about the motivation of African American students? *Harvard Educational Review*, 73(4), 524-558.
- Communication Sciences and Disorders Education Trend Data Undergraduate Programs 2010-2011 to 2014-2015. (n.d.). Retrieved from <http://www.asha.org/uploadedFiles/Trend-Report-AYs-2010-2011-through-2014-2015.pdf>
- Connolly, M. M. (2003). *A critical examination of actuarial offender-based prediction assessments: Guidance for the next generation of assessments*. The University of Texas at Austin.
- Connolly, C. (2006). Introduction to research in education. U.S.A: Wadsworth, Cengage Learning.
- Conti, R. (2000). College goals: Do self-determined and carefully considered goals predict intrinsic motivation, academic performance, and adjustment during the first semester?. *Social psychology of education*, 4(2), 189-211.
- Costa, P.T., Jr., & McCrae, R. (1992). *The NEO personality inventory-revised*. Odessa, FL: Psychological Assessment Resources.
- Covington, M. V. (1993). A motivational analysis of academic life in college. In J. Smart (ed.), *Higher Education: Handbook of Theory and Research*, Vol. 9, pp. 50-93. New York: Agathon Press.
- Cresswell, J. (2013). *Qualitative inquiry & research design: Choosing among five approaches*. London: Sage.
- Creswell, J. D., Pacilio, L. E., Lindsay, E. K., & Brown, K. W. (2014). Brief mindfulness meditation training alters psychological and neuroendocrine responses to social evaluative stress. *Psychoneuroendocrinology*, 44, 1-12.
- Creswell, J. W. & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles: Sage.
- Creswell, J. W. (2009). *Research design: Qualitative and mixed methods approach*. London: Routledge.
- Creswell, J. W. (2010). Mapping the developing landscape of mixed methods research. In A. Tashakkori & C. Teddie (Eds.), *Handbook of mixed methods in social & behavioral research* (2nd ed.) (pp. 45-68). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed method research*. Thousand Oaks, CA: Sage.
- Creswell, J.W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). London: Sage.

- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological bulletin*, 52(4), 281.
- Crossan, F. (2016). Research philosophy: Towards an understanding. *Nurse Researcher*, 11(1), 46-55.
- D'Abate, C. P., & Eddy, E. R. (2007). Engaging in personal business on the job: Extending the presenteeism construct. *Human Resource Development Quarterly*, 18(3), 361-383.
- DABI, O. A. (2017). *Concepts of regression analysis and statistical methods*. American Academic Press.
- DeBacker, T. K., & Nelson, R. M. (1999). Variations on an expectancy-value model of motivation in science. *Contemporary Educational Psychology*, 24, 71-94.
- DeBacker, T. K., & Nelson, R. M. (2000). Motivation to learn science: Differences related to gender, class type, and ability. *Journal of Educational Research*, 93(4), 245-255.
- Deci, E. & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York, NY: Plenum Press.
- Deci, E. L. (1975). *Intrinsic motivation*. New York: Plenum Press.
- Deci, E. L., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum. Deci, E. L., & Ryan, R. M. (2000). The what and the why of goal pursuits: Human needs and the selfdetermination of behaviour. *Psychological Inquiry*.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska Symposium on motivation: Vol. 38. Perspectives on motivation* (pp. 237-288) Lincoln, NE: University of Nebraska Press.
- Deci, E., & Ryan, R. (2002). *Improving academic achievement: Impact of psychological factors on education*. San Diego, CA: Elsevier.
- Devi, B., Pradhan, M. S., Gurung, M. S., Giri, M. D., Lepcha, M. N., Basnett, M. S., & Chettri, M. N. Application of item analysis to evaluate the characteristics of items of the test: qualitative and quantitative techniques.
- Dieronitou, I. (2014). The ontological and epistemological foundations of qualitative and quantitative approaches to research. *International Journal of Economics*, 2(10), 1-17.
- Donkor, A., Osei-Fosu, P., Dubey, B., Kingsford-Adaboh, R., Ziwu, C., & Asante, I. (2016). Pesticide residues in fruits and vegetables in Ghana: a review. *Environmental Science and Pollution Research*, 23, 18966-18987.

- Donkor, E. S., Jamrozy, D., Mills, R. O., Dankwah, T., Amoo, P. K., Egyir, B., ... & Bentley, S. D. (2018). A genomic infection control study for *Staphylococcus aureus* in two Ghanaian hospitals. *Infection and Drug Resistance*, 135-145.
- Durso S., Da Cunha, J., Neves, P., & Texeira, J. (2016). Motivational factors for the master's degree: A comparison between students in accounting and economics in the light of the self-determination theory. *USP, Sao Paulo*, 27(71), 243-258.
- Dweck, C. (2010). Mind-sets and equitable education. *Principal Leadership*. Retrieved from file:///C:/Users/hferguson/Downloads/Mind-sets-and-Equitable- Education.pdf
- Dweck, C. S. (2016). *Mindset: The new psychology of success*. (2nd ed.). New York, Ballantine Books.
- Dzakadzie, Y. (2017). Evaluation of available resources for early childhood education programme in Adaklu District, Volta-Region, Ghana. *European Journal of Education and Pedagogy*, 3(1), 84–88.
- Ein-Gar D., Steinhart Y. (2017). Self-control and task timing shift self-efficacy and influence willingness to engage in effortful tasks. *Front. Psychol.* 8:1788. 10.3389/fpsyg.2017.01788
- Elias, R.Z. (2008). Anti-intellectual attitudes and academic self-efficacy among business students. *Journal of Education for Business*, 84 (2), 110-117.
- Elliot, R. (2002). *A ten-year study of procrastination stability*. Unpublished master's thesis, University of Louisiana, Monroe.
- Ellis, A. & Knaus, W. J. (2002). *Overcoming procrastination* (rev. ed.). New York, NY: New American Library.
- Ellis, A., & Knaus, W. J. (1977). *Overcoming procrastination*. New York, NY: Institute for Rational Living.
- Else-Quest, N. M., Hyde, J. S., Goldsmith, H. H., & Van Hulle, C. A. (2006). Gender differences in temperament: A meta-analysis. *Psychological Bulletin*, 132, 33-72.
- Esser, F., & Vliegenthart, R. (2017). Comparative research methods. *The International Encyclopedia of Communication Research Methods*, 1-22.
- Fairchild, A. J., Horst, S. J., Finney, S. J., & Barron, K. E. (2005). Evaluating existing and new validity evidence for the Academic Motivation Scale. *Contemporary Educational Psychology*, 30(3), 331-358.
- Fakhrou, A., & Habib, L. H. (2022). The relationship between academic self-efficacy and academic achievement in students of the department of special education. *International Journal of Higher Education*, 11(2), 1-12.

- Fazlı, K. A. M. A., & DOĞAN, S. (2023). Classroom Teachers' Effective Communication Skills in the Classroom: A Mixed Methods Study. *SSRJ/ Social Sciences Research Journal*, 12(02), 210-223.
- Feingold, A. (1994). Gender differences in variability in intellectual abilities: A cross-cultural perspective. *Sex roles*, 30, 81-92.
- Ferrari, J. (1993). Christmas and procrastination: Explaining lack of diligence at a "real-world" task deadline. *Personality & Individual Differences*, 14, 25-33.
- Ferrari, J. R. (1992). Procrastinators and perfect behaviour: An exploratory factor analysis of self-presentation, self-awareness, and self-handicapping components. *Journal of Research in Personality*, 26, 75-84.
- Ferrari, J. R. (1994). Dysfunctional procrastination and its relationship with self-esteem, interpersonal dependency, and self-defeating behaviors. *Personality and Individual Differences*, 17(5), 673-679.
- Ferrari, J. R. (2001). Self-handicapping by procrastinators: Protecting self-esteem, social-esteem, or both? *Journal of Research in Personality*, 25, 245-261.
- Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). *Procrastination and task avoidance: Theory research and treatment*. New York, NY: Plenum.
- Ferrari, J., & Pychyl, T. (2000). The scientific study of procrastination: Where have we been and where are we going? *Journal of Social Behaviour and Personality*, 15(5), 3-13.
- Finney, S. J., & Schraw, G. (2003). Self-efficacy beliefs in college statistics courses. *Contemporary Educational Psychology*, 28, 161-186.
- Fırat, M., Kılınç, H., & Yüzer, T. V. (2018). Level of intrinsic motivation of distance education students in e-learning environments. *Journal of Computer Assisted Learning*, 34(1), 63-70. <https://doi.org/10.1111/jcal.1221>
- Fraenkel, R. F. & Wallen, N. E. (2003). *How to design and evaluate research in education*. New York: McGraw Hill.
- Furlong, P., & Marsh, D. (2002). *A skin not a sweater: Ontology and epistemology in political science* (pp. 184-211). na.
- Gay, L. R., & Airasian, P. (2009). *Educational research: Competencies for analysis and applications*. New Jersey: Pearson Education, Inc.
- Gay, R. L., & Geoffrey, E. Mills, and Airasian. 2011. *Educational Research: Competencies for Analysis and Applications (10th ed)*. The United States of America: Pearson Education, Inc.
- Ge, C., Li, C. D., & Li, S. J. (2018). Study on the relationship between the junior high school students' self-efficacy and academic procrastination. *J. Zhoukou Norm. Univ.* 35 146–152

Ghana statistical service, (2021)

Glăveanu, V. P. (2010). Paradigms in the study of creativity: Introducing the perspective of cultural psychology. *New ideas in psychology*, 28(1), 79-93.

Goulimaris, D. (2015). The relation between distance education students' motivation and satisfaction. *Turkish Online Journal of Distance Education*, 16(2), 13-27. <https://doi.org/10.17718/tojde.50678>

Greene, B. A., & Miller, R. B. (1996). Influences on achievement: Goals, perceived ability, and cognitive engagement. *Contemporary Educational Psychology*, 21, 181-192.

Greene, C. M., Hall, J. E., Guilbault, K. R., & Quinn, T. P. (2010). Improved viability of populations with diverse life-history portfolios. *Biology Letters*, 6(3), 382-386.

Grinyer, A. (2002). *The anonymity of research participants: Assumptions, ethics and practices*. London: Guildford.

Grix, T., Ruppelt, A., Thomas, A., Amler, A. K., Noichl, B. P., Lauster, R., & Kloke, L. (2018). Bioprinting perfusion-enabled liver equivalents for advanced organ-on-a-chip applications. *Genes*, 9(4), 176.

Harriott, J., & Ferrari, J. (1996). Prevalence of procrastination among samples of adults. *Psychological Reports*, 78, 611-616.

Hartnett, M., St George, A., & Dron, J. (2011). Examining motivation in online distance learning environments: Complex, multifaceted, and situation-dependent. *International Review of Research in Open and Distributed Learning*, 12(6), 20-38.

Hegarty, N. (2010). Application of the academic motivation scale to graduate school students. *The Journal of Human Resource and Adult Learning*, 6(2), 48-55. Retrieved from <http://www.hraljournal.com>

Heidari, F., Izadi, M., & Ahmadian, M. V. (2012). The Relationship between Iranian EFL Learners' Self-Efficacy Beliefs and Use of Vocabulary Learning Strategies. *English language teaching*, 5(2), 174-182.

Hen M., Goroshit M. (2014). Academic procrastination, emotional intelligence, academic self-efficacy, and GPA: a comparison between students with and without learning disabilities. *J. Learn. Disabil.* 47, 116–124. doi:10.1177/002221941243932537

Hoy, W.K. (2010). *Quantitative research in education*. London: Sage.

Isiksal, M. (2010). A comparative study on undergraduate students' academic motivation and academic self-concept. *The Spanish Journal of Psychology*, 13(2), 572-585. Retrieved from <http://www.redalyc.org>

- Jeffreys, M. R. (1998). Predicting nontraditional student retention and academic achievement. *Nurse Educator*, 23(1), 42-48.
- Jewett, T. O. (1996). *"And they is us": Gender issues in the instruction of science*. (Report No. SE059543). Illinois. (ERIC Document Reproduction Service No. ED402202).
- Johnson, B., & Christensen, L. (2012). *Educational research: Quantitative, qualitative and mixed approaches*. London: Sage.
- Jones, B. D. (2009). Motivating students to engage in learning: the music model of academic motivation. *International Journal of Teaching and Learning in Higher Education*, 21(2), 272-285.
- Joppe, M. (2000). The research process. *The Qualitative Report*, 8(2), 41-42.
- Jung, K. R. (2013). The mediational effect of academic self-discipline (ASD) between academic self-efficacy (ASE) and college GPA.
- Kachgal, M. M., Hansen, L. S., & Nutter, K. J. (2001). Academic procrastination prevention/intervention: Strategies and recommendations. *Journal of Developmental Education*, 25, 14-24.
- Kandemir M. (2014). The predictors of academic procrastination: responsibility, attributional styles regarding success/failure, and beliefs in academic self-efficacy. *Egitim Ve Bilim-Education and Science* 39, 99–114.
- Karwowski, M., & Kaufman, J. C. (Eds.). (2017). *The creative self: Effect of beliefs, self-efficacy, mindset, and identity*. Academic Press.
- Katz, I. Eilat, K., and Nevo, N. (2014). "I'll do it later": type of motivation, self-efficacy and homework procrastination. *Motiv. Emot.* 38, 111–119. doi: 10.1007/s11031-013-9366-1
- Kelly, G. A. (1969). Humanistic methodology in psychological research. *Journal of Humanistic Psychology*, 9(1), 53-65
- Kelly, George A. 1969. *Clinical Psychology and Personality: The Selected Papers of George Kelly*. Ed. Brendan Maher. Wiley.
- Kennedy, H. L. (1996). Science learning: A self-efficacy study in higher education. Doctoral dissertation, University of Southern California. *Dissertation Abstracts International*, 57 (7A), 2856.
- Khan, M. J., Altaf, S., & Kausar, H. (2013). Effect of perceived academic stress on students' performance. *FWU Journal of Social Sciences*, 7(2).
- Khun, T. S. (1977). Mathematical versus Experimental Traditions in the Development of Physical Science. *TS Khun, The Essential Tension*, 31-65.
- Kibuacha, F. (2021). How to determine sample size for a research study.

- Klassen, R. M., & Kuzucu, E. (2009). Academic procrastination and motivation of adolescents in Turkey. *Educational psychology*, 29(1), 69-81.
- Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S., Wong, I. Y., & Georgiou, T. (2010). Exploring the validity of a teachers' self-efficacy scale in five countries. *Contemporary educational psychology*, 34(1), 67-76
- Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic Procrastination of Undergraduate. Low Self-Efficacy to Self-Regulate Predicts Higher Levels of Procrastination. *Contemporary Educational Psychology*, 33(4), 915–931.
- Klein, E. (1971). *A comprehensive etymological dictionary of the English language*. New York, NY: Elsevier.
- Klingsieck, K. B. (2013). Procrastination in Different Life-Domains: Is Procrastination Domain Specific? *Current Psychology*, 32(2), 175–185. <http://doi.org/10.1007/s12144-013-9171-8>.
- Köseoğlu, Y. (2012). Academic Motivation of the first-year university students and the self-determination theory. *Educational Research and Reviews*.
- Kothari, C. R. (2011). *Research Methodology, Methods and Techniques*, second revised edition (New Delhi: New Age International Publishers, pp. 118-122.
- Krauss, S. E. (2005). Research paradigms and meaning making: A primer. *The Quantitative Report*, 10(4), 758-770.
- Krejcie, R. V., & Morgan, D. W. (1970). Sample size determination table. *Educational and psychological Measurement*, 30, 607-610.
- Krispenz A., Gort C., Schultke L., Dickhauser O. (2019). How to reduce test anxiety and academic procrastination through inquiry of cognitive appraisals: A pilot study investigating the role of academic self-efficacy. Sage.
- Kroeze, J. H. (2012). A postmodernist knowledge theory. *AMICIS Proceedings Paper* 7, 1-8 Washington, Seattle.
- Lang P. J., Bradley M. M. (2008). Appetitive and defensive motivation is the substrate of emotion. In A. J. Elliot (Ed.), *Handbook of Approach and Avoidance Motivation* (pp. 51-66) New York: Psychology Press. 35
- Lapan, R.T., Boggs, K.R., & Morrill, W.H. (1989). Self-efficacy as a mediator of investigative and realistic general occupational themes on the Strong-Campbell Interest Inventory. *Journal of Counselling Psychology*, 36(2), 176-182.
- Lawrence, A. & Neuman, W. (2014). *Social research methods: Qualitative and quantitative approaches*.
- Lay, C. H., & Silverman, S. (1996). Trait procrastination, time management, and academic behaviour. *Personality and Individual Differences*, 21, 61-67.

- Lennon, J. M. (2010). Self-efficacy. In J. A. Rosen, E. J. Glennie, B. W. Dalton, J. M. Lennon, & R. N. Bozick (Eds.), *Noncognitive skills in the classroom: New perspectives on Educational Research* (pp. 91-116). Research Triangle Park, NC: RTI Press.
- Loizzo, J., Ertmer, P. A., Watson, W. R., & Watson, S. L. (2017). Adult MOOC learners as self-directed: Perceptions of motivation, success, and completion. *Online Learning*, 21(2), <https://doi.org/10.24059/olj.v21i2.889>
- Long, J. F., Monoi, S., Harper, B., Knoblauch, D., & Murphy, P. K. (2007). Academic motivation and achievement among urban adolescents. *Urban Education*, 42, 196-222.
- Mack, L. (2010). The philosophical underpinnings of educational research. *Polyglossia*, 19(5), 5-11.
- Malinauskas, R., & Požėrienė, J. (2020). Academic motivation among traditional and online university students. *European Journal of Contemporary Education*, 9(3), 584-591
- Mallick, S., K., De, K. K., & Mukhopadhyay, R. (2017). Academic motivation of secondary school students: a critical study. *European Journal of Education Studies*, 3(4), 661-673.
- Manikandan, K., & Sebin, P. (2013). Procrastination Behavior and Life Routines among Students in Kerala. *South Asian Academic Research Journals*, 3(1), 43-52.
- Masaali, S. (2007). Relationship between reading study and academic achievement among students in IU. *disseration*]. *Isfahan: Khorasgan Slamic Azad University*.
- Maurer, T., Allen, D., Gatch, D., Shankar, P., & Sturges, D. (2012). Students' academic motivation in allied health classes. *The Internet Journal of Allied Health Sciences and Practices*, 10(1), 1-12. Retrieved from <http://nsuworks.nova.edu>
- McCombes, S. (2019) *Correlational research*. <https://www.scribbr.com/methodology/correlational-research>
- McCown, W., & Johnson, J., (1989). *Validation of an adult inventory of procrastination*. Paper presented at the Society for Personality Assessment, New York.
- McMillan, J. H. & Schumacher, S. (2001). *Research in education-evidence based enquiry* (6th ed.). Texas: Pearson Education Inc.
- Mehmood, A., Adnan, M., Shahzad, A., & Shabbir, F. (2019). The effect of self-efficacy on academic performance at higher level of learning: A case study of Punjab University Lahore. *Journal of Educational Sciences*, 6(1), 33-47.

- Mehrabi, T., Behzadi, S., Sabouri, F., & Alavi, M. (2016). Assessment of the effect of the CBT on motivation of the nursing students. *Iranian Journal of Nursing and Midwifery Research*, 21(2), 118-123. Retrieved from <http://www.ijnmrjournal.net>
- Mensah, W., & George, B. P. (2015). Performance management in the public sector: An action-research based case study in Ghana. *Journal of Applied Economics and Business Research*, 5(2), 97-111.
- Merriam-Webster's collegiate dictionary (10th ed.). (1993). Springfield, MA: Merriam- Webster.
- Milgram, N. (2001). Procrastination in daily living. *Psychological Reports*, 63, 752-754.
- Milgram, N. A. (Ed.). (1991). *Procrastination*. New York, NY: Academic Press.
- Milgram, N. A., Batori, G., & Mowrer, D. (1993). Correlates of academic procrastination. *Journal of School Psychology*, 31, 487-500.
- Milgram, N. A., Dangour, W., & Ravi, A. (1992). Situational and personal determinants of academic procrastination. *The Journal of General Psychology*, 119(2), 123-133.
- Miller, R. B., Greene, B. A., Montalvo, G. P., Ravindran, B., & Nichols, J. D. (1996). Engagement in academic work: The role of learning goals, future consequences, pleasing others, and perceived ability. *Contemporary Educational Psychology*, 21, 388-422.
- Mohamadi Shahbalaghi, F. (2006). Self-efficacy and caregiver strain in Alzheimer's caregivers. *Iranian Journal of Ageing*, 1(1), 26-33.
- Moon, A., & Roeder, S. S. (2014). A secondary replication attempt of stereotype susceptibility (Shih, Pittinsky, & Ambady, 1999). *Social Psychology*.
- Mouton, J. (2006). Science for transformation: Research agendas and priorities in South Africa. *Science and technology policy for development: Dialogues at the interface*, 14(4), 89-106.
- Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology*, 38, 30-38.
- Nie, Y., Lau, S., & Liao, A. (2011). Role of academic self-efficacy in moderating the relation between task importance and test anxiety. *Learning and Individual Differences*, 21, 736-741.
- Nitko, A. J. (2005). Using a mental measurements yearbook review and other materials to evaluate a test. *Lincoln, NE: Buros Center for Testing*. Retrieved from <http://buros.org/educational-resources>.

- Noel, L., Levitz, R., & Saluri, D. (1985). Increasing student retention: Effective programs and practices for reducing dropout rate. San Francisco, CA: Jossey-Bass.
- Noran, F. Y. (2000). Procrastination among students in institutes of higher learning: Challenges for K-Economy. *Retrieved December, 30, 2008.*
- Neuman, D. (2014). Qualitative research in educational communications and technology: A brief introduction to principles and procedures. *Journal of Computing in Higher Education*, 26, 69-86.
- O'Donoghue, T., & Rabin, M. (1999). Incentives for procrastinators. *Quarterly Journal of Economics*, 114, 769-816.
- Omar, A. (2011). Assessment of Knowledge, Practice, and Self-Efficacy for Patients with Chronic Obstructive Pulmonary Disease. *Port Said Scientific Journal of Nursing*, 1(2), 1-27.
- Onwuegbuzie, (2000): Academic procrastination and perfectionist tendencies among graduate students. *J Soc Behav Pers*; 15: 103-9
- Onwuegbuzie, A. J. (2004). Academic procrastination and statistics anxiety. *Assessment & Evaluation in Higher Education*, 29, 3-19.
- Orodho, A. J., & Kombo, D. K. (2002). Research methods. *Nairobi: Kenyatta University, institute of open learning.*
- Orodho, J. A. (2005). *Elements of educational and social sciences research methods, bureau of education research institute and development.* Kenyatta University, Nairobi, Kenya. White test score institution Process.
- Oso, W. Y., & Onen, D. (2009). *A general guide to writing research proposal and report.* Jomo Kenyatta Foundation.
- Ozer, E., & Akgun, O. (2015). The effects of irrational beliefs on academic motivation and academic self-efficacy of candidate teachers of computer and instructional technologies education department. *Social and Behavioural Sciences*, 197, 1287-1292.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543-578.
- Pajares, F., & Miller, M. D. (1995). Mathematics self-efficacy and mathematics performances: The need for specificity of assessment. *Journal of Counseling Psychology*, 42, 190-198.
- Pajares, F., Britner, S. L., & Valiante, G. (2000). Relation between achievement goals and self-beliefs of middle school students in writing and science. *Contemporary educational psychology*, 25(4), 406-422.

- Pakdel, B. (2013). The historical context of motivation and analysis theories individual motivation. *International Journal of Humanities and Social Science*, 3(18), 240247.
- Pastorelli, C., Caprara, G. V., Barbaranelli, C., Rola, J., Rozsa, S., & Bandura, A. (2001). The structure of children's perceived self-efficacy: A cross-national study. *European Journal of Psychological Assessment*, 17(2), 87.
- Patten, ML, & Newhart, M.(2018). Understanding research methods an overview of the essentials. New York: Routledge. In SST (p. 15).
- Phillips, J. G., & Ogeil, R. P. (2011). Decisional styles and risk of problem drinking or gambling. *Personality and Individual Differences*, 51(4), 521-526.
- Phillips, J., Kern, D., Tewari, J., & Jones, K. (2011). Self-leadership change project. *Advances in Business Research*, 2(1), 71-85.
- Piccini, A., & Kershaw, B. (2003). Practice as research in performance: From epistemology to evaluation. *Journal of Media Practice*, 4(2), 113-123
- Pintrich, P. R. & DeGroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33-40.
- Punch, K. (2005). *Introduction to social research: Quantitative and qualitative approaches*. London: Sage.
- Pychyl, T. A. (2012). Procrastination and Self-Regulatory Failure: An Introduction to the Special Issue, *Journal of Rational-Emotive & Cognitive-Behavior Therapy*. Volume 30, pages 203-212,
- Pychyl, T. A., Lee, J. M., Thibodeau, R., & Blunt, A. (2000). Five days of emotion: An experience sampling study of undergraduate student procrastination. *Journal of Social Behavior and Personality*, 15, 239-254.
- Qadeer, M. (2009). *Motivation in the history* [PowerPoint slides]. Retrieved from <https://www.slideshare.net/Subjectmaterial/chap-2-motivation-in-the-history>
- Rasinger, S. M. (2008). *Quantitative research in linguistic: An introductory continuum*. New York: International Publishing Group.
- Regali, M. D. S. P. (2001). Palinoestratigrafia do intervalo Alagoas da Bacia do Araripe, nordeste do Brasil. *Revista Brasileira de Geociências*, 42(2), 331-342.
- Roig, M., & De Tommaso, L. (1995). Are college cheating and plagiarism related to academic procrastination? *Psychological Reports*, 77, 691-698.
- Rothblum, E. D., Solomon, L. J., & Murakami, J. (1984). Affective, cognitive, and behavioural differences between high and low procrastinators. *Journal of Counselling Psychology*, 33, 387394.

- Ryan, M. R., & Deci, E. L. (2000a). Intrinsic and extrinsic motivation: Classic definitions and new directions. *Educational Psychology*, 25, 54-67.
- Ryan, M. R., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryan, R. M. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.
- Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Sadker, M., & Sadker, D. (1995). *Failing at fairness: How our schools cheat girls*. New York: Touchstone Press.
- Saunders, M., Philip, D. & Adrian P. (2007). *Research methods for business students* (5th ed.). Harlow: Pearson Education.
- Scheier, M., & Carver, C. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4, 219-247.
- Schibeci, R. A., & Riley, J. P., II. (1986). Influence of students' background and perceptions on science attitudes and achievement. *Journal of Research in Science Teaching*, 23(3), 177-187.
- Schmidt, N. A., & Brown, J. M. (2019). The effect of a perioperative nursing elective on nursing career paths. *AORN journal*, 109(1), 87-94.
- Schouwenburg, H. C. (1993). Procrastination and failure-fearing students in terms of personality-describing adjectives. *Nederlands Tijdschrift voor de Psychologie en Haar Grensgebieden*, 48, 43-44.
- Schouwenburg, H. C., Lay, C., Pychyl, T. A., & Ferrari, J. R. (Eds.). (2004). *Counselling the procrastinator in academic settings*. Washington, DC: American Psychological Association.
- Schraw, G., Wadkins, T., & Olafson, L. (2007). Doing the things we do: a grounded theory of academic procrastination. *Journal of Educational psychology*, 99(1), 12.
- Schuh, K. L., & Barab, S. A. (2008). Philosophical perspectives. In *Handbook of research on educational communications and technology* (pp. 67-82). Routledge.
- Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26(3 & 4), 207-231.
- Schunk, D. H. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. *Handbook of self-regulation/Academic Press*.

- Schunk, D. H., & Ertmer, P. A. (1999). Self-regulatory processes during computer skill acquisition: Goal and self-evaluative influences. *Journal of Educational Psychology*, 91, 251-260.
- Schunk, D. H., & Pajares, F. (2004). Self-efficacy in education revisited. *Big theories revisited*, 4, 115-138.
- Schunk, D., & Ertmer, P. (2001). Self-regulation and academic learning: Self-efficacy enhancing interventions. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 631-649). San Diego, CA: Academic Press.
- Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English language teaching*, 5(9), 9-16.
- Seligman, M. E., & Beagley, G. (1975). Learned helplessness in the rat. *Journal of comparative and physiological psychology*, 88(2), 534.
- Sharma, H. L., & Nasa, G. (2014). Academic self-efficacy: A reliable predictor of educational performances. *British Journal of Education*, 2(3), 57-64
- Shonfeld, M., & Magen-Nagar, N. (2020). The impact of an online collaborative program on intrinsic motivation, satisfaction and attitudes towards technology. *Technology, Knowledge and Learning*, 25(2), 297-313.
- Shrait, A. & Abdullah, A. (2008). Academic Reluctance and its relationship of motivation of academic achievement and self-efficacy among a sample of sixth graders. *Journal of Contemporary Psychology and Human Sciences*, 19, 225-233.
- Shunk, D. & Meece, J.L. (2005). Self-efficacy development in adolescences. (Ed. A. Bandura) *Self-Efficacy Beliefs of Adolescents* (s. 71-96).
- Shunk, D. (1995). Self-efficacy, adaptation and adjustment. *Theory Res Appl*, 25(5), 281-303.
- Shunk, D. H. (2000). Motivation for achievement
- Silver, B. B., Smith, E. V., Jr., & Greene, B. A. (2001). A study strategies self-efficacy instrument for use with community college students. *Educational and Psychological Measurement*, 61(5), 849-865.
- Silver, M., & Sabini, J. (1981). Procrastinating. *Journal of the Theory of Social Behavior*, 11, 207-221.
- Skinner, B. F. (1953). *Science and human behavior*. New York, NY: Free Press.
- Smith, J. M. & Owen, S. V. (1994, April). *Explaining science self-efficacy*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

- Smist, J. M. (1993). *General chemistry and self-efficacy*. Report No. SE054247. Massachusetts: ERIC Document Reproduction Service No. ED368558.
- Smist, J. M., Archambault, F. X., & Owen, S. V. (1997). *Gender and ethnic differences in attitude toward science and science self-efficacy among high school students*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Sokolowska, J. (2009). *Behavioral, cognitive, affective, and motivational dimensions of academic procrastination among community college students: AQ methodology approach*. Fordham University.
- Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive- behavioural correlates. *Journal of Counselling Psychology*, 31, 503-509.
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133, 65-94.
- Steel, P. (2010). Arousal, avoidant and decisional procrastinators: Do they exist?. *Personality and individual differences*, 48(8), 926-934.
- Strive, T. (2017). *Beyond content: Incorporating social and emotional learning into the strivetogether framework, 3: A compendium of social and emotional competency measures*. Retrieved from https://www.strivetogether.org/wp-content/uploads/2017/06/StriveTogether_Beyond-Content_Social-and-Emotional-Learning_v3_6.13.17.pdf
- Strunk K. K., Cho Y. J., Steele M. R., Bridges S. L. (2013). Development and validation of a 2 x 2 model of time-related academic behavior: Procrastination and timely engagement. *Learn. Individ. Diff.* 25 35–44. 10.1016/j.lindif.2013.02.007
- Tabachnick, B. G. (2007). *Experimental designs using ANOVA*. Thomson/Brooks/Cole.
- Tang, N., & Westwood, P. (2007). Worry, general self-efficacy and school achievement: An exploratory study with Chinese adolescents. *Australian Journal of Guidance & Counselling*, 17(1), 68-80.
- Taylor, S. E., Peplau, L. A. & Sears, D.O. (2012). *Social psychology* (6th ed.). India: Prentice Hall.
- Tewksbury, R. (2009). Qualitative versus quantitative methods: Why qualitative methods are superior for criminology and criminal justice. *Journal of Theoretical and Philosophical Criminology*, 1(1), 38-58.
- Thomas, J. (2023). Quantitative assessment of additive leachates in abiotic weathered tire cryogrinds and its application to tire wear particles in roadside soil samples. *Chemosphere*, 311, 137132.

- Thomas, S. A., Abdalla, F. B., & Lahav, O. (2010). Upper bound of 0.28 eV on neutrino masses from the largest photometric redshift survey. *Physical Review Letters*, 105(3), 031301.
- Tien, C.C. (2009). What is the truth in marketing research? Being a truth teller. *Asian Journal of management and Humanity Sciences*, 4(4), 241-258.
- Tippins, D. J. (1991). *The relationship of science self-efficacy and gender to ninth grade students' intentions to enroll in elective science courses*. Report No. SE052385. Georgia: ERIC Document Reproduction Service No. ED350144.
- Tuckman, B. W. (1991). The development and concurrent validity of the procrastination scale. *Educational and psychological measurement*, 51(2), 473-480.
- Vallerand, R. J. (2012). From motivation to passion: In search of the motivational processes involved in a meaningful life. *Canadian Psychology/Psychologie Canadienne*, 53(1), 42
- Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality*, 60, 599–620. doi:10.
- Vallerand, R. J., & O'Connor, B. P. (1989). Motivation in the elderly: A theoretical framework and some promising findings. *Canadian Psychology/Psychologie Canadienne*, 30(3), 538
- Vallerand, R., Pelletier, L., Blais, M., Briere, N., Senecal, C., & Vallieres, E. (1992). The academic motivation scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017.
- Van der Roest, J. W., Spaaij, R., & van Bottenburg, M. (2015). Mixed methods in emerging academic subdisciplines: The case of sport management. *Journal of mixed methods research*, 9(1), 70-90.
- Van Eerde W(2000) Procrastination: Selfregulation in initiating aversive goals *Applied Psychology* 49 (3), 372-38
- Van Eerde W., Venus M. (2018). A daily diary study on sleep quality and procrastination at work: the moderating role of trait self-control. *Front. Psychol.* 9:2029. 10.3389/fpsyg.2018.02029
- Van Eerde, W. (2003). Procrastination at work and time management training. *The Journal of Psychology: Interdisciplinary and Applied*, 137, 421–434. doi:10.
- Walford, G. (2005). Ethical guidelines and anonymity. *International Journal of Research & Method in Education Research*, 28(1), 83-93.
- Walker, L. J. S. (2004). Overcoming the patterns of powerlessness that lead to procrastination. In H. C. Schouwenburg, C. H. Lay, T. A. Pychyl, & J. R.

- Ferrari (Eds.), *Counselling the procrastinator in academic settings*. Washington, DC: American Psychological Association.
- Watson, D. C. (2001). Procrastination and the five-factor model: A facet level analysis. *Personality & Individual Differences*, 30, 149-158.
- Wesley, J. (1994). Effects of ability, high school achievement, and procrastinatory behaviour on college performance. *Educational and Psychological Measurement*, 54, 404-408.
- WHO (2013). *Ethical issues in patient safety research: Interpreting existing guidance*. Geneva: WHO Document Production Services.
- Wilkesmann, U. & Virgillito, E. R. (2015). Imaginary contradictions of university governance. In *Incentives and performance: Governance of research organizations* (pp. 189-205). Cham: Springer International Publishing.
- Wohl, M. J., Pychyl, T. A., & Bennett, S. H. (2010). I forgive myself, now I can study: How self-forgiveness for procrastinating can reduce future procrastination. *Personality and individual differences*, 48(7), 803-808.
- Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, 95(1), 179-187.
- Yin, R. K. (2013). Validity and generalization in future case study evaluations. *Evaluation*, 19(3), 321-332.
- Zarrin, S. A., Gracia, E., Paixao, M. P. (2020). Prediction of Academic Procrastination by Fear of Failure and Self-Regulation, *Educational Sciences: Theory & Practice*, 20(3).
- Zeenath, S., & Orcullo, D. J. C. (2012). Exploring academic procrastination among undergraduates. *International Proceedings of Economics Development & Research*, 47(9), 42-46.
- Zhang S. M., Feng T. Y. (2020). Modeling procrastination: asymmetric decisions to act between the present and the future. *J. Exp. Psychol. Gen.* 149 311–322. 10.
- Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82-91.

APPENDICES

APPENDIX A

INTRODUCTORY LETTER



UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF APPLIED BEHAVIOURAL SCIENCES IN EDUCATION
DEPARTMENT OF COUNSELLING PSYCHOLOGY

P.O. Box 25, Winneba, Ghana

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER OF INTRODUCTION

I write to introduce to you KUDODZI MERCY, the bearer of this letter, who is pursuing a Master of Philosophy Degree Programme, in the Department of Counselling Psychology of the University of Education, Winneba.

As part of the programme, she is conducting a research on the topic: **ACADEMIC SELF-EFFICACY AND PROCRASTINATION THE MEDIATING ROLE OF ACADEMIC MOTIVATION IN UEW STUDENTS.**

She needs to administer questionnaire to enable her gather information for her data analysis and she has chosen to conduct this exercise in your outfit.

I would be grateful if she is given the needed assistance. Thank you.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Nyiemedi Agordzo Edoh-Torgah'.

Nyiemedi Agordzo Edoh-Torgah, PhD
AG. Head of Department



UNIVERSITY OF EDUCATION, WINNEBA

FACULTY OF EDUCATIONAL STUDIES

DEPARTMENT OF COUNSELLING PSYCHOLOGY

P.O. Box 25, Winneba, Ghana

psychology@uew.edu.gh

820 298 0904

12th April, 2022.

The Planning Officer
Planning Office
University of Education, Winneba
Winneba

Dear Sir,

LETTER OF INTRODUCTION - MERCY KUDODZI

I write to introduce to you, Mercy Kudodzi, the new first-year student in the Department of Counselling Psychology of the University of Education, Winneba. She is

APPENDIX B

UNIVERSITY OF EDUCATION WINNEBA, FACULTY OF EDUCATIONAL STUDIES, DEPARTMENT OF COUNSELING PSYCHOLOGY

QUESTIONNAIRE

INFLUENCE OF ACADEMIC SELF-EFFICACY AND PROCRASTINATION ON ACADEMIC MOTIVATION AMONG STUDENTS OF UNIVERSITY OF EDUCATION WINNEBA

Introduction

This questionnaire is for research work by Masters of Philosophy student in the Department of Counseling Psychology. For each statement, decide how accurately it describes you by checking the box that precedes it and tick. This questionnaire is aimed at establishing the levels and the influence of academic self-efficacy and procrastination on academic motivation in students of UEW.

It is important to note that, information obtained is purposely meant for academic work and nothing else. It is also not intended to function as any form of psychological assessment. More importantly the information provided in this questionnaire will be treated with optimal confidentiality and anonymity, for that reason there is no need for your name or any form of identity. You are also not coerced, if you feel a particular question pose a threat to your emotional and psychological well-being. Apart from any possible threat to your well-being, you are encouraged to respond to each statement as honestly and sincerely as possible. Thank you.

PART A: DEMOGRAPHIC INFORMATION

Gender: Male [] Female []

Level: 100 [] 200 [] 300 [] 400 []

PART B: STATEMENTS FOR RESPONDENTS WHICH IS ALSO DIVIDED INTO THREE SECTIONS

SECTION ONE: ACADEMIC PROCRASTINATION SCALE

Please indicate the extent to which you agree or disagree to the statement below by checking the box beside the statements

Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA)

Please select only one option

S/N	STATEMENTS	SD	D	A	SA
1.	I do my assignments daily and regularly, so I am punctual with my course work				
2.	I usually hurry to complete academic missions before the deadline				
3.	I always say to myself that I will complete my assignments tomorrow				
4.	I usually start doing study duties immediately after being assigned them				
5.	I always think I have enough time later, so it is not necessary to actually start studying.				
6.	I postpone my duties till the last moment.				
7.	I try to find excuses to justify my delay in doing study assignments				
8.	I always waste time than to start and meet challenges.				
9.	I stop studying early in order to do more pleasurable things.				
10.	I say to myself that I will do my duties, suddenly I change my mind.				

ACADEMIC SELF EFFICACY SCALE

Please indicate the extent to which you agree or disagree to the statement below by checking

Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA)

Please select only one option

S/N	STATEMENTS				
		SD	D	A	SA
11.	Irrespective of the subject, I am competent in learning				
12.	I can reach out for help from lecturers during learning				
13.	I can usually find out quite a few solutions when I am confronted with problems in my study				
14.	During examinations, I can recollect what I have learnt				
15.	Often, I fail to comprehend the actual meaning of what I study.				
16.	I can develop the skills required to succeed in the university program.				
17.	I can barely answer the essay type questions well.				
18.	If I miss some classes for some reason, I can compensate the loss fairly well.				
19.	I can be calm at time of exam as I am conscious of my ability to learn				
20.	I can usually tackle the difficult courses and situations in the study.				

ACADEMIC MOTIVATION SCALE

Please indicate the extent to which you agree or disagree to the statement below by checking

Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA)

Please select only one option

S/N	STATEMENTS				
		SD	D	A	SA
21.	With only a high-school certificate I cannot find a high-paying job later on.				
22.	Honestly, I don't know; I really feel that I am wasting my time in school.				
23.	In order to obtain a more prestigious job later on.				
24.	I once had good reasons for going to university; however, now I wonder whether I should continue.				
25.	I can't see why I go to university and frankly, I couldn't care less.				
26.	I think that university education will help me better prepare for the career I have chosen.				
27.	I feel satisfied when I am in the process of accomplishing difficult academic activities.				
28.	I believe that a few additional years of university education will improve my competence as a worker.				
29.	I really like going to school because I can succeed in my studies.				
30.	University environment allows me to experience a personal satisfaction in my quest for excellence in my studies.				

APPENDIX C

SAMPLE SIZE TABLE

SAVI Curriculum – Handout 2C-2

Population Size	Confidence 95.00%				Confidence 99.00%			
	Degree of Accuracy/Margin of Error				Degree of Accuracy/Margin of Error			
	0.05	0.035	0.025	0.01	0.05	0.035	0.025	0.01
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
900	269	419	568	823	382	541	672	854
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
264,000,000	384	784	1537	9603	663	1354	2654	16586

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APPENDIX D

CONFIRMATORY FACTOR ANALYSIS

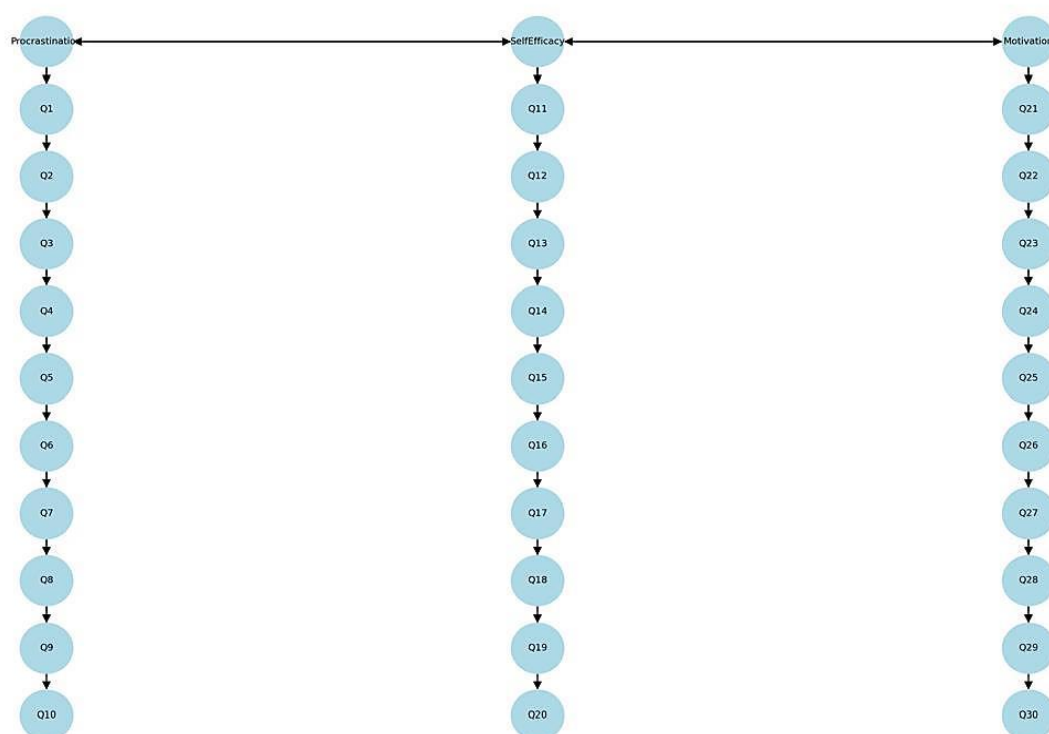


Figure X: Path diagram of the Confirmatory Factor Analysis model showing relationships between three latent variables (Procrastination, Self-Efficacy, and Motivation) and their respective observed indicators (Q1–Q30). Double-headed arrows represent correlations between latent constructs

A Confirmatory Factor Analysis (CFA) was conducted using the lavaan package in R to assess the validity of a three-factor measurement model representing Academic Procrastination, Academic Self-Efficacy, and Academic Motivation. Each latent construct was measured using 10 items on a 4-point Likert scale (1 = Strongly Disagree, 4 = Strongly Agree). Data were collected from 36 university students.

The CFA model showed acceptable fit to the data: $\chi^2 (402) = 589.72$, $p < .001$, Comparative Fit Index (CFI) = 0.951, Tucker–Lewis Index (TLI) = 0.937, Root Mean Square Error of Approximation (RMSEA) = 0.067, and Standardized Root Mean Square Residual (SRMR) =

0.046. These values fall within the thresholds for good model fit as recommended by Hu and Bentler (1999).

All standardized factor loadings were statistically significant ($p < .001$), ranging from 0.58 to 0.81, indicating that each item was a strong indicator of its respective latent construct.

Moreover, the latent variables were significantly correlated. Academic self-efficacy was positively associated with academic motivation, while academic procrastination was negatively related to both self-efficacy and motivation. These results support the construct validity of the instrument and confirm the appropriateness of the hypothesized three-factor structure in measuring the psychological variable.

