RELATIONSHIPS AMONG SELF-REGULATED LEARNING, TEST ANXIETY AND ACADEMIC ACHIEVEMENT OF UNDERGRADUATE STUDENTS, AHMADU BELLO UNIVERSITY, ZARIA, KADUNA STATE, NIGERIA

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER DEGREE IN EDUCATIONAL PSYCHOLOGY

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DECLARATION

1. I, Bala Dinatu P16EDPC8010 hereby declare that this dissertation entitled "Relationships among Self-regulated Learning, Test anxiety and Academic Achievement of Undergraduate Students,Ahmadu Bello University, Zaria, Kaduna State, Nigeria" was conducted by me in the Department of Educational Psychology and Counselling. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree at this or diploma at this or any other institution.

Bala Dinatu _____ Date

CERTIFICATION

This Dissertation entitled Relationships among Self-regulated Learning, Test Anxiety and Academic Achievement of Undergraduate Students, Ahmadu Bello University, Zaria, Kaduna State, Nigeria by Bala Dinatu (P16EDPC8010) meets the regulations governing the award of Master's Degree (Educational Psychology) in the Department of Educational Psychology and Counselling of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This dissertation is dedicated to my beloved parents Late Mr. Bala Malachy Gadani, Mrs. Grace Malachy Gadani and Dr. Mohammed Hassan of blessed memory.

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ABSTRACT

This study examined relationships among self-regulated learning, test anxiety and academic achievement of undergraduate students, Ahmadu Bello University, Zaria, Kaduna State, Nigeria. Five objectives were formulated to guide the study. The population was seven hundred and forty seven (747) 300 level undergraduate students of Ahmadu Bello University, Zaria, the sample for the study consisted of 241 students. The study adopted a correlational research design. The instruments used for data collection were Self-regulated Learning Scale (SRLS), Test Anxiety Inventory (TAI) and CGPA of the students. Data was analyzed using descriptive (frequencies, mean and standard deviation) for the analysis of bio data and Pearson product moment correlation coefficient (r) was used to test the hypotheses. All hypotheses were tested at 0.05 alpha level of significance. Finding revealed that positive relationship existed between self-regulated learning and academic achievement among undergraduate students of Ahmadu Bello University, Zaria with the following values; Goal setting and academic achievement of undergraduate students r=0.605, p=0.039. Memory strategy and academic achievement of undergraduate students r=0.736, p=0.044. Help-seeking strategy and academic achievement of undergraduate student r=0.883, p=0.022. Self-evaluation and academic achievement of undergraduate student r=0.228, p=0.033. While inverse relationship existed between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University, Zaria with r = -0.829, p = 0.010. Based on the findings, it was recommended that psychologists and counsellors should sensitize the school authority on the self-regulated learning strategies such as goal setting, memory strategy, help-seeking strategyand self-evaluation as it enhance students' academic achievement in schools.

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LIST OF ABBREVIATIONS

CAT:	Chemistry Achievement Test
CGPA:	Cumulative Grade Point Average
IQ:	Intelligent Quotient
KASU:	Kaduna State University
PIQ:	Peer Influence Questionnaire
PPMC(r):	Pearson Product Moment Correlation Coefficient
SMART:	Specific, Measurable, Achievable, Relevant and Time-bound
SQ:	Self-regulation Questionnaire
SRL:	Self-regulated Learning
SRLQ:	Self-regulated Learning Questionnaire
SRLS:	Self-Regulated Learning Scale
SSI:	Study Skills Inventory
TAI:	Test Anxiety Inventory
ZPD:	Zone of Proximal Development

OPERATIONAL DEFINITION OF TERMS

The following are the operational definition of terms;

Self-regulated learning: Is the students' ability to actively participate in their learning process by using different learning strategies such as goal setting, memory techniques, help-seeking strategy and self-evaluation among others with little guidance from lecturers or any agent of instruction.

Test Anxiety: Is the unpleasant fear displayed by students before, during and after examination taking in tertiary institution.

Academic Achievement: Is the attainment obtained by a students from lesson taught which may include experience, knowledge, communication skill, punctuality, excellent in sport behavior, and the like, that can be measured through their cumulative grade point average (CGPA).

CHAPTER ONE

INTRDUCTION

1.1 Background to the Study

Education is the process of all round development of an individual. It is the main tool to develop the innate potentialities of an individual. It creates opportunity for an individual to realize his or her potentialities and also enables the development of oneself and the society. Educators are accountable for helping learners with their educational and emotional development, starting from the time of entering school. When they make progress to higher levels, the responsibility for learning then becomes that of the students themselves. Hence, the development of self-regulated learning is essential for students who plan to achieve academic success in their academic pursuit. Changes in the design of methodologies for teaching and learning have been driven by the need to adopt learner-centered approaches to education with the view that learners would emerge empowered, capable of autonomous, lifelong learning skills. Such initiatives attempts to weaken teacher-centered approaches of learning.

According to Pintrich (2012) self-regulated learning is an "active and constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation and behavior, guided and constrained by their goals and the contextual features in the environment". He further stated that self-regulated learners possess the following characteristics: self-regulated learners know how to plan, control time and effort to be used on tasks. They know how to create and structure favourable learning environments, and direct their mental processes towards the achievement of personal goals. They are able to put into play a series of volitional strategies, aimed at avoiding external and internal distractions in order to maintain their concentration, effort and motivation while performing academic tasks. They are

flexible and can analyze reasons why learning did not occur as planned and revise the approach to circumvent the problem. They are initiators of the learning process and accept greater responsibility for their achievement, choose cognitive strategies that have higher payouts, they seek to understand ideas and materials rather than just memorize and recall.

During learning, self-regulated learners employ strategies such as goal setting which can be thought of as statements indicating students' setting educational standard and planning for sequencing, timing, and competing activities related to those goals. For example, if a student sets a goal to do well in an exam, then he or she also may set attainable goals such as studying for a set amount of time and using specific study strategies to help ensure success on the exam. They make use of memory strategy which refers to learner's awareness of and knowledge about their own memory systems and strategies for using their memories effectively. They employ the strategy of seeking assistance when learners cannot solve problems, understand material, or complete assignments, their options include seeking help from friends, internet, classmates and teachers. Self-evaluation is another strategy during self-regulation whereby learners compare the results of their efforts with their intentions, attach meaning to the outcome, and think about whether they have acted according to their own standards or principles. When pleased with the results, these learners experience positive emotions that further enhance their academic achievement and when they are not please with the results they make adjustments for similar tasks in their future. Therefore, it is necessary to promote self-regulated learning skills among the learners to make new and useful adaptations to the emerging challenges in our institutions. Unless these students are able to use self-regulated learning skills, motivation, volition and metacognition, they may not be able to achieve academic success in their learning activity (Murphy, 2010). Efforts to understand and improve the academic outcome of students have

increasingly focused on self-regulation skills as it foster students' interest, confidence, persistence, attention, memory, self-control and learning (Berhenke, 2013). When students face learning problems, they may ascribe them to their own lack of cognitive abilities. However, their actual problem may be that they do not know how to learn. Thus, for meaningful learning, acquisition of knowledge and high academic achievement to be achieved and maximized self-regulated learning skills and strategies should be adopted.

Tests and examinations at all levels of education, have been considered an important and powerful tool for decision making in our competitive society, with people of all ages being evaluated with respect to their achievement, skills and abilities. Zollar and Ben-Chain (2009) have the opinion that "the era in which we live is a test-conscious age in which the lives of many people are not only greatly influenced, but are also determined by their test performance". For instance, results are used to make important decisions about students and educational programs including determining levels of curriculum mastery, grade level promotions and graduation. Such feelings among students may affect their performance during evaluative situation, resulting in high test anxiety directly causing drop in the student academic achievement. However, students experience test anxiety in universities for fear of the class of degree they may end up graduating with, bearing in mind that they have limited time to build their CGPA and also, considering the kind of competition they are going to face especially when it comes to seeking higher qualifications or employment in the later years.

Test anxiety can be defined as a significantly unpleasant experience of worry and emotionality during situations where an individual feels he or she is being assessed. Test anxiety is an important factor which has been shown to reduce psychological wellbeing as well as seriously hinders students' academic achievement (Putman, 2012). It is considered to be a

common educational problem whereby many students experience nervousness before, during or after an examination, do not feel confident about their abilities. A certain amount of test anxiety although, keeps learners energized, motivated, alert and focused but absence of it brings about lack of motivation while too much of it can result in physical distress, difficulty concentrating and emotional worry, which interferes with academic achievement, professional growth, self-esteem, effort and motivation for school tasks.

Academic achievement has been the area of interest for higher education institution. Factors related to academic achievement of university students has become a topic of growing interest in higher educational circle. Studies indicate that there are factors affecting university students' achievement. Hanson (2013), reported that students' academic achievement is affected by different factors such as, the strategies the employ in learning, social circle, perception about their ability, learning environment among others. Academic achievement is the attainment obtained by a student from lesson taught which may include experience, knowledge, communication skill, punctuality co- curricular activities, excellent in sport behavior, and the like, that can be measure through their cumulative grade point average (CGPA). Santrock (2010), academic achievement refers to what the students have learned or what skills they have learned and is usually measured through assessments like standardized tests and performances assessments. The assessment information will usually be translated through grading system such as cumulative grade point (CGPA) since it provides information students' academic performance across time.

1.2 Statement of the Problem

An intellectual measurement of how students perform depends heavily on how he or she studies. Self-regulated learning strategies is the tendency of students to learn in a systematic and

efficient way when opportunity isgiven. It is based on how students choose to study in a routinemanner to improve their academic achievement. From the researcher's observation of students' academic achievement as obtained on notice boards acrosssome departments in ABU Zaria, some undergraduate students are lagging behind in their performance as it can be seen in their results. It is challenging to say that our educational system is based on merits where it sometimes lives no choice to students but resort to memorize formulas for use in examinations. They get use to the fact without understanding why they have to do it. This in turn allows poor educational achievements among students. Many students fail not because they lack ability, but because they do not have adequate learning strategies. They often forget their primary reason of being on campus as soon as they gain admission into university andbecome overwhelmed by the social activities available on campus such as unionism, too many religious activities, clubbing, unguarded friendships, cultism, fashion and styles, businesses, exotic living, among others leading to lack of concentration in their academic pursuit.

They expect their lecturers to provide learning materials and take responsibility for the learning processes. To the students, it is accepted, even expected, that lecturers should be largely in control of what is being learned, how it is learned, and the extent to which it is learned. Students generally accept the role pattern wherein lecturers provide information and students find a way to comprehend, store, and activate knowledgetherefore, confusion sets in when they are faced with testing situations resulting to poor academic outcome as well as weak class of degree among students of higher institutions. Furthermore, it will lead to lack of many life rewarding opportunities for the students and the society at large. Thus, it is on this basis, the researcher deems it fit to find the relationships among self-regulated learning, test anxiety and academic achievement of undergraduate students, Ahmadu Bello University Zaria.

1.3 Objectives of the Study

The following are the objectives for the study; to:

1. Determine the relationship between goal setting and academic achievement among undergraduate students of Ahmadu Bello University Zaria.
2. Determine the relationship between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria.
3. Determine the relationship between help-seeking strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria.
4. Determine the relationship between self-evaluation and academic achievement among undergraduate students of Ahmadu Bello University Zaria.
5. Determine the relationship between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria.

1.4 Research Questions

The following are the research questions for the study;

1. What is the relationship between goal setting and academic achievement among undergraduate students of Ahmadu Bello University Zaria?
2. What is the relationship between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria?
3. What is the relationship between help-seeking strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria?
4. What is the relationship between self-evaluation and academic achievement among undergraduate students of Ahmadu Bello University Zaria?

5. What is the relationship between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria?

1.5 Hypotheses

The following are the hypotheses for the study;

1. There is no significant relationship between goal setting and academic achievement among undergraduate students of Ahmadu Bello University Zaria.
2. There is no significant relationship between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria.
3. There is no significant relationship between help-seeking strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria.
4. There is no significant relationship between self-evaluation and academic achievement among final year undergraduate students of Ahmadu Bello University Zaria.
5. There is no significant relationship between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria.

1.6 Basic Assumptions

The following are the basic assumptions for the study;

1. The study is based on the assumption that self-regulated learning contributes to students' academic achievement.
2. It also assumed that test anxiety interfere with students' academic achievement.

1.7 Significance of the Study

Since the school is mostly concerned with teaching and learning process, critical thinking, self-monitoring, self-control, intelligent analysis, problem solving, perception and students motivation in education as well as self-evaluation, the study is important to the

undergraduate students, students of psychology, teachers, parents, society, school authorities, professional bodies, educational policy makers and curriculum planners.

To the undergraduate students, the researcherthrough sensitization and creation of awareness especially during orientation programme will inform the students on the need to employ self-regulated learning strategies necessary to maximize academic achievement, realization of goal orientation for lifelong learning and future academic excellence. The copy of this work will be in library for students' consumption as well.

To the students of Educational psychology and those who wish to carry similar research, the findings will provide them with valuable information, guide and knowledge especially that involve self-regulated learning, test anxiety and academic achievement. To teachers the study would motivate them to select appropriate modern scientific method of teaching that will make learners to proactively participate in learning processes. To parents, the study will help them to encourage their children to participate actively in school activities so as to enable them achieve academic excellence. To the school authorities, the study will guide the school authorities on the appropriate and adequate teaching materials to provide for the importance of academic achievement which will enable students' capability and enthusiasm for becoming lifelong learners. To the society and other professional bodies the study will help to provide necessary advice for providing qualified teachers for quality education. To the educational policymakers and curriculum planners, the research will guide them in designing educational policy and curriculum that will enable proactive participation of learners into teaching and learning processes.

1.8 Scope and Delimitation

The main focus of this study is on the relationships among self-regulated learning, test anxiety and academic achievement of undergraduate students, ABU Zaria, Kaduna state, Nigeria.The study focused on the indices includinggoal setting, memory strategy, help-seeking strategy, self-evaluation and test anxiety. The study was delimited to 300 level undergraduate students. They are more suitable for this study because they are familiar with university system and are about to graduate as such, they have limited time to build their CGPA therefore, may be employing different learning strategies necessary to allow them graduate successfully. Thus, the study did not include students in other levels.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviews literature related to the variables of the study. The review was done under the following sub-headings;

- Conceptual perspective
- Theoretical perspective
- Empirical studies as well as summary.

2.2 Conceptual Perspective

2.2.1 Concepts of Self-regulated Learning

Self-regulated learning is a process that assists students in managing their thoughts, behaviours, and emotions in order to successfully navigate their learning experiences. This process occurs when a student's purposeful actions and processes are directed towards the acquisition of information or skills. It refers to learning that is guided by metacognition (thinking about one's thinking), strategic action (planning, monitoring, and evaluating personal progress against a standard), and motivation to learn. According to Zimmerman (2012), self-regulated learning is a self-directive process that enables students to transform their mental abilities into academic skills, and it is a regular and mental knowledge process in which learners engage very actively until their learning objectives are realized. It has been defined as, "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals". Zumbrunn, Tadlock and Roberts (2013), described SRL as an active, purposeful constructive process by which a learner sets goal, monitors his learning and controls his motivation, behaviour and cognition. Similarly, Pintrich (2012) defines SRL as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation and behavior, guided and constrained

by their goals and the contextual features in the environment". Self-regulated learning emphasizes autonomy and control by the individual who monitors, directs, and regulates actions toward goals of information acquisition, expanding expertise, and self-improvement. In the same vein, Kauffman (2015) defines SRL as the students' intentional efforts to manage and direct complex activities that involve three primary components, namely; the use of cognitive strategies, meta-cognitive processing and motivational beliefs. SRL implies learning regulated by the students themselves, and is not motivated and regulated by external factors and people. The students' management of their own learning, the steering and directing of cognitive activities and motivation to the attainment of learning goals, are the main features of SRL (Boekaerts, 2014).

Berk (2013) views self-regulated learning as the process of taking control of and evaluating one's own learning and behaviour. Furthermore, it is the process of continuously monitoring progress towards a goal, checking outcomes, and redirecting unsuccessful efforts. SRL emphasizes autonomy and control by the individual who monitors, directs and regulates actions towards goals of information acquisition, expanding expertise and self-improvement. SRL is an integrated learning process consisting of a set of constructive behaviour that affects one's learning. These processes are planned, controlled, and adapted to support the pursuit of personal goals in changing learning environment. The ability to self-regulate has been viewed as a desirable quality throughout history because of its positive effects on behaviour and the acquisition of skills. According to Zimmerman (2008), self-regulated learning is an activity that learners make for themselves in a proactive manner not a hidden event that occurs to them in response to teaching. In other words, it is a self-generated process in which students can change their own mental capability into educational aims. So, it cannot be an academic performance skill

or a mental ability. In this situation “proactively” can be defined as the awareness of student’s own limitations and strengths.

2.2.2 Characteristics of Self- Regulated Learners

Wang, Shannon and Ross (2013) believed that self-regulation is not an enduring measure of mental intelligence after a certain point in life, nor is it a personal characteristic that is genetically based or formed early in life. Students learn self-regulation through experience and self-reflection. Self-regulated learners are those who take an active part in their learning process from the metacognitive to motivational and behavioral viewpoint. Characteristics attributed to self-regulated persons are similar with those attributed to high performance, high capacity students, as opposed to those with low performance who show a lack in these concepts. However, with adequate training in these dimensions, all students can improve their degree of control over learning, academic achievement and many learning disabilities found particularly in low performance students can be alleviated.

In general, studies show that the following characteristics differentiate between self-regulating and none self-regulating students:

- Self-regulated learners are familiar with and know how to apply a series of cognitive strategies (rehearsal, elaboration, organization) which help them to attend to, transform, organize and recover information (Zimmerman, 2001).
- They know how to plan, control, and direct their mental process toward achievement of personal goals, that is, metacognition (Corno, 2001).
- Self-regulated students show motivational beliefs and adaptive emotions such as a sense of academic self-efficacy, the adoption learning goals, the development of positive emotion towards tasks (for example, joy, satisfaction, enthusiasm) and the capability to control and

modify them to the requirements of the preset task and the specific learning situation (Husman, 2014).

- They plan and control the time and effort to be spent on tasks, and they know how to create and structure favorable environments, such as finding a suitable place to study and seeking help from teachers and classmates when they encounter problems (Rowe & Rafferty, 2013).
- To the extent allowed by the context, self-regulated learners show greater efforts to participate in controlling and regulating academic tasks, classroom climate, and structure (Corno, 2001).
- Self-regulated learners are able to affect a series of volitional strategies aimed at avoiding external and internal distractions so that they maintain their concentration, effort and motivation in performing tasks (Deirking & Weinstein, 2013).

2.2.3 Strategies of Self-Regulated Learning

Goal Setting Strategy

Goals can be thought of as the standards that regulate an individual's actions (Schunk, 2010). In the classroom, goals may be as simple as earning a good grade on an exam, or as detailed as gaining a broad understanding of a topic. Goal setting refers to statements indicating students' setting educational standard and planning for sequencing, timing, and competing activities related to those goals. For example, if a student sets a goal to do well in an exam, then he or she also may set attainable goals such as studying for a set amount of time and using specific study strategies to help ensure success on the exam. Research suggests that encouraging students to set goals for their learning can be an effective way to help them track their progress (Zimmerman, 2012).The setting of learning goal is an intrinsic part of the iterative nature of self-regulation. Setting learning goals start by identifying what a learner wants to learn, engages him

or herself in the learning process that aims at achieving the target set, he assesses the work to see if it meets the target and finally, learner set new target or revisiting the goal that was not achieved.

Ideally, students increasingly assume responsibility for the setting of their learning goals and are set to monitor those goals. In practice, students ability to set, monitor and regulate learning varies as such, teachers assistance is important. Teachers commonly use the SMART acronym as a way of guiding students in the design of a learning goal (Lei, Wang & Tanjia, 2012). The acronym reads thus;

S= Specific

M= Measurable

A= Achievable

R= Relevant

T= Time-bound

Specific: A specific goal is detailed, focused and clearly stated. Everyone reading the goal should know exactly what the learner want to learn. The learning target must be specific rather than general. For example, "I will include a topic sentence in each paragraph" rather than 'I will improve my paragraphing".

Measurable: A measurable goal is quantifiable, meaning you can see the results. It must be possible to know whether the learning target has been accomplished. For example, 'I will learn 5-time multiplication table' could be measured by 'being able to recite to my teacher or parent the table without making mistakes.

Achievable: The attainment of the learning target must be something the student is capable of. Where the prospect of attainment seems daunting, the learning target can be broken down into

series of steps so that students can achieve success. The setting of unachievable learning target will lead to lack of motivation and low self-esteem.

Relevant: A relevant goal applies to your current role and is clearly linked to your key role responsibilities. The learning target needs to be significant to student's present learning. If students are allowed to set learning targets without guidance, there is a tendency that such targets will be less pertinent than if they were set in the context of understanding.

Time-bound: A specific goal has timeline and deadline. This will help motivate learners to move towards their goal and to evaluate their progress. Students should specify when they aim to achieve the target. Time-bound learning target is easier to evaluate and track than those with no time period attached to their achievement.

Strategies for Promoting Students' Goal Setting

Skills which lead to SRL are not an important personality trait and they can be learned through experience and self-reflection (Boekaerts, 2012). He further stated that though SRL cannot occur overnight, there are numerous strategic instructions available to promote effective self-regulation, since self-regulation is regarded as a desirable educational goal, as it is linked to achievement, effective problem-solving and greater self-realization. SRL becomes essential because it emphasizes the emerging autonomy and responsibility of students to take charge of their own learning (Winograd, 2013), particularly constructive perspectives of educational interventions. In order to promote students' self-regulated learning, teachers should first and foremost help learners to set a specific learning goal. Setting goals can facilitate students' understanding of their own learning tasks (Lei, Wang & Tanjia, 2012). A perfect goal should be specific, measurable, achievable, relevant and timely. Teachers should assist students to move

towards a determined goal by various measures including deciding a deadline, formulating a plan, anticipating achievements, encouraging and conducting self-assessment (Rader, 2005).

In a first step, teachers can help students record their goals and the reasons for choosing their goals. After several days, the teachers ask students to check their records and delete the goals they are no longer interested in, and then set up their specific goals. The second step is to teach students how to decide the deadline for their goals according to the actual learning progress. The third step is to help students list the obstacles to achieving their learning goals, think about solutions and then make a strategic plan. The fourth step is to guide students to predict the outcome if they achieve their learning goals. The fifth step is to continuously encourage them to move towards their learning goals and give positive feedback on students' weaknesses. Lastly, the teacher should assist students with self-assessment. Because individual students set different learning goals and have different levels of learning ability, they cannot achieve their learning goals at the same time. Teachers should assist those students who achieve their learning goals to set themselves more challenging goals, and help those who do not achieve their learning goals to adjust their strategies and encourage them to make efforts to realize their learning goals. Irrespective of whether students achieve their learning goals, the teachers should acknowledge their efforts and performances.

Memory Strategy

One component of metacognition is about one's memory capabilities and strategies that can aid memory, as well as the processes involved in memory self-monitoring. This self-awareness of memory has important implications for how people learn and use memories. When studying, for example, students make judgments of whether they have successfully learned the assigned material and use these decisions, known as "Judgments of learning" to allocate study

time. So, Meta-memory refers to learner's awareness of and knowledge about their own memory systems and strategies for using their memories effectively. According to Margaryan (2015), metamemory includes,

- Awareness of different memory strategies
- Knowledge of which strategy to use for a particular memory task
- Knowledge of how to use a given memory strategy most effectively

Memory and Metacomprehension skills help learners to make adjustments in their own learning processes in response to their perception of feedback regarding their current status of learning. This concept is known as "self-regulation". Its focus is on the ability of the learners themselves to monitor their own learning (without external stimuli or persuasion) and to maintain the attitudes necessary to invoke and employ these strategies on their own. To learn most effectively, students should not only understand what strategies are available and the purposes these strategies will serve, but also become capable of adequately selecting, employing, monitoring and evaluating their use of these strategies.

Another aspect of metamemory skill involves cognitive monitoring. In monitoring, the individual tracks and as needed, read just an ongoing train of thought. Cognitive monitoring may consist of several related skills (Brown, 2010). For instance, you are realizing "what you know and what you do not know", you learn to be aware of your own mind and the degree of your own understanding. Self-monitoring is a bottom up process of keeping track of current understanding involving the improving ability to predict memory performance accurately. Self-regulation is a top-down process of central executive control over planning and evaluation. Children benefit from training in using such cognitive monitoring processes to enhance their use of appropriate strategies. One of the central aspects of the control and regulation of cognition is the actual

selection and use of various cognitive strategies for memory, learning, reasoning, problem solving and thinking. Numerous studies have shown that the selection of appropriate cognitive strategies can have a positive influence on learning and performance. This cognitive strategy (memory strategy) is useful in helping learners remembering information (Schneider & Pressley, 2009). In research in self-regulated learning, the various cognitive strategies that individuals use to help them understand and learn the material would be placed in this cell. For example, many researchers have investigated the various rehearsal, elaboration and organizational strategies that learners can use to control their cognition and learning (Pintrich & DeGroot, 2008). These strategies include the use of imagery to help encoding of information on a memory task as well as imagery to help one visualize correct implementation of a strategy.

There are three general types of cognitive strategies that can aid memory. They are: rehearsal, elaboration and organization (Weinstein & Mayer, 2008).

Rehearsal Strategy: Rehearsal strategy is a form of cognitive strategy that is important for simple tasks and entails reciting and naming items from a list to be learned.

Rehearsal can be useful for complex learning, but it must involve more than merely repeating information. One useful rehearsal procedure is underlining (highlighting), which improves learning if employed judiciously. It includes attempts to memorize materials by repeating it over and over. It is one of the strategies to organize information in the short-term memory rather in the long-term memory. Rehearsal strategy is also important in complex information when it is used beyond repeating information.

Elaboration Strategy: This refers to student's ability to actively make connection between new and already existing material and structuring this information in order to facilitate the storage of this knowledge in the long-term memory. It reflects a deeper approach to learning by attempting

to summarize the material and put it into your own words. Elaboration strategy refers to technique that is helpful to organize information in the long-term memory by relating items that are going to be learned to each other (Baharom, 2015). This means that the strategy is essential to integrate and relate new information to the previous one and thus, making a connection with the information they have already learned (Weistein, Jung & Acee, 2011). Some of the imaginary strategies that are used are imagery, mnemonics and questioning (Schunk & Zimmerman, 2011).

Organizational Strategy: Organizational strategy refers to plan of action that is essential in reducing the information to the relevant issues to enhance one's comprehension. It entails selection of appropriate information, and to relate information in a form of meaningful category, hierarchy and sequential structures (Schunk & Zimmerman, 2008). For example, a learner engages some deeper processing through the use of various tactics such as note-taking, drawing diagrams, or developing concept maps to organize the material in some manner. Therefore, the student is able to visualize, analyze, understand and store information in the memory in a way that gives meaning. Organizational strategy includes the outlining and mapping of information and facts.

Help-Seeking Strategy

Help-seeking strategy involves statements indicating student-initiated efforts to secure further task information from external sources when undertaking an assignment; for example, "before I begin to write the paper, I go to the library to get as much information as possible concerning the topic". What differentiates self-regulated learners from their peers is that these students not only seek advice from others, but they do so with the goal of making themselves more autonomous (Ryan, 2011). When learners cannot solve problems, understand material, or

complete assignments, their options include seeking help from friends, family members, classmates and teachers. Butler (2012) has also proposed adding performance-related goals as a separate category of reasons why learners seek help. Performance-related goals will be focused on seeking help to ensure success or avoid failure. Several approaches have advanced this positive perspective of help seeking. Ames (2016) conceptualized help seeking as strategic achievement behaviour. Teachers can promote positive help seeking behaviors by providing students with on-going progress feedback that they can easily understand and allowing students opportunities to resubmit assignments after making appropriate changes.

Self-Evaluation Strategy

Self-evaluation means checking one's own solution to the problem against the standard procedure of solving strategy. Students are more likely to become self-regulated learners when they are able to evaluate their own learning, independent of teacher-issued summative assessments (Winne & Hadwin, 2010). Self-evaluation requires measuring one's behaviour against a reference standard which takes the form of precise actions (the number of steps carried out correctly) and performance improvement in terms of speed, quantity and duration. The types of self-evaluation described influence self-corrective responses and modify reactions or even reference standards if these are revealed to be insufficient or unnecessary. Academically, self-regulated learners engage in self-evaluation. They compare the results of their efforts with their intentions, attach meaning to the outcome, and think about whether they have acted according to their own standards or principles. When pleased with the results, these learners experience positive emotions that further enhance their academic achievement. When they are not happy with the results, they often become distressed but, when they do, they can use that feeling as motivation to improve. This practice enables students to evaluate their learning strategies and

make adjustments for similar tasks in their future (Moshman, 2016). Students are more likely to become self-regulated learners when they are able to evaluate their own learning, independent of teacher-issued summative assessments (Winne & Hadwin, 2010). This practice enables students to evaluate their learning strategies and make adjustment for similar tasks in their future. Teachers can promote self-evaluation in the classroom by helping students monitor their learning goals and strategy use, and then make changes to those goals and strategies based upon learning outcomes (Zimmerman, 2004). Once students understand the goal and criteria, they must have opportunity to evaluate their own performance and make adjustments. Students must be able to make adjustment to their work prior to graded evaluation. At this point students react to feedback and adjust their strategies through, rubrics, rating forms or visual organizers. These concrete self-evaluation methods provide objective feedback and identify specific areas of strength or weakness. The feedback serves as a form of item analysis that can be further used to guide instruction and better meet the students' needs.

Components of Self-Evaluation

According to Zimmerman (2004), the following below are the components of self-evaluation:

Self-reflection: Self-reflection helps learners think about what they know or have learned while they identify areas of confusion so they can create new goals. Evaluating what they have learned, hat they need to work on, and how they can get there can all support deeper understanding rather than superficial knowledge. Learners benefit from explaining their work and their own evaluation of quality through reflective activities such as conferences, checklists and others.

Causal Attribution: This refers to the belief that students have with regards to how people understand the reasons for their successes and failures (Zimmerman, 2011). Causal attribution

incorporates cognitive theory and self-efficacy theory in the sense that it emphasizes that learners' current self-perceptions will strongly influence the ways in which they will interpret the success or failure of their current efforts and hence their future tendency to perform these same behaviors. Research on the causal attribution of performance indicates that the effort and persistence are higher if students ascribe their performance to internal causes instead of ascribing it to external or uncontrollable causes (Brorphy, 2008).

Self-reaction: Self-reaction implies that students react according to the goal they have accomplished. If they judge their progress towards set goals as acceptable and they experience satisfaction from having accomplished them, they are more motivated to complete other given tasks. When they believe that they have ability to improve their work by hard work, their motivation does not decline even though there may be a negative evaluative environment. The opposite is true when they believe that they lack the ability to complete the tasks (Schunk & Zimmerman, 2008). Self-reaction includes feelings of satisfaction and positive effect in relation to one's performance and adaptive/defensive responses. Defensive reaction refers to the efforts that students make to protect their self-image by using a withdrawal system to avoid opportunities to learn and perform for example, dropping out of a course or being absent for a test. In contrast, if adjustments are made to foster the effectiveness of one's method of learning, is called adaptive reaction for example, if an individual rejects or improves ineffective learning strategies.

Developing Self-regulated Learning

The ability to self-regulate learning depends on the learning context. However, it is often assumed that learners who have been successful in one learning context (e.g. a prescriptive, lecture-based course) will automatically adapt their strategies for success in another (e.g. a

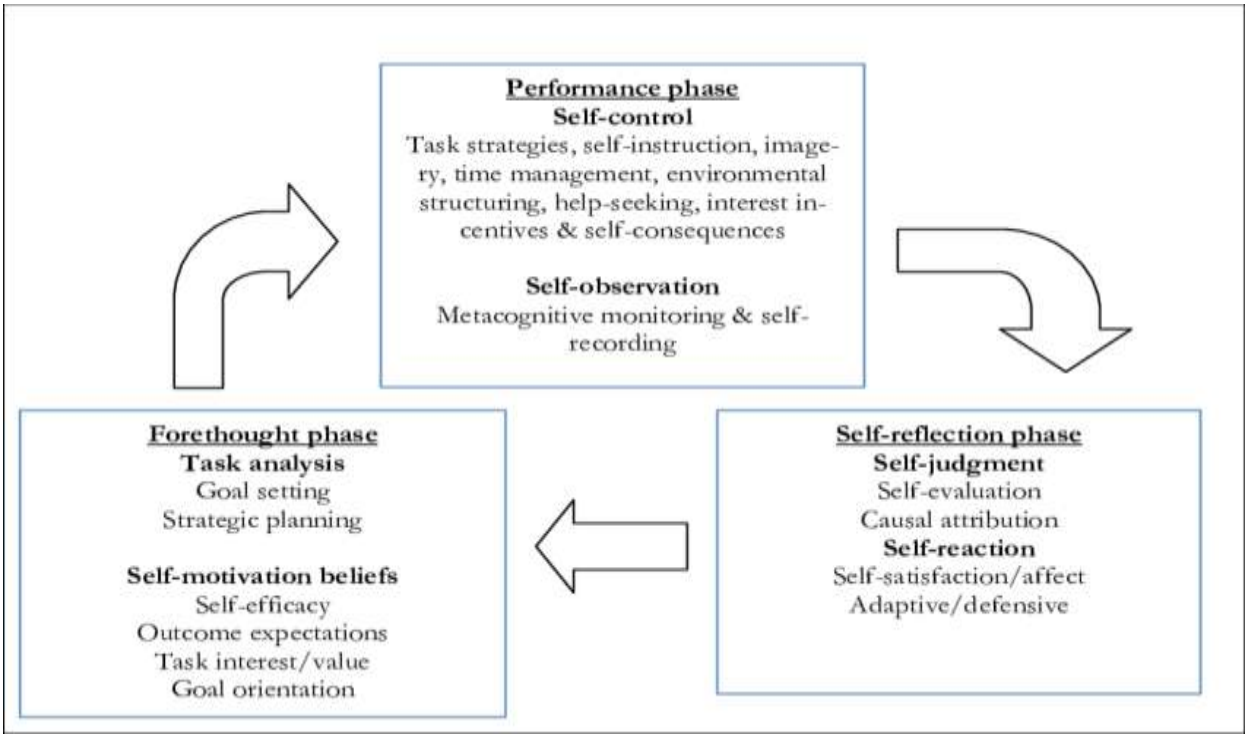
student-directed, inquiry-based course). Challenges arise when learners who do not have an understanding of the processes involved in self-regulated learning are expected to apply them in formal learning situations and beyond. New learning contexts require learners to apply different learning processes. Evidence demonstrates that learners can experience difficulty in adapting self-regulated learning skills from one context to another when left unguided (Ennis, 2013). When a skilled and successful learner enters a new context for the first time, their lack of contextual experience reduces them to the status of a novice learner (Boekaerts, 2012). For such learners to become expert in the new context, they require an understanding of effective learning strategies for that particular context. Learners benefit from guidance when developing skills in self-regulated learning.

Research shows that when left unguided in the early phases of new skill acquisition, learners are more likely to set themselves ineffective goals and experience higher levels of failure, and are more likely to experience negative feelings about themselves (Kitsantas, 2015). Without such guidance, learners are left to discover strategies for themselves, often with varying levels of success. Learners entering a new context look for structure to direct their learning. This is achieved in traditional classrooms through lectures and assessment tasks that dictate what is to be known and how knowledge is to be demonstrated. In a more contemporary, inquiry-based context, it is the student who directs the learning. (Zumbrunn, Tadlock & Roberts, 2013) showed that novice learners in a student-directed curriculum will initially seek external methods to help them regulate their learning, and that even though that such students turned to faculty-provided resources, including textbooks and lecture notes, for guidance, they often adopted ineffective learning methods in the early phases of their degree. While such approaches were reported to change over the four years of their degree, students would have been much more

aware of effective learning strategies they had been made explicit at the outset. Learners should be supported to gain effective self-regulated learning skills. A well designed learning environment is one in which the development of self-regulated learning skills is explicitly guided (Kitsantas, 2015). When learners understand the necessary skills for the context, they are able to set effective plans for learning. This indicates that support for the development of self-regulated learning requires explicit instruction in effective cognitive strategies that are relevant to the new context.

2.2.4. Zimmerman's Self-regulated Learning Model

Zimmerman's self-regulated learning model is based on social cognitive theory. Social cognitive theory posits that the person, behavior, and environment are factors which interact with each other, and as such, self-regulated learning is a cyclical process. When one of these three factors changes during learning, the changes will be monitored, and leads to the changes in the other factors (Lang, Siemens, Wise & Gasevic, 2017). For example, when learning environment changes from a traditional learning setting to an online learning setting, students' learning strategies, cognitions, and behaviors will be changed in order to adjust the change in the environment. Zimmerman (2002) organized self-regulated learning processes under three cyclical phases, namely, forethought phase, performance phase, and self-reflection phase.



Source: Zimmerman and Moylan (2011).

Forethought Phase: This phase precedes learning and sets the stages. It pertains to beliefs and processes that occur before learners attempt to learn; it involves two main levels- task analysis, which by itself consists of goal setting and/or strategic planning, and self-motivation, which is rooted in students' perceptions and learning beliefs (Haibach& Reid, 2013). Goals are characterized by the duration of time that they take to be achieved in the future. If goals are achieved quickly within a short period of time, it is called proximal goals. A proximal goal implies higher motivation and better self-regulation than long-term goals. Therefore, goal-setting is found to be more effective in proximal goals than in distal goals. Self-motivation involves students' beliefs about the importance of activities, the extent of intrinsic interest in the activities and the extent of their self-efficacy beliefs (Haibach & Reid, 2013). Self-efficacy is the belief of one's ability to carry out a task successfully. If students demonstrate high self-efficacy belief,

they will be willing to select challenging academic tasks and will indicate positive attitudes toward learning.

Performance Phase: This phase deals with processes and occurrences during learning to help the learner stay on the task. It contains two sub-phases: self-control and self-observation. In self-control phase, the students start the action by performing volition control as well as using strategies like self-instruction, imagery, self-monitoring and attention control (Bembenutty, 2013). These strategies are essential to enhance the students' performance by means of attention to their work, and how they utilize their effort in an effective way (Zimmerman, 2008).Self-observation is the self-record of personal events or self-experimentation to finding the cause of such events. The information which is found during observation is used to know to what extent the individuals are making progress to meet their goals (Peeters, 2016). For example, if a learner wants to understand the how much time he spends studying, he can keep record of how he uses his time. He may discover that he learns faster by studying alone than when he is studying with friends.

Self-reflection Phase: This phase evaluates a task that cycles back and influences forethought. It consists of two major stages: self-judgment and self-evaluation. These levels refer to comparing one's self-presentation against some principles and rules (Zimmerman, 2011).Self-judgment involves self-evaluation and causal attribution. It entails the comparison of self-observed performance to a previous performance, or another performance, or a kind of external standard. Causal attribution refers to the belief that students have with regards to the cause of success they have made or errors they have experienced. Research on the causal attribution of performance indicates that effort and persistence are higher if students ascribe their performance to internal causes instead of ascribing it to external or uncontrollable causes (Brophy, 2008).Self-reaction

refers to positive or negative evaluation of the progress that students make to achieve set goals (Weiss, 2012). If they judge their progress towards set goals as acceptable, and experience satisfaction from having accomplished them, they are more motivated to complete the given task. When they believe they have the ability to improve their work by working hard, their motivation does not decline even though there may be a negative evaluation.

In Zimmerman's model, self-efficacy is a key competence belief in self-regulatory control processes, such as goal setting and strategy selection (Schunk & Zimmerman, 2008). During the forethought phase, learners assess their self-efficacy for learning. They set goals and plans based on their self-efficacy beliefs. During the performance/volitional control phase, they monitor their performance and adjust strategies as needed in order to reach the optimized performance. Therefore, strategies, such as highlighting, taking notes, outlining are used during this phase. Finally, during the reflection phase, they evaluate their goal progress, make causal attributions of personal control regarding that progress, and adjust their perceptions of self-efficacy accordingly (Manso, Caeiro & Llamas, 2016).

Factors of Self-Regulated Learning

Both cognitive and motivation factors are involved in self-regulated learning.The cognitive factors include maturational/age-related and expertise/experience-related factors (Pintrich & Zusho, 2008). For example, young children are less able to use their cognitive resources as effectively or efficiently as older students because of the developmental differences. Also, prior knowledge of a domain or a topic area is positively associated with memory, learning, thinking, and problem solving. Students who are experts in a domain perform better on memory and learning tasks than novices, whereas they are also more self-regulated. In addition, metacognitive knowledge, including declarative knowledge about a person, a task, and strategy

variables that affect cognitive performance, also contributes to self-regulation. Older students much more likely have metacognitive knowledge than younger children, thus, are more self-regulated. Efficacy-competence judgments, interest and value beliefs, and goal orientations are motivational factors which could facilitate or constrain self-regulated learning.

Self-monitoring is an important component in self-regulation. By self-monitoring, students will be able to judge their progress, their understanding, or their performance and then, use this information to control and regulate their learning behaviors to reduce the discrepancy between the goals and their current states. These judgments of learning are similar to judgments of competence or self-efficacy. Previous research has indicated that judgments of competence are positively correlated with self-regulation and actual performance (Pintrich & Zusho, 2008). Students who believe that they have the capabilities to perform or learn the task use self-regulatory strategies much more frequently as well as do better on the task itself.

However, there are developmental and individual differences in the correlation of self-efficacy and self-regulation. Young children who are usually more positive about their capabilities are also unrealistic, and thus are less likely to see the need to regulate or change their behaviors (Pintrich & Zusho, 2008). On the other hand, although older students are more negative about their competence, they are more realistic about their capabilities and willing to change their behaviors. In addition, students who underestimate their actual competence are less self-regulated because of not having adequate self-efficacy, whereas those who overestimate their capabilities are also less self-regulated because they do not see the need to do so. Furthermore, students who hold the entity theory of intelligence (intelligence is fixed and stable) may think self-regulation is time consuming and the cost of adopting self-regulatory strategies are too high. In contrast, students who hold the incremental theory of intelligence (intelligence is changeable

and malleable through effort and learning) can see the advantages of using self-regulatory strategies in order to improve their skills, even if there are costs in terms of time and effort.

Self-regulation is an effortful and time-consuming activity, and requires much of an individual's mental effort and commitment (Pintrich & Zusho, 2008). Therefore, students who are personally interested in a task, or those who place high values on a task are more likely to be self-regulated. In other words, high interest and high value beliefs lead students to use more self-regulation learning strategies. Moreover, if students set their learning goals as learning and improving (mastery-approach goals), then they are more likely to use self-regulatory strategies, such as monitoring their performance and attempting to control and regulate their learning. Also, if students set their learning goals such as to outperform others (performance-approach goals), they are more likely to use self-regulatory strategies because they need to involve themselves in the tasks of besting others. On the other hand, if students set their learning goals as avoiding looking incompetence (performance-avoidance goals), they are less engaged in tasks and demonstrate less self-regulation. Students who can regulate their own cognition, motivation, behavior and their environment are more likely to be successful in academic setting. Further, older students are more able to self-regulate than younger students, and self-regulatory capabilities also increase as a student gains experience and expertise in doing a task. Both cognitive and motivational factors can facilitate and constrain the development of self-regulation in school contexts. In general, prior content knowledge, metacognitive knowledge, high self-efficacy, high interests and value beliefs, and mastery-approach goals lead individuals toward self-regulation.

2.3 Concepts of Test Anxiety

Test anxiety is basically a strong emotional reaction that an individual experiences before and during an examination (Akca, 2011).

Tobias (2014), defined test anxiety as an individual's physiological, cognitive, and behavioral responses that stimulate negative feelings about an evaluation. He proposed that when an individual becomes anxious, the physiological system becomes stimulated, causing faster heart beat and increased perspiration from the sweat glands, leading to feelings of apprehension and inadequacy. He believes that when experiencing test anxiety, individuals develop negative feelings about testing situations. It is a physiological condition in which people experience extreme stress and discomfort during or before test situation. These responses can drastically hinder an individual's ability to perform well and negatively affect their social, emotional and behavioural development and feelings about themselves and school (Salend, 2012)

Test anxiety is an overwhelming feeling of disturbance and distress among the students around the world. It is a type of performance problem just like when some people get nervous speaking to large crowds or trying something new. Test anxiety can be a devastating problem for many college and university students; because it may impair their academic achievement and well-being in the long run (Porto, 2013). Test anxiety produces psychological symptoms that build up in students before a test which include restlessness, unusual body movements, difficulty in concentration, insomnia, fatigue, muscles contraction, abdominal pain and tremor (Parviz & Alemi, 2010). A certain amount of test anxiety keeps us energized, motivated, alert, and focused but too much of test anxiety can result in emotional or physical distress, difficulty concentrating and emotional worry, which influence the academic performance and professional growth negatively. Test anxiety is "the set of phenomenological, psychological, and behavioral responses that accompany concern about possible negative consequences or failure on an exam

or similar evaluative situations" (Takahashi, 2015) defined test anxiety as the "reaction to stimuli that are associated with an individual's experience of testing or evaluative situations". Roy (2013) views test anxiety as a trait: a relatively stable personality characteristics that prompts an individual to react to threatening situations with sometimes debilitating psychological, physiological and behavioural responses. According to him, among these responses, the psychological effects on attention and memory have received much attention.

Test anxiety is basically a strong emotional reaction that an individual experiences before and during an examination (Akca, 2011). Usually, situations where individuals are allowed personal evaluation is termed an evaluative situation, which will potentially result in performance efforts geared towards high standards that lead to high levels of performance. On the other hand, when placed in an evaluative situation, distress regarding normative assessment, comparative and competitive behaviors will lead to heightened anxiety and disrupt students from focusing on doing what is necessary to successfully complete the test (Zeidner & Van Yperen, 2009). Therefore, this is detrimental towards the performance and will erode academic achievement by affecting the subject's mental health and academic life. The test anxiety construct is widely accepted to be multidimensional; consisting of the "worry" and "emotionality" components (Mobrary, 2016). Worry refers to the cognitive component of test anxiety, such as negative and derogatory self-statements related to failure. Emotionality refers to affective physiological component of test anxiety, the person's perception of autonomic arousal and tension.Test anxiety refers to the emotional reactions that some students have to examinations (Stober, 2013). Most students experience anxiety during examinations. When anxiety begins to affect some performance, it has become a problem. This is because the excessive fear of examinations interferes with one's ability to be successful.

2.3.1 Components of Test Anxiety

According to Stober (2013), the following are the components of test anxiety;

- The physical component
- The emotional component
- The mental component

The physical component involves the typical bodily reactions to anxiety: a knot in the stomach, hand wet and trembling, nausea, ache in the shoulders and back of the neck, dry mouth, and pounding heart.

The emotionality component involves fear, panic or breed as one student put it; “I become completely unglued” From the affective perspective, test anxiety causes some students to experience physiological reactions such as increased heart rate, feeling nauseated, frequent urination, increased perspiration and muscle spasms (Zeidner, 1998).

The mental or cognitive component involves problems with attention and memory “my mind jumps from one thing to another” and worries “I am certain to fail”. Students who experience test anxiety from the cognitive perspective are worriers lacking self-confidence. They may be preoccupied with negative thoughts, doubting their academic ability and intellectual competence (Sarason, 2009).Not only does test anxiety lead to failure to communicate what one knows in a test situation but also to poor self-esteem and stress related physical ailments. Sarason (2009) viewed test anxiety as conditions under which emotional distress distracts and eventually disrupts the performance of students on examinations

2.3.2 Signs of Test Anxiety

Wine (2014) maintained that there are several signs which indicate that a student is experiencing test anxiety which include the following: Physical manifestation including headache, stomach aches, frequent urination, tiredness, aches and pains and profuse sweating.

- Emotional reactions such as crying, sensitive hair trigger responses, irritability, excess giggling, sudden changes of expression and general unrest.
- Poor work habits, such as day-dreaming, disorganization, cheating, off task behaviour and lack of concentration.
- Nervous manifestation such as nervous ticks, nail biting, excessive blinking, hair chewing, finger sucking, fidgeting, rocking motions and chewing clothing.
- Misbehaviour and aggression such as breaking pencils, loss of temper, striking out, using bad language, quarrelling, bullying and destructiveness.
- Attention seeking, such as immature behaviours, seeking approval of others, demands for attention, making up bizarre stories, continuous questioning, clinging to the teacher, acting out and taking injuries.
- Self-destructive behaviours, such as not caring what happens and self-denigration.

We have all experienced it at one time or another. However, for some people, the level of anxiety experienced can be very unpleasant indeed and can in some cases lead to the person leaving the examination room, leaving the subject early, panicking of failing the test. This means that the level of anxiety can fluctuate over time in response to both internal and external stimulation. If an individual's experience is negative, then the test anxiety level will be higher leading to lower performance. Consequently, if an individual experience is positive, then the test anxiety level will be lower leading to higher performance.

According to Shamsuddin and Muhammad (2013), prior to, or during an exam, students may experience any of the following changes:

Physiological	**Emotional**	**Cognitive**
• Perspiration, sweaty palms	• Fear of failure	• Decreased ability to make decisions
• Diarrhea, indigestion, Vomiting	• Helplessness	• Memory loss/forgetfulness
• Headache/Stomachache	• Frustration/anger	• Limited attention span
• Trembling/Dizziness	• Shame/guilt	• Inability to concentrate
• Rapid heart beat	• Doubt/hopelessness	• Mental distraction
• Tense muscles	• Anxiety/panic	• Procrastination
• Poor eating habits	• Irritability	• Negative self-statements
• Poor sleeping habits or feeling tired	• Tearfulness	• Catastrophising
• Susceptibility to illness	• Moodiness	• Preoccupation with thoughts or tasks

2.3.3 Causes of Test Anxiety

In the educational context, test anxiety is not only due to the lack of students' motivation, or his/her insufficient skills, but it is also due to their misperception of courses and negative experiences in previous study classes. Harris (2012) concludes that "students with high level of

test anxiety show significantly less motivation in classrooms perceived as highly evaluative compared to students with low level anxiety". Hill (2013) opined that a variety of factors can contribute to a student's level of anxiety, examples include: past experience with courses, perception of course load, their inability to manage time, family issues and beliefs, which may have been shaped by a complex interplay of factors, may result to a unique reaction to a situation and lead to test anxiety. Wine (2014) attributed a pre-occupation with self-oriented negative thoughts as a cause of test anxiety. For example a student may feel that he is worthless, not competent or stupid. The harsh self-criticisms are likely to lead to poor self-esteem and a lack of self-confidence. Zatz and Chassin (2013) attributed a high number of off-task thoughts as a cause of test anxiety. Students may be distracted by other things that are going on in their lives. Many students have dysfunctional home lives, may be addicted to drugs or may have trouble in maintaining good relationships with their peers. Janis (2015) attributed poor study habits and test taking skills as a cause of test anxiety. Many students simply lack good test taking skills and good study habits because they have never learned to take tests, and study in efficient and meaningful ways. Lewis and Linder (2010) attributed an overly active sense of self-awareness as a cause of test anxiety. They found that the presence of an audience, even if it is just the teacher, induces a state of heightened self-awareness. They have also found that a sense of competition will lead to a heightened sense of self awareness. They stated that inward focused attention and a state of heightened self-awareness will increase performance up to a certain level but if the students become overly self-aware or inwardly focused, it will lead to performance decrements.

2.3.4 Skill-Deficit Model of Test Anxiety

The skill-deficit model considers the strategies that are used by students to prepare for the upcoming examination. Benjamin (2011) explained that test anxiety and poor achievement are

caused by lack of knowledge about preparation and test-taking skills. It is caused by inadequate learning which results in poor performance and manifest in a form of emotion that results from an awareness of being unprepared for the test. The skills deficit model claims that high test anxious students have difficulties learning and organizing materials, and that this results in poor test performance (Tobias, 2014). Students with high test anxiety deal with anxiety through avoidance (Appelhans & Schmeck, 2002). They minimize important differences and miss subtle cues about what is important to learn (Cassady & Johnson, 2009). Both avoidance of learning and minimization of attention lead to poor test performance. Their test setting anxiety comes from their realization that they are not prepared. The problem is not one of recall, but rather, a lack of preparation due to poor study skills. They do poorly because there is little learned information to recall. According to this model, increasing learning strategies reduces test anxiety because students understanding material and thus they can retrieve it. The model considers mostly the practical and preparedness aspects of test anxiety.

2.4. Concept of Academic Achievement

Academic achievement is viewed by Monk (2008) as the grade point average (CGPA). Gerda (2010) defines academic achievement as the attainment obtained by a child from lesson taught which may include experience, knowledge, skill and the like. He explained that the child's good or poor achievement does not depend on any attribute that the child is born with, but he has complex responses to his family, his home environment, his social contacts, his teachers and the overall climate of his school and assessment procedure. Academic achievement can be defined as excellence in all academic disciplines, in class as well as curricular activities. It includes excellence in sporting behaviour, confidence, communication skills, punctuality, arts, culture and many others which can be achieved only when an individual is well adjusted (Educational

Research and Essays, 2013). Ganai and Ashraf (2013) defined academic achievement as "knowledge attaining ability or degree of competence in school tasks usually measured by standardized test and expressed in a grade or units based on pupils' performance". Ganai (2013) refers to academic achievement as, "The knowledge obtained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher".

Broadly defined, Academic achievement concerns the development of motives, capabilities, interests and behavior that have to do with performance in evaluative situations. More specifically, the study of achievement during adolescence focuses on young people performance in educational settings and on their hopes and plans for future scholastic and occupational careers (Steinmayr, McElvany & Wirthwein, 2016). It can also be regarded as academic attainment that brings individual closer to the fulfilling of one's goals and dreams. Achievement is not just reaching an end such as being handed with ones diploma. It is a process and occurs because it is aspired and worked to make it happen. Invariably, academic achievement includes aspiration, effort and strategies for achieving better out comes. Achievement is a source of prestige, self-satisfaction and differential rewards, a means of evaluating performance and a goal towards ones efforts are directed. Hence, the key to achievement or success is making sure that planning, systematic time management, and organizing oneself is essential. The best way to plan systematically is to use a goal setting strategies which should be clear, direct as well as realistic and attainable to the capacity of an individual. This is because the perceived importance of task and the task importance related to future goal in the individual will increase the arousal of achievement motivation which leads to academic success (Ganai & Ashraf, 2013). Moreover, having state of mind about things, attributing success to ability and hard work and failure to lack of effort, taking appropriate risk

level and persistence in the face of difficult tasks, curiosity and confidence including anticipation of success are the ways to achievement and can contribute for improved academic achievement (Feather, 2014).

2.4.1 Relationship between Self-regulated Learning and Academic Achievement

The interest in self-regulated learning and academic achievement was initiated twenty years ago with the purpose of knowing how students control and shape their own learning processes (Zimmerman, 2008). Subsequently, SRL has continually gain popularity because it highlights the independence of the students to be responsible for their own learning (Turingan & Yang, 2009). Self-regulated learning as a concept has become highly relevant in understanding learning and academic achievement especially in tertiary institutions where distinctive demands are placed on students (Cassidy, 2013). Though several key theoretical perspectives have been put forth for self-regulated learning, there is consensus regarding the central role played by students' perceptions of themselves as learners. Murphy (2010) confirmed that self-regulated learning is significantly related to academic achievement. Cassidy (2013) noted how intense interest in self-regulation has recently contributed to effectual learning and academic achievement processes. They conceptualized self-regulated learning as the way in which learners control their thoughts, feelings and actions in order to achieve academically and in a climate of rapid change in human context with a particular emphasis on technological advancement. They considered self-regulated learning to be an essential requirement for individuals, particularly with regards to maintaining the capacity for lifelong learning and employment. SRL is now considered as an important concept in the educational field. Currently, the ability to self-regulate learning is perceived by educational psychologists and policy makers as an important component for learning not just in school but in all aspects of life (Boekaerts, 2014).

Research indicates that when students are self-regulated in learning, they tend to be self-regulated in other aspects of their lives as well. For example, adolescents who tend to set goals and consciously plan their academic studies, are likely to plan other areas of their lives such as their friendships, their health and fitness programmes, their involvement with their families and the community, their engagement in the environment as well as personal well-being activities (Purdie, Carroll & Roche, 2011). Motivational, self-regulated strategies have also been found as the best predictor of students' high school diploma grades and for those who have intention to further their education (Zimmerman, 2008). Self-regulated students have high motivation and adaptive learning methods thus, tend to be successful in their academic work, and optimistic about their future (Zimmerman, 2002).

2.4.2. Relationship between Test Anxiety and Academic Achievement

Academic achievement is a critical issue in university education. Research findings indicated that psychophysiology difficulties produce in turn affects the achievement of students academically (McCrathy, 2007).Academic achievement can be explained using attribution theory (Weiner, 1986). Attribution theory is a cognitive theory of motivation which states that a relationship between student's beliefs regarding cause of success or failure and the ways these beliefs are internalized will influence student's academic achievement, expectation to success and self-concept. Karata, Alci and Aydin (2013), there is a very strong connection between test anxiety and academic achievement. High level of test anxiety is associated with such components as worry (cognitive) components during stressful activities that subsequently lead to interruption in the performance of the students and reduction of efficiency. In the study conducted by Steinmayr, Crede and Wirthwein (2016) on subjective wellbeing, test anxiety and academic achievement: testing for reciprocal effects found out that worry negatively predicted

changes in students' CGPA. Duty, Christian, Loftus and Zappi (2016) conducted a study in which cognitive component of test anxiety was correlated with academic performance among nursing students. The result indicated modest but statistically significant lower examination grade T scores in students with high test anxiety compared with low level of test anxiety.

Turgay (2011) conducted a study which investigated the relationships among study habits, test anxiety, achievement, motivation, and academic success with 510 Turkish tenth grade high school students. He states in his study that the worry dimension of test anxiety was negatively associated with academic success.Another study was conducted in Iran by Fayegh Yousefi, Talib,Mansor, and Redzuan (2010). The purpose of this study was to determine the relationship between test anxiety and academic achievement among adolescents in Sanandaj, Iran. In this article, a self administered questionnaire was used for data collection which includes a Test-Anxiety Inventory (TAI), Grade Point Average (GPA) score and personal information. The results showed that there was a significant correlation (r= -0.23, p=.000) between test anxiety and academic achievement among 400 adolescents. In another study, Rana and Mahmood (2012) tried to find the relationship between test anxiety and academic achievement. Their study showed that there is a significant negative relationship between test anxiety scores and students' achievement scores.

According to Zeidner (2008), test-anxiety is a multidimensional sign that can be described as a group of phenomenological, physiological, and behavioral reactions to appear with possible negative consequences or failure on an examination or similar evaluative situation. Test-anxiety, especially worry has impact on academic performance, and working memory (Eysenck, 2001).The materials used consisted of three types of questions: thirteen multiple-choice questions, eight short-answer questions and two essay questions. The questionnaire

administered after the final examination were utilized to examine their perceptions about feeling anxious, their difficulties in learning the material, their study hours in general and the grade point average. In addition, Sarason (2009) found that test anxiety decreases attention span, memory and concentration, and then leads to low academic achievement. He also found that high school students with high test anxiety had a poor school achievement. Thus, test anxiety contributes to academic achievement because of vulnerability to distraction and interference experienced by students. It is worth discussing some studies showing a statistically significant inverse relationship between test anxiety and students' achievement since long time. Gaudry and Spielberger (1980) discussed that high test anxiety is considered as one of the main factors for low achievement of students at university level.

Vogel and Collins (2012) investigated the effect of test anxiety on academic achievement. They found that students with high test anxiety as well as those students with low test anxiety showed lower academic achievement. Moreover, those students with moderate levels of test anxiety achieved well. Findings showed that having very little or no anxiety usually results in very poor academic achievement, probably because we are indifferent and careless. As nervousness about the test increases, performance also improves up to a point but having more anxiety than a moderate amount negatively affects academic achievement. That is, as anxiety continues to go up, achievement declines.

Hancock (2001) investigated the effects of students' test anxiety and teacher's evaluation practices on students' achievement and motivation at post-secondary school level. He found statistically significant results, which revealed that all students, especially students with high anxiety level, performed poorly and were less motivated to learn. Thus, he concluded that when test-anxious students are exposed to a highly evaluative assessment environment in their

educational institution, they perform poorly and are less motivated to perform (Hancock, 2001).

Getu (2010) investigated the relationship between test Anxiety, study habit parental involvement and academic achievement of grade ten students in Addis Ababa. Correlational design was adopted for the study and ten (10) secondary schools were selected for the study. The study generally addressed the relationship between the given variables. In this paper the relationship between test anxiety and academic achievement are dealt with. The result is that there is negative correlation between the two variables.

2.5 Theoretical Perspective

2.5.1 Cognitive Constructivist Theory (1972)

The Russian psychologist Lev Vygotsky believed that people and their cultural environments constitute an interactive social system. Children develop competence (language, symbols) by observing people's communication and actions within their environment. By using these tools within the social system, the children develop higher level of cognitive functions such as problem solving and self-regulation which transit to coordination of mental processes hence, memory, planning, synthesis and evaluation. A student's self-regulated learning processes reflect those things that are valued and taught in the environment of the student. Social context therefore, plays a crucial role in formulating students' cognitive functions, and must be explained as the product of social interactions. According to Vygotsky, personal processes, behaviours, and environment interact reciprocally to influence learners' functioning and determine any changes needed to modify their cognition, perceptions, strategies, emotions and behaviours. This reciprocal causation is the one most well fitted to self-regulated learning because of the dynamic nature of its triadic elements during the learning process, as these elements must be subject to

self-monitoring for the purpose of adjusting students' cognition, strategies, affects and behaviours.

Another Vygotskian concept is the Zone of Proximal Development. Vygotsky (1978) defined ZPD as the "distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers". Initially, children's actions are directed by language (speech) of others, but children gradually internalize this self-directing language and use it to self-regulate. Through interaction with adults in the ZPD, children make the transition from behaviours regulated by others to behaviours regulated by themselves. Vygotsky (1978) believed that when a learner is at the ZPD for a particular task, provision of appropriate assistance (scaffolding) will boost the learner's ability to achieve the task. Once the learner, with the benefit of scaffolding master the task, the scaffolding can then be removed and the learner will then be able to complete the task again on his own. Eventually the zone is changed to reflect new, higher-order learning.

The cognitive constructivist view of cognitive functioning assumes that students directly impact their SRL by taking an active role during their learning and memory recall. In general, cognitive constructivists do not see motivation as a separate process; instead they presumed that the construction of meaning occurs through interaction with the world. According to this view, self-regulation does not occur until the child reaches Piaget's formal operational stage where the students are able to create hypotheses about their learning and test them.

2.5.2 Beck's Cognitive Theory (1983)

Central to Beck's cognitive theory is the construct of schema. Beck defined schema as stored bodies of knowledge (mental representations of the self and prior experiences) that are

relatively enduring characteristics of a person's cognitive organization. When an individual is confronted with a situation, the schema most relevant to the situation is activated. Schema activation subsequently influences how the person perceives, encodes, and retrieves information regarding the situation. Beck (1983) hypothesizes that schemata are typically organized as sets of dysfunctional attitudes such as "If I fail at my work then I am a failure as a person." Among individuals who possess anxiety schema, the occurrence of evaluative events triggers a pattern of negatively biased self-referent. Information processing characterized by negative errors in thinking increase the likelihood that the individual will develop negative cognitive triad, comprising three types of anxious thought patterns: negative views of the self (e.g., the belief that one is deficient, inadequate or unworthy), negative views of the world (e.g., construing life experiences in terms of themes of defeat or disparagement) and negative views of the future (e.g., the expectation that one's difficulties will persist into the future and there is nothing one can do to change this). According to the theory, the development of the negative cognitive triad triggers the onset of anxiety symptoms.

The way students perceive their mental ability and past experiences as regards to assessment can become a schema (stored bodies of knowledge) that triggers irrational fear that is capable of eroding their academic achievement.

2.5.3 Walberg's Theory of Educational Productivity (1981)

Walberg in his theory demonstrated the importance of the domains of motivational orientations, self-regulated learning strategies, and social/interpersonal abilities in facilitating academic achievement. The theory states that there are nine central variables that were found to impact academic achievement. These nine factors include (a) ability or prior achievement, (b) age, (c) motivation or self-concept, (d) quantity of instruction, (e) quality of the instructional

experience, (f) the home environment, (g) the classroom or school environment, (h) the peer group environment, and (i) the mass media (Walberg, 1981).

The first three variables in Walberg's model (ability, age, and motivation) can each be seen as internal traits to the learner or student aptitude (Walberg, Fraser, Welch, 1987). Ability or prior achievement, for Walberg, includes factors that can be measured by "the usual standardized test" (Walberg & Tsai, 1985). These factors would include the learner's aptitude, ability, and IQ, as well as previous achievement (Keith, 2002). In his research Walberg has attempted to keep the age variable as a constant. Motivation or self-concept, in the Walberg model, is operationalized as scores on personality tests of the student's willingness to persevere intensively on learning tasks (Walberg & Tsai, 1985).

The next two variables, quantity of instruction and quality of the instructional experience, examine instructional factors (Walberg, Fraser, Welch, 1987). Quantity of instruction is described as the amount of time students engage in learning (Walberg & Tsai, 1985), including the time scheduled, allowed, or assigned for a given instructional unit by the teacher, as well as the fraction of this time the student actually spends learning the content (Walberg, 1981). Walberg measured quantity of instruction through reports of weekly homework and class attendance (Reynolds & Walberg, 1992). In addition, this variable has been measured through effective use of class time, interruptions during class, and teachers' ability to gain students' attention quickly. Quality of the instructional experience includes psychological and curricular experiences, and can be seen as the appropriateness of the instructional experience (Reynolds & Walberg, 1992).

The final variables: home environment, classroom or school environment, peer group environment, and mass media, are characterized as environmental factors (Walberg, Fraser,

Welch, 1987). Home environment refers to the support given to students while at home. It has been measured in various ways, including family interest in school (Wentzel, 1991), parental education (Reynolds & Walberg, 1992), number of times the dictionary is used at home (Walberg & Tsai, 1985), and home socioeconomic status (Ma & Wang, 2001). Classroom and school environment, including classroom morale (Keith, 2002), refers to the classroom as a social atmosphere and has been measured through access to classroom materials (Walberg & Tsai, 1985). Others have measured classroom and school environment through student reports of feeling put-down by the teacher or by other students in the classroom (Ma & Wang, 2001). Peer group experience refers to how well students get along with each other outside of the school environment (Walberg & Tsai, 1985). The mass media variable refers to the minimum leisure-time spent in viewing television (Walberg & Tsai, 1985), and the reading of books or magazines (Reynolds & Walberg, 1992).

This theory plays a fundamental role in its application to academic achievement as it tries to shed some light on various factors that promote students' academic achievement in schools. This is due to a fact that Walberg targeted students' learning characteristics such social, behavioural, motivational, affective, cognitive, and meta-cognitive as the set of variables with the most potential for modification that could, in turn, significantly and positively affect students' outcome. The theory also makes it clear that no one variable can work in isolation and that they are all linked.

2.6 Review of Empirical Studies

John and Ademola (2014) carried out a study on self-regulation and peer influence as determinants of Senior Secondary School students' achievement in science. Descriptive research design was used to carry out the study. Two hundred and four (204) were randomly selected

from the three geopolitical zones of Katsina State. Three instruments were used to collect the data for the study which include; Self-regulation Questionnaire (SQ), Peer Influence Questionnaire (PIQ) and Science Achievement Test (SAT). Data collected were analyzed using Multiple Regression, Linear Regression, Pearson Product Moment Correlation Coefficient and t-test. The findings revealed that self-regulation and peer influence together accounted for 1.2% of the total variance in science achievement. Self-regulation alone accounted for 0.8% of the total variance in science achievement, peer influence alone accounted for 0.0% of the total variance in science achievement. There was a positive significant relationship between self-regulation and science achievement. There was no significant difference between male and female students in self-regulation, peer influence and science achievement.

Tunde (2015) examined the relationship between self-regulated learning strategies and students' performance in Chemistry. Two hundred (200) senior secondary school students from four co-educational institutions in Akure South Local Government Area in Ondo State, Nigeria, constituted the sample. This study adopted correlational type of design. The instruments used were Chemistry Achievement Test (CAT) and Self-regulated Learning Questionnaire (SRLQ). Data collected were analyzed using mean, standard deviation and PPMC(r). It was observed that time management, study environment and help-seeking had positive coefficient at 0.05 level of significance. The result of the study showed that self-regulated learning strategies have significant relationship with students' academic performance in chemistry.

Radovan (2011) examined the relationship between distance learning students' motivation, their use of self-regulated learning strategies and students' academic success with a sample of 319 students (83 males and 236 females). The self-regulated learning dimensions consisted of memory strategy, elaboration, self-efficacy, intrinsic goal, extrinsic goal and time

organization. The students' success was measured by the number of examinations written, the frequency of repetition of the examination and average course achievement. Questionnaire was used for the collection of the data. The study revealed that among the key self-regulated learning dimensions that contributed to better academic achievement is memory strategy in the distance education programme.

Chen (2012) examined the relationship between SRL strategies and academic achievement. The study used an introductory course in information systems with a sample of 197 students. The information system course had a 60% delivery by lecture and a 40% delivery by computer. The SRL strategies involved meta-cognitive self-regulation, the management of time and the study environment, the regulation of effort, peer learning and help-seeking. It was found that effort regulation seemed to help the students to do well in the lecture-type of learning environment. The students could control distractions and concentrate to learn computer concepts, so that they achieved high test scores. On the other hand, peer learning did not seem to help the learning of computer concepts, and this approach led to relatively low test scores. However, it was difficult to determine with certainty which strategies were effective for computer laboratory assignments, as the data did not fulfill the assumption of normality. The engagement of the students' SRL was highly related to their efficacy beliefs about their ability to do classroom tasks, and to the beliefs that they had about classroom tasks being interesting and worth learning (Pintrich & DeGroot, 2008). The students' perceptions of efficacy were found to greatly predict their actual goal setting and their academic success.

Al-Jarrah's (2010) study examined the relationship between SRL and academic achievement of university students, SRL scale by Magno (2010) was used on a sample of 331 male and female undergraduate students from Yarmouk University. The hypotheses were tested

using PPM(r). The results of his study revealed that there were statistically significant relationship in academic achievement between students with high/ low scores on the SRL components of goal setting and planning, rehearsing and memorizing in the favor of the students with high level SRL, and that keeping records and monitoring, and goal setting and planning components predict academic achievement among students.

Bail (2011) investigated the impact of SRL skills on performance, graduation rate of college students and academic achievement in University of Hawaii. The population of 79 students forming the experimental group was subjected to SRL skills development training program, while the 78 constituting the control group were not subjected to this program. Quasi experimental design was adopted for the study. The findings of the study showed that the students of the experimental group who developed their SRL skills demonstrated better academic achievement than those students in the control group.

Peng (2012) examined the relationship between self-regulated learning behavior of college students of science and their academic achievement. Sample of 101 college students from Jilin Normal University in Chine participated in the study; 54% were males. Correlational design was adopted for the study and PPMC(r) was used to test the hypotheses. Findings showed that self-regulation, cognitive strategies, were important predictors of academic achievement in science. His study indicated that SRL improves students' self-satisfaction and their motivation, and therefore enhances their academic achievement.

Muhammad and Abubakar (2015) examined the relationship between SRL and academic achievement among University undergraduate students in Malaysia. Correlational design was used with the sample of 364 students from nine colleges was selected randomly. Results showed

that there is a relationship between SRL and academic achievement, and SRL serves as a good predictor of higher academic performance (GPA).

Eshel and Kohavi (2013) examined the relationship between self-regulation strategies, self-control and academic achievement. Sample was comprised of 302 sixth graders; 163 girls and 139 boys in Israel. Results indicated that higher mathematics scores are also related to positive self-efficacy with intrinsic value, and cognitive strategies to self-regulated learning. Furthermore, the use of SRL strategies was higher when the students had a higher perceived control than the teachers.

Alegre. (2014) investigated the relationships among academic self-efficacy, self-regulated learning and academic performance in first-year university students. The total population consists of undergraduate students at a private university in the Metropolitan Lima area. The research design is correlational. General Academic Self-Efficacy Questionnaire prepared and validated by Torre (2006), based on the Bandura self-efficacy social cognitive theory and directed towards university students was used for the academic performance and self-regulated learning and students' academic record (second semester CGPA) was considered. The data analysis was carried out using the version 20.0 of the SPSS (Statistical Program for Social Science). The association between the study variables was established through the PPMC(r), and the alpha value (α) for statistical tests was set to 0.05 level of significant. Result showed self-efficacy and self-regulation are very important motivational processes to obtain a better academic performance in students, since they make them feel competent and have full confidence in their own abilities, resulting in high expectations for themselves, valuing assigned tasks and activities in a positive manner and make them feel responsible for complying with their objectives.

Ismail and Sharma (2012) investigated the relationship between SRL strategies and academic achievement among 236 undergraduate university students across different academic levels majoring in English at a Saudi Arabian University. Correlational research design was adopted for the study. Result revealed that there is a positive relationship between SRL strategies and academic performance (in term of student's GPA), and these strategies can explain a significant amount of variation in the students' GPA.

Ablard (2008) investigated the relationship between Self-regulated Learning and academic Achievement. A sample of 222 high-achieving seventh-grade students participated in the study; 53% were boys. Results of responses to the Self-regulated Learning Interview Schedule indicated that the most reported strategies were self-evaluation, goal setting, planning organization and transformation, monitoring, record keeping, seeking assistance from adults, note review and text review. However, the students only used on average one of these strategies, while the particular strategies used varied greatly. The authors concluded that learning goal is an intrinsic part of the iterative nature of self-regulation. The study revealed that goal setting as learning strategy is the most significant predictor of academic achievement among undergraduate students. Gender differences were also noted, suggesting that girls use more self-regulatory strategies than boys do when performing difficult reading and writing tasks.

Afolayan (2013) investigated the relationship between test anxiety and academic achievement of nursing students,Niger Delta University, Bayelsa State, Nigeria.

This study focused on 200 levelstudents of the Faculty of Nursing, College of Health Sciences, Niger Delta University, Amassoma in Southern IjawLocal Government Area of Bayelsa State. The criteria for selection was that 200 level is a transition stage for nursing students from pre-clinical to clinical; also it is at this level that the students take all the basic medical courses such

as anatomy, physiology, medical microbiology and biochemistry alongside other external courses. A purposive sampling technique was used to select 50 students out of 100 students from 200level in the faculty of nursing science. Data were collected by using the Test Anxiety Inventory (TAI) developed by Spielberger. Pearson moment correlation coefficient (r) was used for the data analysis. Result showed r = 0.543, P= -0.021. It was found that a significant negative relationship exists between test anxiety and students' achievement. Therefore, it is concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test anxiety.

Yousefi, Talib, Mansor, Juhari, & Redzuan (2010) who examined the relationship between test anxiety and academic achievement among Iranian Adolescents. The population for this study comprised nine public high schools randomly selected among the 33 public high schools in Sanandaj, Iran. They were divided into subgroups, particularly gender and age group. The respondents comprised of 400 students (200 boys and 200 girls) in the age range and stratified random sampling method was employed. A self-administered questionnaire was used for data collection which includes a Test Anxiety Inventory (TAI) (Spilberger 1980), Grade Point Average (GPA) score and personal information. PPMC(r) was used to determine the relationship between test anxiety and academic achievement as the dependent variable. The result revealed that test anxiety and academic achievement were significantly correlated, (r=-.22, p≤.000). The negative relationship connotes that as test anxiety increases, respondent's academic achievement decreases and vice versa.

Turgay (2011) conducted a study which investigated the relationships among study habits, test anxiety, achievement, motivation, and academic success with 510 Turkish tenth grade

high school students. He states in his study that the worry dimension of test anxiety was negatively associated with academic success.Another study was conducted in Iran by Fayegh Yousefi, Talib,Mansor, and Redzuan (2010). The purpose of this study was to determine the relationship between test anxiety and academic achievement among adolescents in Sanandaj, Iran. In this article, a self administered questionnaire was used for data collection which includes a Test-Anxiety Inventory (TAI), Grade Point Average (GPA) score and personal information. The results showed that there was a significant correlation (r= -0.23, p=.000) between test anxiety and academic achievement among 400 adolescents. In another study, Rana and Mahmood (2012) tried to find the relationship between test anxiety and academic achievement. Their study showed that there is a significant negative relationship between test anxiety scores and students' achievement scores.

2.7 Summary

This chapter presents a thorough review of relevant literature of the study. From the literature, self-regulated learning is a self-directive process that enables students to transform their mental abilities into academic skills, and it is a regular and mental knowledge process in which learners engage very actively until their learning objectives are realized. It emphasizes autonomy and control by the individual who monitors, directs, and regulates actions toward goals of information acquisition, expanding expertise, and self-improvement. The concept of test anxiety is defined as the set of phenomenological, psychological, and behavioral responses that accompany concern about possible negative consequences or failure on an exam or similar evaluative situations. These responses can drastically hinder an individual's ability to perform well and negatively affect their social, emotional and behavioural development and feelings about themselves and school. The concept of academic achievement was equally explained as

while as the relationship between self-regulated learning and academic achievement, relationship between test anxiety and academic achievement. Furthermore, relevant theories were reviewed which include Vygotsky's cognitive constructivist theory, Beck's cognitive theory andWalberg's theory of educational productivity. Last segment presents related empirical studies.

From the literatures reviewed, so much work had been done on self-regulated learning but majority are foreign studies. The few researches conducted in Nigeria on self-regulated learning was carried out using secondary school students as the population. Most of the studies looked at other sections of self-regulated learning strategies such as metacognition, record keeping, motivation, time management and planning. However, the uniqueness of this study is established in the sense that, it focuses on the relationships among self-regulated learning, test anxiety and academic achievement as the main variables of the study; taking into consideration goal setting, memory strategy, seeking strategy, self-evaluation as the indices of self-regulated learning as well test anxiety among undergraduate students of Ahmadu Bello University Zaria.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research method that was used in this study. These include research design, population, sampling techniques, instrumentations, validity of the instruments, pilot study, reliability of instruments, procedure for data collection and procedure for data analysis.

3.2 Research Design

The research design that was adopted in conducting this research is correlational design. This is because the study seeks to establish relationships among variables and all hypotheses are based on relationships. Paul (2016) stated that correlational design is a type of non-experimental design in which the researcher measures two or more variables and assesses the statistical relationship between them with little or no effort to control extraneous variables. Correlational design study examines whether an increase or decrease in one variable leads to increase or decrease in another variable. Therefore, correlational design was used in this study because the study seeks to find relationships among self-regulated learning, test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria.

3.3 Population

The total number that constituted the population for thestudy was seven hundred and forty seven undergraduate students (747) from 300L. Five Faculties constituted the population for the study and in every Faculty, only one Department was considered.

Table 3.3.1: Distribution of the Population of 300 Level Students of Ahmadu Bello University Zaria According to five Faculties and Percentage

NO	Faculty	Population	percentage
1	Art	122	16.3
2	Education	256	34.3
3	Physical Sciences	161	21.6
4	Environmental design	40	5.4
5	Life Science	168	22.4
	TOTAL 747		**100%**

Source: Management and Information System Unit, Ahmadu Bello University Zaria 2017/2018 Session

3.4 Sample and Sampling Technique

Simple random sampling technique was used to select five faculties as well as five Departments for the study using balloting method. According Abdullahi (2015), simple random sampling technique is a method of selecting a portion of population such that each member of the population has equal chance of being selected. While purposive sampling technique was used to target three hundred level students. The reason for purposive sampling technique is that it is characterized by the use of judgment and deliberate effort to obtain representative samples (Kerlinger in James 1997). The selected Departmentshas a total number of seven hundred and forty-seven (747) students. Seven (7) questionnaires represented research mortality. Below is the table showing the sample size. Using Research Advisors (2006) table for determining sample size from a given population at 5% two hundred and forty-eight (248) respondents were used for this study.

Table 3.4.1: Distribution of the Sample of 300 Level students, Ahmadu Bello University Zaria According to their Faculties and Departments.

Faculties/ Departments	Population	Male	Female	Sample Size
Arts				
B.A Arabic	122	109	13	39
Education				
B.Ed Social Studies	256	169	87	83
Physical Sciences				
B.ScGeography	161	117	44	52
Environmental Design				
B.A Fine Arts	40	30	10	13
Life Sciences				
B.Sc Microbiology	168	67	101	54
Total	**747**	**492**	**255**	**241**

3.5 Instrumentation

Two main instruments were used for this study. The instruments are Self-regulated Learning Scale and Test Anxiety Inventory. CGPA of students was used to measure academic achievement. The instrument comprised of three sections. Section A, Biographic Data of the Students, Section B, Self-regulated Learning Scale, Section C, Test Anxiety Inventory.

Moreover, the self-regulated learning scale was adopted from Magno (2010) and test anxiety inventory was also adopted from Taylor (2002). The instruments were found valid and reliable for this type of research.

3.5.1 Self-regulated Learning Scale

This instrument is a standardized one that seeks to determine aspect of self-regulated learning of students. The 40 items instruments concentrate on issues such as I record lessons that I attend, I make my own note in the class, I share learned ideas with my friend, I welcome

feedback on my work, and many more. It has five points likert scale which consist of strongly agreed (SA), Agreed (A), Not Sure (NS), Disagree (D), Strongly Disagree (SD) which represent students' feelings.

3.5.2 Test Anxiety Inventory

This instrument is also a standardized one which is designed to measure test anxiety of the students. It includes issues such as having to face an important test disturbs my sleep, people will question my ability if I do poorly in test, I never seem to be fully prepared to take test, I would rather take a test than to write a paper and many more. The instrument has 20 items. The instrument comprised of both positive and negative items. Therefore, the score of the negative items were reversed. Item number 1, 2, 5, 6, 8, 12, 14, 15, 17, 18 and 20 are positive while item number 3, 4, 7, 9, 10, 11, 13, 16 and 19 are negative.

3.5.3 Cumulative Grade Point Average (CGPA)

Theinstrument that was used in measuring the academic achievement of the undergraduate students for this study was the second semester CGPA of their previous class. After obtaining an introductory letter from the Department of Educational Psychology and Counselling, Faculty of Education, ABU, the researcher was given the needed data from the various Faculties.

3.5.4 Validity of the Instruments

To ascertain the validity of the instruments, scholars in the Department of Educational Psychology and Counselling, Faculty of Education, ABU Zaria validated the instruments to determine content validity, their relevance and appropriateness in the study. Necessary corrections, suggestions and observations were made in order to ascertain the validity of the instruments. Some words were wrongly spelt by the researcher and were observed by the

scholars. All the corrections, suggestions and observations pointed out were noted and effected properly.

3.5.5 Pilot Study

The pilot study was carried out in Kaduna State University (KASU) with the purpose of establishing internal consistency of Self-regulated Learning Scale and Test Anxiety Inventory after adoption of the instruments. This is because the instruments adopted are foreign. Few researchers who have used these instruments in their research work used secondary schools students as their population. Based on these reasons, the researcher thought it wise to carry out pilot study considering the fact that her population is University undergraduate students. Before going for pilot study, the researcher collected an introductory letter from the Department of Educational Psychology and Counselling, Faculty of Education, ABU Zaria to Kaduna State University where the researcher after introducing herself and research area to the students, solicited their support to fill the items accordingly as it best describe their feelings and promised to keep the information highly confidential as it is going to be used solely for the purpose of research. The researcher administered 40 copies each of SRL-S and TAI, among 300 level undergraduate students of the various faculties with the help of a research assistant (none academic staff) who assisted in directing the researcher to various faculties. These students are not going to participate in the main study, but have similar characteristics in all respect. Data collected from pilot study was analyzed and internal consistency of test reliability co-efficient was obtained.

3.5.6 Reliability of the Instruments

The reliability of instrument using Cronbach alpha reliability method was used to test the reliability of the instruments. Split-half method of reliability was used to obtain the internal

consistency of the instruments.The reliability was done for each section of self-regulated learning. The reliability for goal setting was .795, for memory strategy it was .751, for help-seeking strategy it was .706 and for self-evaluation it was .825 while there reliability for items under test anxiety was .802 respectively. This reliability coefficient obtained for the items in this study titled relationships among self-regulated learning, test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna State, Nigeria showed the instrument as reliable and fit for the main work since the calculated reliability coefficient is close to 1 than to 0.

3.6 Procedure for Data Collection

Before going to the field, the researcher collected an introductory letter from the Department of Educational Psychology and Counselling, Faculty of Education, Ahmadu Bello University Zaria. The letters was delivered to the Deans of the five faculties where research was carried out. After permission from the Deans of the faculties, the researcher introduced herself and the research assistant to the respondents in their lecture halls, classes and tell them the purpose of her coming and ensured them absolute confidentiality of information they gave as it was going to be used solely for the purpose of research work. The researcher and her research assistant whom she got acquainted with the content of the instruments and also trained on procedures involved in both administration and collection of items administered the instruments adopted for this study (Self-regulated Learning Scale and Test Anxiety Inventory). After filling the items by respondents, the researcher collected the items for analysis.

3.7 Procedure for Data Analysis

The data collected was analyzed using descriptive and inferential statistics. Frequency counts and percentage was used to analyze Bio data of the subjects, mean and standard deviation

was used to answer the research questions raised and Pearson Product Moment Correlation Coefficient(r) was used to test all the five hypotheses respectively. The hypotheses were tested at 0.05 alpha level of significance.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This study seeks to determine the relationships among self-regulated learning, test anxiety and academic achievement of undergraduate students, Ahmadu Bello University Zaria. A total of 248 students were sampled out for the study, out of which a total of 241 responses were collected. The statistical package of version IBM 23 was used for the analysis of the data collected from 241 respondents. The data analysis was presented in sections. Section one presents bio data variables of the respondents which include the gender and age. The bio data variables were presented in frequency and percentages. Section two answered the five research questions. The research questions were answered using item means, frequency of options of strongly agree, agree, not sure, disagree and strongly disagree and a cumulative mean in each section which was compared with a decision mean of 3.0. The decision mean was computed based on the 5-Likert scale, thus (5+4+3+2+1)/5 =3.0 and section three testing of five research hypotheses. All the null hypotheses were tested using Pearson Product Moment Correlation Coefficient(r) since we are looking for relationship. All hypotheses were tested at 0.05 alpha level of significance. The summary of all the major finding was presented as well as discussion of findings.

Table 4.2.1 Analysis of Demographic Variables

Gender

Gender	Frequency	Percentage
Male	125	51.9
Female	116	48.1

Total	241	100

The table above shows distribution of respondents by gender. 125 representing 51.9% out of the 241 respondents were male while 116 representing 48.1% were female.

Table 4.2.2: Distribution of Respondents based on Age

Age group	Frequency	Percent
16-20	50	20.7
21-25	159	66.0
26-30	29	12.0
31 and above	3	1.2
Total	241	100.0

Table 4.3 above shows the distribution of respondents by age. 50 out of 241 respondents representing 20.7% falls within the age bracket of 16-20years, 159 respondents representing 66.0% falls within the age bracket of 21-25years, 29 respondents representing 12.0% falls within the age bracket of 26-30years, 3 respondents representing 1.2% falls within the age bracket of 31 years and above.

4.3 Testing of Hypotheses

Hypothesis One: The null hypothesis stated that there is no significant relationship between goal setting and the academic achievement among undergraduate students of Ahmadu Bello University, Zaria.

Table 4.3.1: Pearson Product Moment Correlation Coefficient(r) statistics on the relationship between goal setting and academic achievement among undergraduate students of Ahmadu Bello University, Zaria.

Variables	N	Mean	SD	Df	r	P
Goal Setting	241	38.7469	7.91769	239	0.605	0.039
Academic Achievement	241	3.1502	.71649			

Correlation is significant at 0.05 level (2 tailed)

Result of the table 4.3.1 revealed that significant relationship exists between goal setting and academic achievement among undergraduate students of Ahmadu Bello University, Zaria. Reason being that0.05 alpha level of significance is greater than the calculated p value of 0.039. This shows that the higher the goal settings of the students, the higher their academic achievement and vice versa. Therefore, the null hypothesis which states that there is no significant relationship between goal setting and the academic achievement among undergraduate students of Ahmadu Bello University, is hereby rejected.

Hypothesis Two: The null hypothesis stated that there is no significant relationship between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University, Zaria.

Table 4.3.2: Pearson Product Moment Correlation Coefficient(r) statistics on the relationship between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University, Zaria.

Variables	**N**	**Mean**	**SD**	**Df**	**r**	**P**
Memory strategy	241	36.625	5.08246			
				239	0.736	0.044
Academic Achievement	241	3.1502	.71649			

Correlation is significant at 0.05 level (2 tailed)

The result of the table 4.3.2 showed that significant relationship exists between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University, Zaria. Reason being that0.05 alpha level of significance is greater than the calculated p value of 0.044. This shows that the higher the memory strategy of the students, the higher their academic achievement and vice versa. Therefore, the null hypothesis which states that there is no significant relationship between memory strategy and the academic achievement among undergraduate students of Ahmadu Bello University, Zaria is hereby rejected.

Hypothesis Three: The null hypothesis stated that there is no significant relationship between help-seeking strategy and the academic achievement among undergraduate students of Ahmadu Bello University, Zaria.

Table 4.3.3: Pearson Product Moment Correlation Coefficient(r) statistics on the relationship between help-seeking strategy and the academic achievement among undergraduate students of Ahmadu Bello University, Zaria

Variables	N	Mean	SD	Df	r	P
Help-seeking strategy	241	37.8838	7.78962	239	0.883	0.022
Academic Achievement	241	3.1502	.71649			

Correlation is significant at 0.05 level (2 tailed)

Result of the table 4.3.3 showed that significant relationship exists between help-seeking strategy and academic achievement of ABU students. Reason being that 0.05 alpha level of significance is greater than the calculated p value of 0.022. This shows that the higher the level of seeking assistance of the students, the higher their academic achievement and vice versa. Therefore, the null hypothesis which states that there is no significant relationship between help-seeking strategy and the academic achievement of students of ABU, is hereby rejected.

Hypothesis Four: The null hypothesis stated that there is no significant relationship between self-evaluation and the academic achievement among undergraduate students of Ahmadu Bello University, Zaria.

Table 4.3.4: Pearson Product Moment Correlation coefficient(r) statistics on the relationship between self-evaluation and the academic achievement among undergraduate students of Ahmadu Bello University, Zaria.

Variables	N	Mean	SD	Df	r	P
Self-evaluation	241	40.4357	6.00807	239	0.228	0.033
Academic Achievement	241	3.1502	.71649			

Correlation is significant at 0.05 level (2 tailed)

Result of the table 4.3.4 showed that significant relationship exists between self-evaluation and academic achievement among undergraduate students of Ahmadu Bello University, Zaria. Reasons being that0.05 alpha level of significance is greater than the calculated p value of 0.033. This shows that the higher the self-evaluation of students, the higher their academic achievement and vice versa. Therefore, the null hypothesis which states that there is no significant relationship between self-evaluation and the academic achievement among undergraduate students of Ahmadu Bello University, Zaria is hereby rejected.

Hypothesis five: The null hypothesis stated that there is no significant relationship between the level of test anxiety and the academic achievement of students of ABU

Table 4.3.5: Pearson Product Moment Correlation(r) statistics on the relation shop between the level of test anxiety and the academic achievement of students of ABU.

Variables	**N**	**Mean**	**SD**	**Df**	**r**	**P**
Test anxiety	241	48.7593	12.48466			
				239	-0.829	0.010
Academic Achievement	241	3.1502	.71649			

Correlation is significant at 0.05 level (2 tailed)

Result of the table 4.3.5 showed that significant relationship exists between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University, Zaria. Reason being that 0.05 alpha level of significance is greater than the calculated p value of 0.010. This shows that test anxiety of the students have inverse significant relationship with their academic achievement. This indicates that the higher the students' test anxiety, the lower their academic achievement and vice versa. Therefore, the null hypothesis which states that there is no significant relationship between test anxiety and the academic achievement of undergraduate students of ABU is hereby rejected

4.4 Summary of Major Findings:

The following are the summary of the major findings of the study:

1. Significant relationship exists between goal setting and academic achievement among undergraduate students of Ahmadu Bello University Zaria at (r =0.605) hence the null hypothesis was rejected. This implies that goal setting promotes academic achievement of students.
2. Significant relationship exists between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria at (r = 0.736)hence the null hypothesis was rejected. This implies that memory strategy promotes academic achievement of students.
3. Significant relationship exists between help-seeking strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria at (r = 0.883) hence the null hypothesis was rejected. This implies that help-seeking strategy promotes academic achievement of students.
4. Significant relationship exists between self-evaluation and academic achievement among undergraduate students of Ahmadu Bello University Zaria achievement at (r = 0.228) hence the null hypothesis was rejected. This implies that self-evaluation promotes academic achievement of students.
5. Significant relationship exists between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria at (r = -0.829) hence the null hypothesis was accepted. This implies that the higher the test anxiety of students, the lower their academic achievement and vice versa.

4.5 Discussion of Findings

This study focused on the relationships among self-regulated learning, test anxiety and academic achievement of undergraduate students, Ahmadu Bello University Zaria, Kaduna State.

Hypothesis one: The findings from hypothesis one revealed that significant relationship exists between goal setting and academic achievement among undergraduate students of Ahmadu Bello University Zaria. The findings is in line with that of Ablard (2008) who examined the relationship between Self-regulated Learning and academic Achievement. A sample of 222 high-achieving seventh-grade students participated in the study. According to this study, the setting of learning goal is an intrinsic part of the iterative nature of self-regulation. The study revealed that goal setting as learning strategy is the most significant predictor of academic achievement among students.

Hypothesis two: The findings from hypothesis two revealed that significant relationship exists between memory strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria. The findings is in line with that of Radovan (2011) who examined the relationship between distance learning students' motivation, their use of self-regulated learning strategies and students' academic success in Turkey with a sample of 319 students (83 males and 236 females). The self-regulated learning strategies consisted of memory strategy, elaboration, self-efficacy, intrinsic goal, extrinsic goal and time organization. The students' success was measured by the number of examinations written, the frequency of repetition of the examination and average course achievement. Questionnaire was used for the collection of the data. According to this study, to learn most effectively, students should not only understand what strategies are available and the purposes these strategies will serve, but should also understand the strategy necessary to aid encoding, storage and retrieval of information acquired. This

cognitive strategy (memory strategy) is useful in helping learners remembering information. The study revealed that among the key self-regulated learning dimensions that contributed to better academic achievement is memory strategy in the distance education programme.

Hypothesis three: The findings from hypothesis three revealed that significant relationship exists between help-seeking strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria. The findings is in line with that of Tunde (2015) who examined the relationship between self-regulated learning strategies and students' performance in Chemistry. Two hundred (200) senior secondary school students from four co-educational institutions in Akure South Local Government Area in Ondo State, Nigeria, constituted the sample. Data collected were analyzed using mean, standard deviation and PPMC(r). The result of the study revealed that help seeking as self-regulated learning strategies have significant relationship with students' academic performance in chemistry at 0.05 level of significance. Thus, the result of this study revealed that help-seeking as a strategy of self-regulated learning is significant in predicting the students' performance in Chemistry.

Hypothesis four: The findings from hypothesis four revealed that significant relationship exists between self-evaluation and academic achievement among undergraduate students of Ahmadu Bello University Zaria. The findings is in line with that of Alegre (2014) who examined the relationships among academic self-efficacy, self-regulated learning and academic performance in first-year university students. The total population consists of undergraduate students at a private university in the Metropolitan Lima area. The research design was correlational. General Academic Self-Efficacy Questionnaire prepared and validated by Torre (2006), based on the Bandura self-efficacy social cognitive theory are directed towards university students was used for the academic performance and self-regulated learning and students' academic record (second

semester CGPA) was considered. The relationship between the study variables was established through the PPMC(r), and the alpha value (α) for statistical tests was set to 0.05 level of significant. Result showed self-efficacy and self-regulation are very important motivational processes to obtain a better academic performance in students, since they make them feel competent and have full confidence in their own abilities, resulting in high expectations for themselves, valuing assigned tasks and activities in a positive manner and make them feel responsible for complying with their objectives. They judge their progress towards set goals as acceptable and they experience satisfaction from having accomplished them, they are more motivated to complete other given tasks. When they believe that they have ability to improve their work by hard work, their motivation does not decline even though there may be a negative evaluative environment.

Hypothesis five: The findings from hypothesis five revealed that significant inverse relationship exists between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria. The findings is in line with that ofYousefi, Talib, Mansor, Juhari, & Redzuan (2010) who examined the relationship between test anxiety and academic achievementamong Iranian Adolescents. The population for this study comprised nine public high schools randomlyselected among the 33 public high schools in Sanandaj, Iran. They were divided into subgroups,particularly gender and age group.Therespondents comprised of 400 students (200 boys and 200 girls) in the age range and stratified random sampling method was employed. A self-administeredquestionnaire was used for data collection which includes a Test Anxiety Inventory (TAI) (Spilberger 1980), Grade Point Average (GPA) score and personal information. PPMC(r) was used to determine the relationship between test anxiety and academic achievement as the dependent variable. The result revealed that test anxiety and academic

achievement were significantly correlated with academic achievement. The inverse relationship connotes that as test anxiety increases, respondent's academic achievement decreases and vice versa.

In the same vein, this study is in line with that of Afolayan (2013) who investigated the relationship between test anxiety and academic achievement of nursing students,Niger Delta University, Bayelsa State, Nigeria. Thestudy focused on 200 levelstudents of the Faculty of Nursing, College of Health Sciences, Niger Delta University, Amassoma in Southern IjawLocal Government Area of Bayelsa State. The criteria for selection was that 200 level is a transition stage for nursing students from pre-clinical to clinical; also it is at this level that the students take all the basic medical courses such as anatomy, physiology, medical microbiology and biochemistry alongside other external courses. A purposive sampling technique was used to select 50 students out of 100 students from 200level in the faculty of nursing science. Data were collected by using the Test Anxiety Inventory (TAI) developed by Spielberger. Pearson moment correlation coefficient (r) was used for the data analysis. It was found that a significant inverse relationship exists between test anxiety and students' achievement. Therefore, it is concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test anxiety.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the chapters, conclusions and recommendations and also suggestions for further studies.

5.2 Summary

The study was aimed at finding the relationships among self-regulated learning, test anxiety and academic achievement of undergraduate students, Ahmadu Bello University Zaria. Among numerous self-regulated learning strategies, four were the focus of this study which include; goal setting, memory strategy, help-seeking strategy and self-evaluation and also taking into consideration, test anxiety and academic achievement (CGPA) of 300 level undergraduate students of Ahmadu Bello University, Zaria. The study was structured in five different chapters. The introductory chapter presents the background and introduction of the study, as well as statement of the problem that necessitated the drawing up of research objectives, research questions, hypotheses, basis assumptions and significance of the study.

Chapter two presented the literature review of the study. The literature review was done under the following sub-headings: concept of self-regulated learning, characteristics of self-regulated learners, strategies of self-regulated learning, Zimmerman's self-regulated learning model, concept of test anxiety, components of test anxiety, signs of test anxiety, causes of test anxiety, skill-deficit model of test anxiety, academic achievement, relationship between self-regulated learning and academic achievement, relationship between test anxiety and academic achievement, cognitive constructivist theory, Beck's cognitive theory, Walberg's theory of educational productivity, empirical studies related to this research.

Chapter three presented the methodology of the study. The research design that was adopted in conducting this research is correlational design. The population of undergraduate students of Ahmadu Bello University Zaria was seven hundred and forty seven students across five Faculties. Two instruments were used for this study. The instruments are Self-regulated Learning Scale and Test Anxiety Inventory. CGPA of students was used to measure academic achievement. The instrument comprised of three sections. Section A, biographic data of the students, Section B, Self-regulated Learning Scale adopted from Magno (2010) was structured under four sections according to the self-regulated learning indices, Section C, Test Anxiety Inventory adopted from Taylor (2002). Scoring guide, validity and reliability of the instruments were discussed. Procedure for data collection was discussed and Pearson Product Moment Correlation Coefficient(r) was used to test all the hypotheses at 0.05 alpha level of significance.

Chapter four was the use of statistical package to analyze the data collected from the respondents. A total of 241 responded to the data. The first section of the analysis presented the frequencies of the demographic variables. The five null hypotheses were analyzed using PPMC(r). All the null hypotheses were rejected. Thus, the study established that significant relationship exists between self-regulated learning and academic achievement. Also, significant inverse relationshipexists between test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria. In other words, the findings of the study discovered among others that: Significant relation exists between goal setting as a self-regulated learning strategy and academic achievement, memory strategy as a self-regulated learning strategy and academic achievement, help-seeking as a self-regulated learning strategy and academic achievement and self-evaluation as a self-regulated learning strategy and academic achievement among undergraduate students of Ahmadu Bello University Zaria. The relationship that exists

between the four indices of self-regulate learning and academic achievement is direct relationship while the relationship that exists between test anxiety and academic achievement is inverse.

Chapter five being the last chapter presented the study's summary, conclusions and recommendations.

5.3 Contribution to Knowledge

Based on the findings of the study, it has been established that:

1. Students who employ goal setting strategy during learning tend to have great academic achievement in Ahmadu Bello University Zaria.
2. Students who employ memory strategy during learning tend to have great academic achievement in Ahmadu Bello University Zaria.
3. Students who employ help-seeking strategy during learning tend to have great academic achievement in Ahmadu Bello University Zaria.
4. Students who employ self-evaluation strategy during learning tend to have great academic achievement in Ahmadu Bello University Zaria.
5. The higher the students' level of test anxiety, the lower their academic achievement in Ahmadu Bello University Zaria.

5.4 Conclusion

Based on the findings of this study, it can be concluded that goal setting as a SRL strategy is positively correlated to academic achievement of undergraduate students of Ahmadu Bello University Zaria.

Memory strategy is positively correlated to academic achievement of undergraduate students who participate actively in learning acquisition in Ahmadu Bello University Zaria.

Help-seeking as a self-regulated learning strategy is positively correlated to academic achievement of undergraduate students who participate actively in learning acquisition in Ahmadu Bello University Zaria.

Self-evaluation correlated to academic achievement positively with emphasis on welcoming feedback on students on work and also checking ones progress by reviewing past performances.

Also, test anxiety inversely correlated to academic achievement of undergraduate students of Ahmadu Bello University Zaria. Therefore, it is concluded that SRL strategies have positive relationship with academic achievement among undergraduate students of ABU, since it was found that students who employ SRL strategies have high academic achievement compare to those who do not.

5.5 Recommendations

Based on the findings of this study, the following recommendations were made by the researcher;

1. The University should have a functional psychological testing and counselling centres whereby psychologists and counsellors will sensitize students on goal setting strategy in order to boost their academic achievement in schools.
2. Psychologists and counsellors should identifying memory strategies necessary to assist University students in enhancing their memory strategy as this will help in boosting their academic outcome in schools.
3. The school psychologists and counsellors should organize seminars, workshops and conferences to create awareness on help-seeking strategy especially on the use of

libraries, internet facilities, tutorial among others as these will enhance students' academic achievement in Universities.

4. University should give periodic assessments especially on areas they have taught and provide feedback to students so that they can measure their performance against a reference standard since self-evaluation is found to enhance academic achievement among learners.
5. Appropriate psychological assistance and guidance be provided by educational psychologists and counsellors to students to assist them deal with stress in order to maintain good state of health during examination as this is important better academic achievement.

5.6 Suggestions for Further Studies

Based on the outcome of this study, the following suggestions for further studies are made:

1. Further studies should also be carried to out on self-regulated learning and other correlates for example, experimental study on effect of disability on learners' self-regulation skills among students in special schools.
2. More studies should also be conducted to establish relationship between test anxiety and academic achievement among primary school pupils.

REFERENCES

Abdullahi, M. I. (2015). Basic Concept in Educational Research. Tunlad Prints & Publishing Coy, Beirut Road, Kano.

Ablard, K. E. (2008). Self-regulated Learning in high-achieving Students: Relations to Advanced Reasoning, Achievement Goals, and Gender. *Journal of Educational Psychology, Vol90(1).* Retrieved from http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&uid=1998-00166-008# on 2/4/15Academic Press.

Afolayan, J. A. (2013).Relationship between anxiety and academic performance of nursing students, Niger Delta University, Bayelsa State, Nigeria.*Adv. Appl. Sci. Res., 2013, 4(5):*25-33.Retrieved fromwww.pelagiaresearchlibrary.com

Akca, F. (2011).The relationship between test anxiety and learned helplessness. *Social Behaviour and Personality, 39(1),* 101-112.

Alderman, M. K. (2004).*Motivation for Achievement*. Mahwah, New Jersey: Lawrence American Psychology Association.

Alegre, A. (2014). Relationships among Academic self-efficacy, self-regulatedlearning and academic performance in first-year university students. *PropósitosyRepresentaciones, 2*(1), 79-120.

Al-jarrah A. (2010). The relationship between self-regulated learning and academic achievement among sample of Yarmouk university students. *The Jordanian Journal of Educational Sciences, 6(4),* 333-348.

Ames, R. (2016). *Help-seeking and achievement orientation:* Perspectives from Attribution Theory. Academic Press, New York. Anxiety-Reduction Techniques. Journal of Counseling and Clinical Psychology, *48*, 431-433.

Appelhans, B. & Schmeck, R.(2002). Learning Styles and Approach versus Avoidant Coping During Academic Exam Preparation. *College Student Journal. 36:* 157-161.

Baharom, S. (2015). *Describing University Students Learning Strategies Using the Rasch Model.* Paper Presented at the NZARE AARE Conference Educational Research, Risk and Dilemmas. New Zealand, 29th November-3rd December. Retrieved from http://uir.unisa.ac.za/bitstream/...thesis_tigist%20merha%20tsemrekal.pdf?...1.On 11/2/15

Bail, F. T. (2011). Impact of a self-regulated learning course on the academic performance and graduation rate of college students in an academic support program. *Journal of College Reading and Learning, 39* (1), 54-73. doi:10.1080/10790195.2008.10850312.

Bembenutty, H. (2013). Self-regulated Learning in Post-secondary Education. Retrieved from www.researchgate.net/profile/Hefer_Bembenutty/publications on 6/4/15.

Benjamin, M. (2011). Test anxiety: Deficit in Information Processing. *Journal of Educational Psychology, 73,* 816-824.

Beck, A. T. (1983). *Cognitive Therapy and the Emotion Disorders.* New York: International University Press.

Berhenke, A. (2013). Observed Emotional and Behavioural Indicators of Motivation Predict Readiness in Head Start graduates. *Early Childhood Research Quarterly, 26* 430-441.

Berk, L. E. (2013). *Child Development*. Allyn and Bacon. Boston. Retrieved from shttps://www.ahead.org/uploads/2013/.../3.6%20Handout%209.p... On 4/5/15.

Birenbaum, M. & Pinku, P. (1997). "Effects of Test Anxiety, Information Organization, and Testing Situation on Performance on Two Test Formats. *Contemporary Educational Psychology 22(1)*: 23-38.

Boekaerts, M. (2012). Self-regulated Learning: where we are today. *Journal of Educational research, 31,* 445-475.

Boekaerts, M. (2012). Self-regulated learning: A New Concept Embraced by Researchers, Policy Makers, Educators, Teachers, and Students. *Learning and* Instruction, *7(2),* 161-186.

Boekaerts, M. (2014). How do Students from Different Cultures Motivate Themselves for Academic Learning? *Journal of Information Age: 25,*13-32.Retrieved from https://books.google.com/books?isbn=3515089705 on 1/3/15.

Brorphy, J. (2008). *Motivating Students to Learning.* Lawrence Erlbaum Associates. New Jersey. Retrieved from https://www.questia.com/library/104334427/motivating-students-to-learn on 2/2/15.

Brown, G. (2010). *Assessment: A Guide for Lecturer* . Londol: LTSN Generic Centre.

Butler, R. (2012). Determinants of help Seeking: Relations between Perceived Reasons for Classroom Help-avoidance and Help-seeking Behaviors in an Experimental Context. *Journal of Educational Psychology, 90,* 630-643.

Cassady, J. C. and R. E. Johnson (2009). Cognitive Test Anxiety and Academic Performance. *Contemporary Educational Psychology: 31,* 270-275.

Cassidy, S. (2013). *Self-regulated Learning in Higher Education: Identifying Key Component Processes.* Directorate of Psychology, Counselling and Psychotherapy, University of Salford, UK. Retrieved from www.usir.salford.ac.uk/14683/1/SRL and HEpaper.pdfon 2/1/15.

Chen, C. S. (2012). Self-regulated Learning Strategies and Academic Achievement in an Introduction to Information Systems Course. *Information Technology, Learning and Performance Journal, 20(1): 11-25.* Retrieved from

https://books.google.com/books?isbn=1616929030 on 3/12/14.*Contemporary Educational Psychology*. *27*, 270-295.

Corno, L. (2001). *Teaching and self-regulated learning*. In D. C. Berliner, & Rosenshine, B. V. (Eds.), Talks to Teachers (pp. 249-266). New York: Random House.

Dabbagh, N. & Kitsantas, A. (2005).*Using web-based pedagogical tools as scaffolds for self regulated learning*. *Instructional Science:33*, 513-540.

Daniel, T. & Feldman, J. (2002). Personality Type and Academic Achievement Motivation As Correlates of College Academic Performance. *Unpublished M.A Thesis.*

Deirking, B. K. & Weinstein, C. E. (2013).*Learning Strategies: In Learning and Cognition in Education.* Elsevier. Oxford. Retrieve from https://repository.nie.edu.sg/.../SELF-ERAS%202013-Areepattamannil a. on 3/4/15. Distinguishing the means and ends. In Alexander, P. A. & Winne, P. H. (eds.), During Academic Exam Performance."*College Student Journal*. 36:157-161. *Educational Psychologist*. *20*,135-142. Educational

Duty, S. M., Christian, L., Loftus, J., & Zappi, V. (2016). Is cognitive test-taking anxiety associated with academic performance of nursing students. *Nurse Educator, 41*(2),70-74.

Educational Research and Essays (2013). *Wyno academic Journal Vol. 1 (1), pp.* 5-8.Retrieved fromhttp://www.wynoacademicjournals.org/edu-research.html on 20/4/15

Ennis, R. H. (2013). The extent to which critical thinking is subject-specific: Further clarification. *American Educational Research Association,19(4),* 13-16 Erlbaum Associates, Inc.

Eshel, Y. & Kohavi, R. (2013).Perceived Classroom Control, Self-regulated Learning Strategies and Academic Achievement. *Educational Psychology: An international Journal of Experimental Educational Psychology, Vol. 23(3),* 249-260. Retried from www.competency.guideline.co.kr/pds/2009research/sjh09 4.pdf on 16/5/15 graduate students. Journal of Educational Psychology, *97,* 268-274. *Handbook of Educational Psychology (2nd ed.)(*pp. 349-367). Washington, DC:

Eysenck, M. W. (2001). *Principles of Cognitive Psychology*. Hove. East Sussex: Psychology Press.

Feather, N. T. (2014). The Relationship of Persistence at a Task to Expectations for Success and Achievement-oriented Motives. *Journal of Abnormal and Social Psychology*, *63,* 552-561.

Ganai, M. Y. & Ashraf M. M. (2013).A Comparative Study of Adjustment and Academic Achievement of College Students. *Journal of Educational Research and Essays Vol. 1(1),* 5-8.Retrieved from www.wynoacademicjournals.org/A%20COMPARATIVE%20STUDY2...19/4/15.

Gaudry, E. & Spielberger, C. D. (1980).*Anxiety and educational achievement*. New York: Wiley.

Gerda Z. (2010) *academic* performance at school, problem and prospects. *Educational Psychology Vol.5,* 364-596.

Getu, T. (2010). The Relationship between Test Anxiety, Study Habit, Parental Involvement and Academic Achievement of Grade Ten Government Secondary School Students in Addis Ababa.*(Unpublished MA thesis.* Addis Ababa University).

Haibach, P. S & Reid, G. (2011). *Motor Learning and Development.* Lower Mitcham: Human Kineetics, South Australia. Retrieved from http://uir.unisa.ac.za/bitstream/...thesis_tigist%20merha%20tsemrekal.pdf?...1.On 19/5/15.

Hammood M., Radin A. & Radin M. (2016). The Relationship between Test Anxiety and Academic Self-Regulated Learning Among Foundation Students in Iium. *Journal of Education. Vol. 4, No. 2, 2016,* pp. 39-45.

Hancock, D. R. (2001).Effect of Test Anxiety and Evaluative Threats on Students' Achievement and Motivation. *The Journal of Educational Research, 94 (5),* 284-290. *Higher Education*

Hanson, J. B. (2013). Student Performance and Student Growth as Measure of Success: A Evaluator's Perspective. Paper Presented At Annual Meeting of the American Educational Research Association New Orleans. Louisiana. 25 April.

Harris, H.L. (2012). *Helping Students Cope with Test Anxiety*. ERIC Counseling and Student Services Clearing House.

Hill, K.T. (2013). *Children's Achievement Strategies and Test Performance*: The Role of Time Pressure, Evaluation Anxiety and Sex. Development Psycholom, 22, 31-36.

Husman, J. (2014). Interventions with a Focus on Learning Strategies. In M. Boekaerts, P. R.Pintrich, & M. Zeidner (Eds.), *Handbookof self-regulation* (pp. 727-747). San Diego, CA: Academic Press. (Cited: GS 46) J. S. (2002). *Development of Achievement Motivation* (pp. 249-284). San Diego, CA: *International Journal*, *68*(4), 603-609.

Ismail, A. & Sharma, S. (2012). Anxiety in Students. *Psychological Studies, 47,* 148-152.

James, P. K. (1997). Research Design in Occupational Education. Oklahoma State University. Retrieved from https://www.okstate.edu/agedcm4/academic/aded5980/newpage/15.htm

.

Janis, (2015). Test Anxiety: Theory, Research and Applications. Hillsdale, N. J.: Erlbaum.

John, O. K & Ademola, O. R. (2014). Self-regulation and Peer Influence as Determinants of Senior Secondary School Students' Achievement in Science. *Mediterranean Journal of Social Sciences.Vol.5No.7.*Retrievedfromwww.mcser.org/journal/index.php/mjss/article/viewFile/2492/2460 on 8/12/15.

Karatas, H., Alci, B., & Aydin, H. (2013). Correlation among High School Senior Students' Test Anxiety, Academic Performance and Points of University Entrance Exam. *Educational Research and Reviews, 8(13),* 919-926.

Kauffaman, D.F, (2015). Self-regulated in Web-based Environments: Instructional Tools Designed to Facilitate Cognitive Strategy-use, Metacognitive Processing and Motivational Belief. *Journal of Educational Computing Research, Vol* 30(1&2): 139-161. Retrieved from https://www.gwern.net/docs/concientiousness/2008-winter.pdf on 21/5/15.

Keith, T. Z. (2002). Commentary: Academic enablers and school learning. School Psychology Review, 31, 394-402.

Kirkland, K. & Hollandsworth, J. G. (2011). Effective test taking: *The Journal of Educational Research, 94 (5),* 284-290. Higher Education.

Kitsantas, A. (2015). Developmental Phases in Self-regulation: Shifting from Process Goals to Outcome Goals. *Journal of Educational Psychology, 89(1),* 29-36.

Lang, C., Siemens, G., Wise, A., &Gasevic, D. (2017).*Handbook of Learning Analytics*. First Edition. Society for Learning Analytics Research. DOI: 10.18608/hla17

Lei, L., Wang, L. & Tanjia, C (2012). The Role of Goal-orientation in Self-regulated Learning. *The Journal of Psychology, 33 (4),* 349-353.

Lewis, B. P., Linder (2010). Thinking About Choking? Attentional Processes and Paradoxical Performance. *Personality and Social Psychology Bulletin, 23(9),* 937-944 Mahwah, NJ: Erlbaum. Merrill/Prentice Hall.

Ma, X. & Wang, J. (2001). A confirmatory examination of Walberg's model of educational productivity in student career aspiration. Educational Psychology, 21, 443-453.

Magno, C. (2010). Assessing Academic Self-regulated Learning among Filipino College Students: The Factor Structure and Item Fit. *The International Journal of Educational Psychological Assessment, August 2010, Vol.5*.

Manso, M., Caeiro, M., & Llamas, M. (2016). *"Analysis of Self-Regulated Learning Strategies Oriented to the Design of Software Support"*, in Frontiers in Education (FIE), Madrid, 2016, Aprobada. Pendiente de publicación.

Margaryan, A. (2015). Measuring Self-regulated Learning in Institution. *International Journal of Training and Development.19 (1)* 32-52.

McCarthy, J. M. (2007). Selection Test Anxiety Exploring Tension and Fear of Fear of Failure across the Sexes is Simulated Selection Scenarios. *International Journal of Selection and Assessment, 13(4),* 283-295.

Mobrary, T. (2016).*Working Memory, Test Anxiety and Effective Interventions:* A Review. The Australian Educational and Developmental Psychologists, *29(2)* 141-156.

Monk, T. Y. (1998). Variables Associated with Academic Achievement of African-American Males. *In Four-Year Undergraduate Educational Institutions*: A Synthesis of Studies Retrieved fromwww.scolar.lib.vt.edu./theses/available/etd-9198-8537/.../chap1-3.PDF on 4/4/15

Morris, L. W. (1981). Cognitive and Emotional Components of Anxiety: Literature Review and a Revised Worry-Emotionality Scale. *Journal of Educational Psychology, 73,* 541-555.

Moshman, D. (2016). Metacognitive Theories. *Journal of Educational Psychology Review, 7,*351-371.

Muhammad, A. S., & Abu Bakar, N. (2015).*Relationship between Self-regulated Learning and Academic Achievement among University Sultan ZainalAbidin (UNISZA) Undergraduate Students*. International Conference on Empowering Islamic Civilization in the 21st Century, 6-7 September 2015-Universiti Sultan ZainalAbidin, Malaysia.

Murphy, P. F. (2010). *Relationships among Parenting Practices, Independent Learning Achievement and Family Structure.* M.Ed. dissertation: Polytechnic Institute and State University, Virginia.

Olayiwola, A. O. (2010). *Procedures in Educational Research.* Nigeria: HANJAM Publications. http://www.hrdc-drhc.gc.ca/arb/ Retrieved August 14, 2012.

Parviz, B., &Alemi, M. (2010).The Impact of Test Anxiety on Test Performance among Iranian EFL Learning. *Research in Artificial Intelligence and Neuroscience, 1(4),* 45.

Paul, C. (2016). *Research Methods in Psychology*. U.K: Penguin Press.

Peeters, J. (2016). Teacher Differences in Promoting Students' Self-regulated Learning: Exploring the Role of Student Characteristics. *Learning and Individual Differences 52,* 88–96, http://dx.doi.org/10.1016/j.lindif.2016.10.014

Peng, C. (2012). Self- regulated learning behavior of college students of science and their academic achievement. *Physicsprocedia, 33,* 1446-1450.

Pintrich, P. R. &DeGroot, E. V. (2008). Motivational and Self-regulated Learning Components of Classroom Academic Performance. *Journal of Educational Psychology, Vol 82(1):*33-40.Retrieved from www.web.stanford.edu/.../self-regulation/self-regulated%2.On 5/6/15.

Pintrich, P. R. (2012). The Role of Goal Orientation in Self-regulated Learning. InM. Boekaerts, P.R. Pintrich, & M. Zeidner (Eds.), *Handbook of Self-regulation* (pp. 451–502). San Diego: Academic Press.

Pintrich, P. R., & Zusho, A. (2008). Chapter10. The Development of Academic Self-regulation:19-94.*Journal of Educational Psychology, 20,* 135-142.70-74.

Porto, A. (2013). *Definitions and Classification of NAWDA Nursing Diagnoses*. *NANDA*

Purdie, N., Carroll, A, & Roche, L. (2011). Parenting and Adolescent Self-regulation. *Journal of Adolescence, 27,* 663-676.

Putman S, (2012).The *Debilitative Effects of Anxiety on Reading. Cassady (Ed), Anxiety in School; Consequences,* Peter Lang, New York, 59-79.

Rader, L. A. (2005). Goal Setting for Students and Teachers: Six Steps to Success, The Clearing House, 78 (3), 123-126. *Research, and Applications* (3rd ed.). Upper Saddle River, NJ: Pearson

Radovan, M. (2011). Relationship between Distance Learning Students' Motivation, their use of Self-regulated Learning Strategies and Students' Academic Success. *The Turkish Online Journal of Educational Psychology, Vol 10(1): 217-222.* Retrieved from www.editlib.org/j/ISSN-1303-6521/

Reynolds, A. J. & Walberg, H. J. (1992). A structural model of science achievement and attitude: An extension to high school. Journal of Educational Psychology, 84, 371-382.

Rowe, F. A., & Rafferty, J. A., (2013). Instructional Design Interventions for Supporting Self-Regulated Learning: Outcomes in Postsecondary E-Learning Environments. *MERLOT Journalof Online Learning and Teaching. Vol. 9,(4),* 590-601.

Roy, B. (2013). Test anxiety and academic performance of school students. *International Journal of Scientific Research, 2(1),* 211-213.

Ryan, A. (2011). "Should I ask for Help?" The Role of Motivation and Attitudes in Adolescents Help Seeking in Math Class.*Journal of Educational Psychology, 89,* 329-341.

Ryan, A. M., Pintrich, P. R., &Midgley, C. (2001).Avoiding Seeking Help in the Classroom: Who and why? *Educational Psychology Review, 13,* 93-114.

Salend, S. J. (2012). Teaching Students on how to Deal with Test Anxiety. Delta Kappan, *93(6)* 20-25.

Santrock: J.N (2010). Influence of Achievement Goals and Self-efficacy on Students'Self-regulation.*Educational psychology (2nnd edition North American McGraw Hill*

Sarason, I. G. (2009). *Test Anxiety:* Theory, Research and Applications. Hillsdal N. J. Erbium Press.

Schneider, W., & Pressley, M. (2009). *Memory Development between 2 and 20.*Lawrence Erlbaum Associates. Mahwah. Schunk (Eds.), *Self-regulated learning and academic Achievement: Theory, research, and practice (Vol. 2*, pp. 111-142). Mahwah, NJ: Erlbaum.

Schunk, D. H. & Zimmerman, B. J. (2011). Self-regulation and Learning. *Handbook of Psychology: Educational Psychology. (Vol.9*). Hobken, New Jersey: John Wiley & Sons, Inc.

Schunk, D. H. (2010). Social Cognitive Theory and Self-regulated Learning.In Zimmerman, B. J., & Schunk, D. H. (Eds.) *Self-regulated Learning and Academic Achievement*: Theoretical Perspectives. Mahwah, NJ. Lawrence Erlbaum Associates.

Schunk, D. H., & Zimmerman, B. J. (2008). *Motivation and Self-regulated Learning: Theory, Research and Applications*. New York: LEA.

Shamsuddin, K. & Muhammad, N. (2013).Correlates of Depression, Anxiety and Stress among Malaysian University Students. *Asian Journal of Psychiatry.6 (4),* 318-23.

Spiegel M (1992). *Synthesizing Evaluation Perspectives, Practices and Evidences, Proceedings of the American Evaluation Association*: 92 Extension evaluation Topical Interest Group, Seattle WA, 27-37.

Steinmayr, R., Crede, J., McElvany, N., &Wirthwein, L. (2016). Subjective Well-being: Test Anxiety, Academic Achievement Testing for Reciprocal Effects. *Frontier Psychology, 6,* 1-13.

Stevens, J (1986). *Applied Multivariate Statistics for the Social Sciences:* Hillsdale: NJ: Eribaum.

Stevenson, J. & Hadwin, J. A. (2012). Anxiety and Depression in Academic Performance: An Exploration of the Mediating Factors of Worry and Working Memory. *School Psychology International, 33,* 434-435.

Stober, J. (2013). Dimension of Test Anxiety: Ways of Coping with Pre-exam anxiety and Uncertainty. *Journal of Anxiety, Stress and Coping Strategies, 17(3),* 213-226.

Takahashi, M. (2015). Test Anxiety and Academic Performance in Undergraduate and Testing Situation on Performance on Two Test Formats. *Journal of Educational Psychology*. *22*, 23-38

Taylor, J. (2002). Effects of Test Anxiety and Evaluative Threat on Students' achievement and Motivation.*The Journal of General Psychology 129(2):* 127-136. April 2002 with 292 Reads.

Tobias, S. (2014). Test Anxiety: Interference, Defective Skills, and Cognitive Capacity.*Journal of Educational Psychology, 20,* 135-142.

Tunde, K. (2015). *Relationship between self-regulated learning strategies and Academic Performance in Chemistry of Senior Secondary Students, Ondo State, Nigeria.* US-China Educational Review, Vol. 4 No. 11, 799-805. Retrieved from www.davidpublishing.com/Download/?id=18281on 22/2/2015.

Turgay, E. (2011) *The Relationships among Test Anxiety, Study Habits, Achievement, Motivation, and Academic Performance among Turkish High School Students*. Education and Science, 36(160).

Turingan, J. P., &Yang, C. Y. (2009). A Cross-cultural Comparison of Self-regulated Skills between Korean and Filipino College Students.*Asian Social Science Journal, Vol 5 (12),* 3-10.Retrieved form www.macs.psicothema.com/pdf/3547.pdf on 15/5/15.

Vogel, H. L. & Collins, A. L. (2012).The effect of Test Anxiety on Academic Performance. *International Journal of Scientific Research, 2(1),* 211-213.

Vygotsky, L. S. (1972). *Thought and language.* Cambridge, MA: MIT Press.

Vygotsky, L. S. (1978). *Analysis on Zone of Proximal Development. Thought and language.* Cambridge, MA: MIT Press.

Walberg, H.J. (1981). A psychological theory of educational productivity. In F.H. Farley & N. Gordon (Eds), Psychology and education. Berkeley, California: McCutchan.

Walberg, H.J., Fraser, B.J., & Welch, W.W. (1987). A Test of a Model of Educational Productivity among Senior High School Students. The Journal of Educational research, 79, 133-139.

Walberg, H. J. & Tsai, S. (1985). Correlates of reading achievement and attitude: A national assessment study. Journal of Educational Research, 78, 159-167.

Wang, C., Shannon, D. M., & Ross, M. E. (2013).Students' Characteristics Self-regulated Learning, Technology Self-efficacy and Course Outcomes in online learning. *Distance Education, 34(3),* 302-323.

Weinstein, C. E., & Mayer, R. E. (2008). The Teaching of Learning Strategies. In M. Wittrock (Ed.), *Handbook of Research on Teaching* (pp. 3 15-327). New York, NY: Macmillan.

Weinstein, C. E., Jung, J. & Acee, T. W. (2011).*Learning Strategies: In Learning and Cognition in Education.* Elsevier. Oxford. Retrieve from https://repository.nie.edu.sg/.../SELF-ERAS%202013-Areepattamannil a. on 3/4/15.

Weiss, M. R. (2012). *Children in Sport: An Educational Model.* Lower Micham, South Australia. Retrieved from https://books.google.com/books?isbn=073603711X on 27/4/15.

Wine, J.D. (2014). Test Anxiety and Direction of Attention. *Psychological Bulletin, 76, 92-104*.

Wentzel, K. R. (1991). Relations between social competence and academic achievement in early adolescence. Child Development, 62, 1066-1078.

Winne, P. H. & Hadwin, A. F. (2010) *Studying as Self-regulated Learning*. In D. J. Hacker & J. Dunlosky (Eds.), Metacognition in Educational Theory and Practice, TheEducational Psychology Series. Mahwah, NJ: Erlbaum.

Winne, P. H. (1995). Inherent Details in Self-regulated Learning. *Educational Psychologist, 30,* 173-188.

Winograd, P. (2013). *The Role of Self- regulated Learning in Contextual Teaching:* Principles and Practices for Teacher Preparation. Retrieved on 06/04/2013,from http://www.ciera.org/library/archive/2001-04/0104parwin.htm.www.rethinking-precollege-math.wikispaces.com/.../Zimmerman+2008+Self+....

Yousefi, F., Talib, M. A., Mansor, M. B., Juhari, R. B., & Redzuan, M. (2010).The Relationship between Test-Anxiety and Academic Achievement among Iranian Adolescents. *Asian Social Science, 6(5);* 100-105.

Zatz, S. & Chassin, L. (2013). Conditions of Test-Anxious Adults Under Naturalistic Test Taking Conditions. *Journal of Consulting and Clinical psychology, 53 (3),* 393-401.

Zeidner, M. & Van Yperen, N. W. (2009). Performing Well in an Evaluative Situation: The Roles of Perceived Competence and Task İrrelevant İnterfering Thoughts. *Anxiety, Stress & Coping, (4),* 409-419.

Zeidner, M. (1998). *Test Anxiety:* The State of the Art. New York, NY: Plenum.

Zimmerman, B. J. (2000). Becoming a Self-regulated Learner: An Overview. *Theory into Practice,* 41(2), 64-72.

Zimmerman, B. J. (2001). Theories of Self-regulated Learning and Academic Achievement: An Overview and analysis. In B. J. Zimmerman & D.H. Schunk (Eds.), *Self-regulated Learning and Academic Achievement: Theoretical Perspectives 2,* 1-37.

Zimmerman, B. J. (2002). *Attaining Self-regulation: A Social Cognitive Perspective.* Academic Press, San Diego. Retrieved from www.education .com. School and Academic Classroom Learning.

Zimmerman, B. J. (2004). *Socio-cultural Influence and Students' Development of Academic Self-regulation: A Social-cognitive Perspective*. In D. M. McInerney& S. Van Etten (Eds.), Big Theories Revisited (pp.139-164). Greenwhich, CT: Information Age.

Zimmerman, B. J., & Martinez-Pons, M. (2009). Construct Validation of a Strategy Model of Student Self-regulated Learning. *Journal of Educational Psychology, Vol 80(3),* 284-290.Retrieved from www.researchgate.net/.../232550661 Construct Validation of... On *4/2/15.*

Zimmerman, B. J., & Moylan, A. R. (2011*).* Self-regulation: Where Metacognition and Motivation Intersect.In D. J. Hacker, J. Dunlosky& A. C. Graesser (Eds.), *Handbook of Metacognition in Education* (pp. 299-315). New York: Routledge.

Zimmerman, B. J., (2008). Investigating Self-regulation and Motivation: Historical Background, Methodological Developments, and Future Prospects. *American Educational Research Journal, Vol 45(1),* 166-183.

Zimmerman, B.J. (2012). Goal setting: A Key Proactive Source of Academic Self-regulation. In Schunk, D.H. & Zimmerman, B.J. (Eds.), *Motivation and Self-Regulated Learning Theory,*

Research, and Applications (pp.267-295). Routledge Taylor &Francis Group: New York and London.

Zoller, U., & Ben-Chain, D. (2009). Gender Differences in Examination Type, Test Anxiety, and Academic Achievement in College Science: A Case Study. *Science education*, *74*(6), 597-608.

Zumbrunn, S., Tadlock, J., & Roberts, E.D., (2013). *Encouraging Self-Regulated Learning in the Classroom:* A Review of the Literature, Virginia: Metropolitan Educational Research Consortium (MERC), Virginia Commonwealth University.

APPENDIX A

QUESTIONNAIRE

Department of Educational Psychology

Faculty of Education

Ahmadu Bello University Zaria.

Date:

Dear respondent,

QUESTIONNAIRE FOR SELF-REGULATED LEARNING AND TEST ANXIETY

I am a master's student of the Department of Educational Psychology and Counselling Ahmadu Bello University Zaria, currently conducting a research on "Relationships among self-regulated learning, test anxiety and academic achievement of undergraduate students, ABU Zaria". I am here by soliciting your support to fill the items accordingly.

I want you to know that any information collected from you will be considered highly confidential for it will be used solely for the purpose of this research.

Thank you for your cooperation.

Yours faithfully,

BALA DINATU

P16EDPC8010

INSTRUCTIONS

This questionnaire is divided into three sections. Section A – Bio-Data, Section B – Academic Self-regulated Learning Scale, Section C – Test Anxiety Inventory respectively. In each of the sections, list of questions are provided with corresponding boxes. Simply tick [✓] the appropriate box that represents your feelings. The following options are orderly provided: SA-(Strongly Agree), A-(Agree), NS-(Not Sure), D-(Disagree), SD-(Strongly Disagree).

SECTION A

BIO DATA OF THE RESPONDENTS

1. Gender: Male [ ] Female [ ]
2. Reg. no [ ]
3. Age [ ]

SECTION B

Academic Self-Regulated Learning Scale (SRL-S) Developed by C. Magno 2010.

Please indicate by ticking (✓) the item that best describes you where: SA=Strongly Agree, A= Agree, NS= Not Sure, D= Disagree, SD= Strongly Disagree.

S/N	Goal Setting	SA	A	NS	D	SD
1.	I have in mind an end goal in every task that I engage.					
2.	I plan the things I have to do in a week.					

3.	I keep track of myself if I am accomplishing my goals.					
4.	I make schedule of the activities I need to accomplish.					
5.	I make sure I accomplish the things I need to do each day					
6.	I draft my personal study timetable and work by it					
7.	Before I engage in an academic task, I identify what I need to learn first					
8.	I revisit set target which I am unable to achieve					
9.	I explore tips for successful goal setting					
10.	I adjust my schedule based on my personal strength					
	Memory Strategy					
1	I write information that I need to remember.					
2	I use my own words in writing my notes.					
3	I visualize words in my mind to recall them.					
4	I draw figures to understand ideas better.					
5	I represent concepts with symbols so I can easily remember them.					
6	I group similar information into a category					
7	I summarized what I have read					
8	I read my note aloud when I am reading					
9	I make sample questions from a topic and answer them					
10	I record the lessons that I attend					
	Help-Seeking Strategy					
1	I enjoy group work because of the cooperation.					
2	I use library materials to find the information that I need.					
3	I seek help from friends to review my lesson.					
4	I compare my notes with that of my classmates.					
5	I ask classmates about the homework that I missed					
6	I share with my peers what I have learned					
7	I use variety of sources when doing school related tasks					
8	I ask for help of a friend to review my lessons					

9	I prefer to have a reading partner than reading alone					
10	When others explain concepts, I understand it better from their own point of view					
	Self-Evaluation					
1	I evaluate my accomplishments at the end of each study session.					
2	I allow others assess my work before submission.					
3	I welcome feedback on my work.					
4	I check my progress by reviewing my past performance.					
5	I listen attentively to people's comments on my work.					
6	I am open to feedback to improve my work					
7	I am aware of my progress when doing certain activities					
8	I keep track of my accomplishments					
9	I ask feedback of my performance from someone I think is good at it					
10	If I am having a difficulty, I seek assistance from an expert					

SECTION C

Test Anxiety Inventory (TAI) Developed By J.Taylor 2002.

Please indicate by ticking (✓) the item that best describes you where: SA= Strongly Agree, A= Agree, NS= Not Sure, D= Disagree, SD= Strongly Disagree.

S/N	ITEMS	SA	A	NS	D	SD
1.	Having to face an important test disturbs my sleep.					
2.	Knowing that my future depends on doing well in tests upsets me.					
3.	I would rather take a test than to write a paper.					
4.	On exams I take the attitude "if I don't know it now there's no point worrying about it".					
5.	I would rather write a paper than take a test for a grade.					
6.	The harder I work on some test items, the more confuse I get.					

7.	I don't care what others think about me if I perform poorly in tests.					
8.	My test performance is directly connected to my future success and security.					
9.	Tests do not really show how much a person knows.					
10.	I think that examination periods ought not to be made the tense situations which they are.					
11.	I never seem to be fully prepared to take tests.					
12.	When taking a test, my emotional feelings interfere with my concentration.					
13.	I seldom feel the need for cramming before an exam.					
14.	I do not feel confident and mentally relaxed before a test.					
15.	People will question my ability if I do poorly in test.					
16.	I don't study any harder for final exams than for the rest of my course work.					
17.	During test I sometimes get so nervous and forget facts I really know.					
18.	My stomach becomes upsets before important tests.					
19.	I really don't see why some people get so upset about tests.					
20.	I start feeling very anxious and uneasy just before getting test result.					

APPENDIX B
RELIABILITY CO-EFFICIENCE

On Relationships among self-regulated learning, test anxiety and academic achievement among undergraduate students of ABU Zaria.

Goal Setting
Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.795	.794	10

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
I have in mind an end goal in every task I engage	4.08	1.207	40
I plan things I have to do in a week	3.40	1.172	40
I keep track of myself if I am accomplishing my goal	3.65	1.051	40
I make schedule of the activities I need to accomplish	3.80	1.091	40
I make sure I accomplish the things I need to do each day	3.70	1.181	40
I draft my personal study time table and work by it	3.05	1.358	40
Before I engage in an academic task I identify what I need to learn first	3.80	1.137	40
I revisit set target which I am unable to achieve	3.73	1.109	40
I explore tips for successful goal setting	3.78	1.230	40
I adjust my schedule based on my personal strength	4.18	1.035	40

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.715	3.050	4.175	1.125	1.369	.101	10

Memory Strategy
Reliability
Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.751	.761	10

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
I write information that I need to remember	4.08	1.071	40
I use my own words I writing my notes	3.73	1.109	40
I visualize words in my mind to recall them	3.88	1.017	40
I draw figures to understand ideas better	3.23	1.165	40
I represent concepts with symbols so I can easily remember them	3.08	1.328	40
I group similar information into a category	3.30	1.285	40
I summarized what I have read	4.00	1.198	40
I read my note aloud when I am reading	2.83	1.500	40
I make sample questions from a topic and answer them	3.55	1.154	40
I record the lessons that I attend	2.85	1.562	40

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.450	2.825	4.075	1.250	1.442	.214	10

```
RELIABILITY
  /VARIABLES=S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE
  /SUMMARY=MEANS.
```

Help-Seeking Strategy
Reliability
Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.706	.716	10

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
I enjoy group work because of the cooperation	3.65	1.252	40
I use library materials to find the information that I need	3.88	1.399	40
I seek help from friends to review my lesson	4.28	1.037	40
I compare my notes with that of my classmates	3.55	1.280	40
I ask classmates about the homework that I missed	3.88	1.181	40
I share with my peers what I have learned	3.78	1.330	40
I use variety of sources when doing school related tasks	4.18	.874	40
I ask for help of a friend to review my lessons	3.85	.949	40
I prefer to have a reading partner than reading alone	2.93	1.700	40
when others explain concepts I understand it better from their own point of view	3.60	1.215	40

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.755	2.925	4.275	1.350	1.462	.139	10

```
RELIABILITY
  /VARIABLES=E1 E2 E3 E4 E5 E6 E7 E8 E9 E10
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE  /SUMMARY=MEANS.
```

Self-Evaluation
Reliability
Scale: ALL VARIABLE

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.825	.824	10

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
I evaluate my accomplishments at the end of each study session	3.70	1.067	40
I allow others assess my work before submission	3.38	1.295	40
I welcome feedback on my work	3.93	1.163	40
I check my progress by reviewing my past performance	4.25	.809	40
l listen attentively to peoples comments on my work	4.08	1.118	40
I am open to feedback to improve my work	4.00	1.132	40
I am aware of my progress when doing certain activities	3.85	.921	40
I keep track of my accomplishments	4.00	1.038	40
I ask for feedback of my performance from someone I think is good at it	4.30	.966	40
If I am having a difficulty I seek assistance from an expert	4.58	.675	40

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.005	3.375	4.575	1.200	1.356	.111	10

Text Anxiety
Reliability
Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.802	.804	10

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
having to face an important test disturbs my sleep	3.73	1.339	40
knowing that my future depends on doing well in tests upsets me	3.38	1.409	40
I would rather take a test than to write a paper	3.13	1.453	40
on exams I take the attitude "if I don't know It now there is no point worrying about it"	2.43	1.448	40
I would rather write a paper than take a test for a grade	2.68	1.457	40
the harder I work for a test the more confused I get	2.33	1.457	40
I don't care what others think about me if I perform poorly in test	2.70	1.454	40
tests do not really show how much a person knows	3.83	1.394	40
I think that examination periods ought not to be made the tense situations which they are	3.73	1.467	40
I never seem to be fully prepared to take tests	3.60	1.392	40
when taking a test my emotional feelings interfere with my concentration	2.98	1.527	40

I seldom feel the need for cramming before an exam	2.90	1.722	40
I do not feel confident and mentally relaxed before a test	2.95	1.395	40
people will question my ability if I do poorly in test	3.20	1.682	40
I don’t study for final exams than for the rest of my course work	2.73	1.552	40
during test I sometimes get so nervous and forget facts I really know	3.40	1.446	40
my stomach becomes upset before my important tests	2.75	1.481	40
I really don’t see why some people get so upset about tests	2.85	1.494	40
I start feeling very anxious and uneasy just before getting test result	3.60	1.429	40

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.096	2.325	3.825	1.500	1.645	.199	20

Self-regulated learning styles
Reliability
Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.891	.895	10

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
I have in mind an end goal in every task I engage	4.08	1.207	40
I plan things I have to do in a week	3.40	1.172	40
I keep track of myself if I am accomplishing my goal	3.65	1.051	40
I make schedule of the activities I need to accomplish	3.80	1.091	40
I make sure I accomplish the things I need to do each day	3.70	1.181	40
I draft my personal study time table and work by it	3.05	1.358	40
before I engage in an academic task I identify what I need to learn first	3.80	1.137	40
I revisit set target which I am unable to achieve	3.73	1.109	40
I explore tips for successful goal setting	3.78	1.230	40
I adjust my schedule based on my personal strength	4.18	1.035	40
I write information that I need to remember	4.08	1.071	40
I use my own words I writing my notes	3.73	1.109	40
I visualize words in my mind to recall them	3.88	1.017	40
I draw figures to understand ideas better	3.23	1.165	40
I represent concepts with symbols so I can easily remember them	3.08	1.328	40
I group similar information into a category	3.30	1.285	40
I summarized what I have read	4.00	1.198	40
I read my note aloud when I am reading	2.83	1.500	40
I make sample questions from a topic and answer them	3.55	1.154	40
I record the lessons that I attend	2.85	1.562	40
I enjoy group work because of the cooperation	3.65	1.252	40

I use library materials to find the information that I need	3.88	1.399	40
I seek help from friends to review my lesson	4.28	1.037	40
I compare my notes with that of my classmates	3.55	1.280	40
I ask classmates about the homework that I missed	3.88	1.181	40
I share with my peers what I have learned	3.78	1.330	40
I use variety of sources when doing school related tasks	4.18	.874	40
I ask for help of a friend to review my lessons	3.85	.949	40
I prefer to have a reading partner than reading alone	2.93	1.700	40
when others explain concepts I understand it better from their own point of view	3.60	1.215	40
I evaluate my accomplishments at the end of each study session	3.70	1.067	40
I allow others assess my work before submission	3.38	1.295	40
I welcome feedback on my work	3.93	1.163	40
I check my progress by reviewing my past performance	4.25	.809	40
I listen attentively to peoples comments on my work	4.08	1.118	40
I am open to feedback to improve my work	4.00	1.132	40
I am aware of my progress when doing certain activities	3.85	.921	40
I keep track of my accomplishments	4.00	1.038	40
I ask for feedback of my performance from someone I think is good at it	4.30	.966	40
If I am having a difficulty I seek assistance from an expert	4.58	.675	40

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.731	2.825	4.575	1.750	1.619	.170	40

APPENDIX C
STATISTICAL RESULT OUTPUT

H1
Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Academic Achievement	3.1502	.71649	241
Goal Setting	38.7469	7.91769	241

Correlations

		Academic Achievement	Goal Setting
Academic Achievement	Pearson Correlation	1	.605**
	Sig. (2-tailed)		.039
	N	241	241
Goal Setting	Pearson Correlation	.605**	1
	Sig. (2-tailed)	.039	
	N	241	241

**. Correlation is significant at the 0.05 level (2-tailed).

H2 Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Academic Achievement	3.1502	.71649	241
Memory strategy	38.7884	7.99589	241

Correlations

		Academic Achievement	Memory strategy
Academic Achievement	Pearson Correlation	1	.736**
	Sig. (2-tailed)		.044
	N	241	241
Memory Strategy	Pearson Correlation	.736**	1
	Sig. (2-tailed)	.044	
	N	241	241

**. Correlation is significant at the 0.05 level (2-tailed).

```
CORRELATIONS
  /VARIABLES=CGPA Help-Seeking Strategy
  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```

H3 Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Academic Achievement	3.1502	.71649	241
Help-Seeking Strategy	37.8838	7.78962	241

Correlations

		Academic Achievement	Help-Seeking Strategy
Academic Achievement	Pearson Correlation	1	.883**
	Sig. (2-tailed)		.022
	N	241	241
Help-Seeking Strategy	Pearson Correlation	.883**	1
	Sig. (2-tailed)	.022	
	N	241	241

**. Correlation is significant at the 0.05 level (2-tailed).

```
CORRELATIONS
  /VARIABLES=CGPA Self_Evaluation
  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```

H4
Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Academic Achievement	3.1502	.71649	241
Self-Evaluation	40.4357	6.00807	241

Correlations

		Academic Achievement	Self-Evaluation
Academic Achievement	Pearson Correlation	1	.228**
	Sig. (2-tailed)		.033
	N	241	241
Self-Evaluation	Pearson Correlation	.228**	1
	Sig. (2-tailed)	.033	
	N	241	241

**. Correlation is significant at the 0.05 level (2-tailed).

```
CORRELATIONS
  /VARIABLES=CGPA Test_Anxiety
  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```

H5 Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Test Anxiety	48.7593	12.48466	241
Academic Achievement	3.1502	.71649	241

Correlations

		Test Anxiety	Academic Achievement
Test Anxiety	Pearson Correlation	1	-.829**
	Sig. (2-tailed)		.010
	N	241	241
Academic Achievement	Pearson Correlation	-.829**	1
	Sig. (2-tailed)	.010	
	N	241	241

**. Correlation is significant at the 0.05 level (2-tailed).

Frequencies

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	125	51.9	51.9	51.9
	Female	116	48.1	48.1	100.0
	Total	241	100.0	100.0	

Reg. No

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	241	100.0	100.0	100.0

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-20	50	20.7	20.7	20.7
	21-25	159	66.0	66.0	86.7
	26-30	29	12.0	12.0	98.8
	31 and above	3	1.2	1.2	100.0
	Total	241	100.0	100.0	

4.2 Answering Research questions

Question one: What is the level of goal setting relationship with academic achievement?
Table 4.2.1: Goal setting effect on academic achievement

S.NO	ITEMS	Response categories					MEAN
		SA	A	NS	D	SD	
1	I have in mind an end goal in every task that I engage.	140	90	6	4	1	4.510
2	I plan the things I have to do in a week.	90	109	38	2	2	4.174
3	I keep track of myself if I am accomplishing my goals.	101	110	26	2	2	4.270
4	I make schedule of the activities I need to accomplish.	86	120	24	9	2	4.158
5	I make sure I accomplish the things I need to do each day	76	93	59	10	3	3.950
6	I draft my personal study timetable and work by it	114	60	50	13	4	4.108
7	Before I engage in an academic task, I identify what I need to learn first	95	111	20	14	1	4.183
8	I revisit set target which I am unable to achieve	98	98	19	16	10	4.071
9	I explore tips for successful goal setting	78	88	48	18	9	3.863
10	I adjust my schedule based on my personal strength	109	98	21	2	11	4.212
	Cumulative Mean						4.1499

Standard/decision mean =3.000

The level of Goal Setting relationship with academic achievement is very high since the cumulative mean of 4.1499 is higher than the decision mean of 3.0, Specifically, most have in mind an end goal in every task they engage in, as this has the highest mean of 4.4510, as a total of 14 strongly agree, 90 agreed 6 not sure while 4 disagree and the rest 1 strongly disagreed with this view. Also they assert that they keep track of themselves if accomplishing their goals has the second highest mean of 4.270, as 101 strongly agree, 110 agree, 26 not sure as against 2 that disagreed and the rest 2 strongly agreed. In summary the level of goal setting relationship with academic achievement is high, as most have in mind an end goal in every task they engage and they keep track of themselves if accomplishing their goals.

Question Two: What is level of memory strategy relationship with academic achievement?

Table 4.2 2: Memory strategy effect on academic achievement

S.NO	ITEMS	Response categories					MEAN
		SA	A	NS	D	SD	
1	I write information that I need to remember.	130	99	5	5	2	4.452
2	I use my own words in writing my notes.	98	117	22	2	2	4.274
3	I visualize words in my mind to recall them.	81	111	36	3	10	4.037
4	I draw figures to understand ideas better.	90	117	23	10	1	4.183
5	I represent concepts with symbols so I can easily remember them.	69	99	58	11	4	3.905
6	I group similar information into a category	100	59	59	15	8	3.946
7	I summarized what I have read	99	99	30	12	1	4.174
8	I read my note aloud when I am reading	99	98	17	14	13	4.062
9	I make sample questions from a topic and answer them	76	90	47	19	9	3.851
10	I record the lessons that I attend	92	106	26	4	13	4.079
	Cumulative Mean						4.0963

Standard/decision mean =3.000

The level of memory strategy relationship with academic achievement is high because the cumulative mean of 4.0963 is higher than the decision mean of 3.0. Specifically they write information that they need to remember has the highest mean of 4.452, as details show, a total of 130 strongly agree, 99 agree, while 5 are not sure, while 5 disagreed and the rest 2 strongly disagreed . In the same vein ,most use their own words in writing their notes has the second highest mean of 4.4.274 a total of 98 strongly agree, 117 agreed as against 22 are not sure while 2 disagreed and the rest 2 strongly disagree**.** In summary the level of memory strategy relationship with academic achievement is high because most of the respondents write the information that need to be remembered and use their own words in writing my notes.

Question Three: What is the level of help-seeking strategy relationship with academic achievement?

Table 4.2 3: Help-seeking strategy effect on academic achievement

S.NO	ITEMS	Response categories					MEAN
		SA	A	NS	D	SD	
1	I enjoy group work because of the cooperation.	90	60	11	45	35	3.519
2	I use library materials to find the information that I need.	119	88	20	11	3	4.282
3	I seek help from friends to review my lesson.	108	80	28	23	2	4.116
4	I compare my notes with that of my classmates.	80	77	24	50	10	3.693
5	I ask classmates about the homework that I missed	140	69	11	10	11	4.315
6	I share with my peers what I have learned	121	86	22	11	1	4.307
7	I use variety of sources when doing school related tasks	111	80	24	18	8	4.112
8	I ask for help of a friend to review my lessons	99	98	21	20	3	4.120
9	I prefer to have a reading partner than reading alone	80	70	11	50	30	3.498
10	When others explain concepts, I understand it better from their own point of view	88	61	32	40	20	3.651
	Cumulative Mean						3.9613

Standard/decision mean =3.000

The level of help-seeking relationship with academic achievement is high since the cumulative mean of 3.9613 is higher than the decision mean of 3.000, specifically most ask classmates about the homework that they missed has the highest mean of 4.315 as details showed that while 140 strongly agree, 69 agreed while 11 not sure as against 10 that disagreed and the rest 11 strongly disagreed with this view. In the same vein, most assert that they use library materials to find the information that they need, this item had the second highest mean of 4.282 as detail showed that while 119 strongly agree, 88 agreed as against 20 that were not sure while 11 disagreed and the rest 3 strongly disagreed. In summary information that they need the level of help-seeking relationship with academic achievement is high specifically as most of the ask classmates about the homework that they missed and they use library materials to find the information that I need.

Question Four: What is level of self-evaluation relationship with academic achievement?

Table 4.2 4: Self-evaluation effect on academic achievement

S.NO	ITEMS	Response categories					MEAN
		SA	A	NS	D	SD	
1	I evaluate my accomplishments at the end of each study session.	88	70	8	31	44	3.527
2	I allow others assess my work before submission.	114	90	23	11	3	4.249
3	I welcome feedback on my work.	103	79	28	29	2	4.046
4	I check my progress by reviewing my past performance.	82	80	24	45	10	3.743
5	I listen attentively to people's comments on my work.	120	73	17	15	16	4.104
6	I am open to feedback to improve my work	111	84	30	14	2	4.195
7	I am aware of my progress when doing certain activities	99	79	34	22	7	4.000
8	I keep track of my accomplishments	100	92	21	25	3	4.083
9	I ask feedback of my performance from someone I think is good at it	81	71	11	48	30	3.519
10	If I am having a difficulty, I seek assistance from an expert	79	70	32	40	20	3.614
	Cumulative Mean						3.908

Standard/decision mean =3.000

The level of Self-evaluation relationship with academic achievement is high since the cumulative mean of 3.908 is higher than the decision mean of 3.0. specifically, allow others assess my work before submission has the highest mean of 4.4.249, as detail 114 strongly agree, 90agree 23 are not sure 11 disagree and 3 strongly disagree. Also, listen attentively to people's comments on my work has the second highest mean of 4.104, as a total of 120 strongly agree, 73 agree, 17 not sure as against 15 disagree and the rest 16 strongly disagree. In summary level of Self Evaluation relationship with academic achievement is high specifically, as most allow others assess their work before submission and also listen attentively to people's comments on their work

Question Five: What is level of test anxiety relationship with academic achievement?

Table 4.2 5: Test anxiety effectonacademic achievement

S.NO	ITEMS	Response categories					MEAN
		SA	A	NS	D	SD	
1	Having to face an important test disturbs my sleep.	87	71	8	31	44	3.523
2	Knowing that my future depends on doing well in tests upsets me.	112	92	23	11	3	4.241
3	I would rather take a test than to write a paper.	100	78	31	30	2	4.012
4	On exams I take the attitude "if I don't know it now there's no point worrying about it".	82	79	25	45	10	3.739
5	I would rather write a paper than take a test for a grade.	120	73	17	15	16	4.104
6	The harder I work on some test items, the more confuse I get.	111	84	30	14	2	4.195
7	I don't care what others think about me if I perform poorly in tests.	99	79	34	22	7	4.000
8	My test performance is directly connected to my future success and security.	97	98	20	24	2	4.095
9	Tests do not really show how much a person knows.	81	71	11	48	30	3.519
10	I think that examination periods ought not to be made the tense situations which they are.	78	71	32	40	20	3.610
11	I never seem to be fully prepared to take tests.	88	61	9	46	37	3.485
12	When taking a test, my emotional feelings interfere with my concentration.	119	88	20	11	3	4.282
13	I seldom feel the need for cramming before an exam.	108	81	27	23	2	4.120
14	I do not feel confident and mentally relaxed before a test.	77	79	26	49	10	3.680
15	People will question my ability if I do poorly in test.	120	76	13	14	18	4.104
16	I don't study any harder for final exams than for the rest of my course work.	109	98	23	9	2	4.257
17	During test I sometimes get so nervous and forget facts I really know.	98	99	20	14	10	4.083
18	My stomach becomes upsets before important tests.	100	100	17	19	5	4.124
19	I really don't see why some people get so upset about tests.	88	77	10	40	26	3.668
20	I start feeling very anxious and uneasy just before getting test result.	80	70	30	46	15	3.639

	Cumulative Mean						3.924

Standard/decision mean =3.000

The level of test anxiety is high since the cumulative mean of 3.924 is higher than the decision mean of 3.0. specifically, When taking a test, my emotional feelings interfere with my concentration; has the highest mean of 4.282 in the same vein Knowing that my future depends on doing well in tests upsets me as this had the second highest mean of 4. In summary level of test anxiety relationship with academic achievement is high because of, when taking a test, their emotional feelings interfere with their concentration andknowing that their future depends on doing well in tests upsets them.

APPENDIX D

SAMPLE SIZE TABLE

Population Size	95.00% Degree of Accuracy/Margin of Error				99.00% 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

APPENDIX E

MANAGEMENT INFORMATION SYSTEM (MIS) UNIT

INFORMATION COMMUNICATION TECHNOLOGY (ICT) DIRECTORATE

AHMADU BELLO UNIVERSITY, ZARIA

Undergraduate Students Statistics by Faculty/Department 2017/2018 Session.

Faculty/Departments	**100**	**200**	**300**	**400**	**500**	**60**	**G. Total**
Administration	**578**	**680**	**724**	**1209**			**3191**
B.A Local Government & Development	115	88	146	228			577
B.Sc Accounting	121	162	164	273			720
B.Sc Business Administration	120	161	158	282			721
B.Sc Insurance	76	110	42	68			301
B.Sc Public Administration	146	159	209	358			872
Agriculture	**233**	**301**	**145**	**147**	**92**		**918**
B.Agriculture	117	181	124	124	85		631
B.Sc Agricultural Extension		31	21	23	7		82
B.Sc. Fisheries and Aquaculture	57	50					107
B.Sc. Foresty and Wildlife	59	39					98
Arts	**636**	**885**	**976**	**985**			**3482**
B.A Arabic	47	108	122	146			423
B.A Archeology	108	191	181	262			742
B.A Archeology/History	50	69	34	55			208
B.A English (Language)	102	11	242	210			669
B.A English (Literature)	87	70	73	37			267
B.A French	17	45	1	38			101
B.A Hausa	41	85	55	81			262
B.A History	112	115	163	108			498
B.A Theatre and Performing Arts	72	87	105	48			312
Education	**1531**	**2957**	**2545**	**2481**			**9514**
B.Ed (Education Psychology and	39	18		1			58
B.Ed Arabic Education	31	82	67	73			253
B.Ed Biology Education	128	323	219	159			829
B.Ed Chemistry Education	126	266	113	123			628
B.Ed Christian Religious Studies	93	34	31	48			206
B.Ed Geography Education	53	99	148	133			433
B.Ed Guidance and Counselling	48	235	361	267			911
B.Ed Hausa Education	7	58	50	66			181
B.Ed Health Education	24	2					26
B.Ed Home Economics	26	65	43	22			156
B.Ed Human Kinetics	40	1					41
B.Ed Integrated Science	92	205	75	131			503
B.Ed Islamic Religious Studies	93	147	176	195			611

B.Ed Mathematics Education	71	167	60	88			386
B.EdPhysical & Health Education	80	122	99	67			368
B.Ed Physics Education	90	184	104	96			474
B.Ed Social Studies	126	152	256	136			672
B.Sc (Ed) Business Education	94	149	172	155			570
B.Sc (Ed) Computer Science Education	55	178	118	182			533
B.Sc (Ed) Computer Science Education			2				2
B.Sc (Ed) Agriculture Education	103	157	111	57			428
BLI (Bachelor of Library & Information	112	313	340	480			1245
Engineering	**921**	**1160**	**825**	**765**	**1014**		**4685**
B.Eng. Minerals Engineering	27						27
B.Eng. Agricultural Engineering	77	111	77	73			405
B.Eng. Automotive Engineering	29	32					61
B.Eng. Chemical Engineering	119	164	145	124	226		778
B.Eng. Civi1 Engineering	121	175	152	140	172		760
B.Eng. Communications Engineering	46	62	42	19	26		195
B.Eng. Computer Engineering	62	101	54	50	56		323
B.Eng. Electrical Engineering	78	105	97	122	200		602
B.Eng. Mechanical Engineering	127	146	119	86	1 54		632
B.Eng. Mechatronics Engineering	47	38					85
B.Eng. Metallurgical and Materials	88	113	69	61	49		380
B.Eng. Polymer and Textile Engineering	14						14
B.Eng. Water Resources & Environmental	86	113	70	90	61		420
B.Sc. Land Surveying					3		3
Environmental Design	**582**	**840**	**648**	**742**	**366**		**3178**
B.A Fine Arts	33	57	40	54			184
B.A Industrial Design	20	57	70	93			240
B.Eng. Geomatic Engineering	14			2	2		18
B.Sc Architecture	103	110	106	168			487
B.Sc Building	101	166	95	102	154		618
B.ScGeomatics	50	117	81	63	44		355
B.Sc Quantity Surveying	77	146	102	88	75		488
B.ScUrban & Regional Planning	87	67	76	86	91		407
Law	**249**	**305**	**357**	**327**	**391**		**1629**
LLB Civil Law	130	137	171	166	205		809

LLB With Special Islamic Law	119	168	186	161	186		820
Life Science	**715**	**864**	**688**	**950**			**3217**
B.Sc Biochemistry	104	107	186	293			690
B.Sc Biological Science	171	215	227	378			991
B.Sc Botany	148	175	69	5			397
B.Sc Microbiology	152	215	168	263			798
B.Sc Zoology	140	152	38	11			341
Medicine	**693**	**779**	**570**	**598**	**340**	**1**	**2981**
B.ScHuman Anatomy	151	211	135	150			647
B.ScHuman Physiology	138	209	128	155			630
B.ScNursing Science	143	226	193	182	244		988
Bachelor of Dental Surgery	40						40
Bachelor of Medical Lab. Science	51						51
B.Sc Medical Radiography	46						46
MBBS	124	133	144	111	96		579
Pharmaceutical Sciences	**119**	**150**	**125**	**107**	**244**		**745**
B.Pharmacy	119	150	125	107	244		745
Physical Science	**667**	**1400**	**1036**	**1461**	**72**		**4636**
B.Sc Chemistry	165	201	179	306			851
BSc Computer Science	131	203	237	317			888
B.ScGeography	48	163	161	204			576
B.ScGeology	66	113	58	128			365
B.ScMathematics	89	137	98	133			457
B.ScPhysics	62	176	82	129			449
B.Sc Polymer & Textile Science	13	216	10				239
B.Sc Statistics	93	190	114	168			565
B.ScTextile Science & Technology		1	97	76	72		246
Social Sciences	**655**	**668**	**810**	**987**			**3120**
B.ScEconomics	127	121	140	199			587
B.Sc International Studies	123	116	174	184			597
B.ScMass Communication	159	158	181	319			817
B.ScPolitical Science	114	138	168	146			566

APPENDIX F

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 10/10/2018

The Dean,
Faculty of Arts
ABU Zaria

Dear Sir,

STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research Project/Thesis/Dissertation. They are therefore required to collect data for the research studies.

Most of them will need to be allowed access to certain relevant documents and some valuable information which you may have.

Please accord them all the necessary assistance.

TOPIC OF RESEARCH:
Relationships among self-regulated learning, test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna State, Nigeria.

Thank you for your continued cooperation

Yours sincerely,

HEAD
DEPARTMENT OF
EDUCATIONAL PSYCHOLOGY AND COUNSELLING

Research Advisor

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 16/10/2018

The Dean
Faculty of Life Sciences
ABU Zaria.

Dear Sir,

STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research Project/Thesis/Dissertation. They are therefore required to collect data for the research studies.

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TOPIC OF RESEARCH:
Relationships among self-regulated learning trait anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna State, Nigeria.

Thank you for your continued cooperation

Yours sincerely,

Research Advisor

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 16/10/2015

The Dean,
Faculty of Physical Sciences
ABU Zaria

Dear Sir,

STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research Project/Thesis/Dissertation. They are therefore required to collect data for the research studies.

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TOPIC OF RESEARCH:
Relationships among Self-regulated learning test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria Kaduna State Nigeria

Thank you for your continued cooperation

Yours sincerely,

Research Adviser

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 10/10/2018

The Dean,
Faculty of Environmental Design
ABU Zaria.

Dear Sir,

STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research Project/Thesis/Dissertation. They are therefore required to collect data for the research studies.

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TOPIC OF RESEARCH:
Relationships among Self-regulated learning, test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna State, Nigeria.

Thank you for your continued cooperation

Yours sincerely,

Research Advisor

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 10/10/2018

The Examination Officer
Faculty of Life Sciences
ABU Zaria.

Dear Sir,

STUDENTS' FIELD RESEARCH

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Relationships among Self-regulated learning, test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna State, Nigeria.

Thank you for your continued cooperation

Yours sincerely,
HEAD
DEPARTMENT OF
EDUCATIONAL PSYCHOLOGY
COUNSELLING
A. B. U. ZARIA

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 10/10/2018

The Examination Officer,
Faculty of Environmental
Design
ABU Zaria.

Dear Sir,

STUDENTS' FIELD RESEARCH

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TOPIC OF RESEARCH:
Relationships among Self-regulated learning, test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna State, Nigeria.

Thank you for your continued cooperation

Yours sincerely,

HEAD
DEPARTMENT OF
EDUCATIONAL PSYCHOLOGY
AND COUNSELLING
ZARIA

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 10/10/2015

The Examination Officer
Faculty of Physical
Sciences
ABU Zaria

Dear Sir,

STUDENTS' FIELD RESEARCH

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TOPIC OF RESEARCH:
Relationships among self-regulated learning, test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna state, Nigeria.

Thank you for your continued cooperation

Yours sincerely,

HEAD
DEPARTMENT OF
EDUCATIONAL PSYCHOLOGY
COUNSELLING
A.B.U. ZARIA

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 10/10/2018

The Examination Officer
Faculty of Education
ABU Zaria

Dear Sir,

STUDENTS' FIELD RESEARCH

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TOPIC OF RESEARCH:
Relationship among Self-regulated learning test anxiety and academic achievement among undergraduate students of Ahmadu Bello University Zaria, Kaduna State Nigeria.

Thank you for your continued cooperation

Yours sincerely,

HEAD
DEPARTMENT OF
EDUCATIONAL PSYCHOLOGY
AND COUNSELLING
A.B.U. ZARIA

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA

Our Ref: _____ Date: 10/10/2018

The Examination Officer,
Faculty of Arts
ABU Zaria

Dear Sir,

STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research Project/Thesis/Dissertation. They are therefore required to collect data for the research studies.

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TOPIC OF RESEARCH:
Relationships among Self-regulated learning skill and Anxiety and academic achievement among undergraduate Students of Ahmadu Bello University Zaria, Kaduna state, Nigeria

Thank you for your continued cooperation.

Yours sincerely,

Research Adviser

HEAD
DEPARTMENT OF
EDUCATIONAL PSYCHOLOGY
AND COUNSELLING
A.B.U. ZARIA