ASSESSMENT OF TECHNICAL EDUCATION STUDENTS ON SELF REGULATIVE LEARNING STYLE IN COLLEGE OF EDUCATION MINNA, NIGER STATE

BY

JAGABA, Saidu
2016/1//62617TI

DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

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A RESEARCH PROJECT SUBMMITTED TO THE DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION, SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA IN PARTIAL FULMENT OF THE REQUIREMENTS OF THE AWARDS OF BACHELOR OF TECHNOLOGY (B. TECH) IN INDUSTRIAL AND TECHNOLOGY EDUCATION

APRIL, 2023

DECLARATION

I JAGABA, Saidu with the matriculation number 2016/1/62617TI an undergraduate student of the Department of Industrial and Technology Education certify that the work embodied in the project is original and has not submitted in part or full for any other diploma or degree of this or any other University.

JAGABA, Saidu **……**
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CERTIFICATION

This project has been read and approved as meeting the requirement for the award of B. Tech degree in Industrial and Technology Education, School of Science and Technology Education, Federal University of Technology, Minna.

Mr. S.N. Yisa ----------
Supervisor Signature & Date

Dr. T. M. Saba ----------
Head of Department Signature & Date

---------- ----------
External Examiner Signature & Date

DEDICATION

This work is dedicated to Almighty God, who has been with me and seen me throughout my stays as undergraduate in the University, my parents Mr and Mrs Jagaba.

ACKNOWLEDGEMENTS

My sincere gratitude goes to Almighty God, I appreciate him for my sparing my life and making it easier for me to complete my study successfully.

My sincere appreciation goes to my supervisor Mr. S. N.Yisa for his guidance, tireless effort towards making this work a resourceful project. I am privileged to have him as my supervisor, May God continue to guide him on his right path.

My appreciation goes to the head of department Industrial and Technology Education, School of Science and Technology Education, Federal University of Technology, Minna. Dr. T. M. Saba for his fatherly advice, May GOD rewards him abundantly. Also, to my distinguish lecturers for impacting their professional knowledge on me, May God grant all your desires.

My unreserved gratitude goes to my beloved parents, Mr. Mrs. Jagaba and my entire family for their prayers and their contributions both financially and morally in making my dream a reality, May God spare their lives to reap the fruit of their labour (Amin).

Finally, to all my friends (Bukunmi, Abdulhakeem, Muktar, Nacho, Moses, Abdulmalik, Tessy, Agu). I say a big thank you for their support throughout this project, may almighty Allah reward them all.

The researcher acknowledges the academic and non-academic staff of the Department of Industrial Technology Education and for their immense contributions toward success of the work.

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ABSTRACT

The study is aimed at investigating self-regulative learning style in college of education Minna, Niger State. In order to obtain the pertinent information of the study three objectives and corresponding three research questions were set to guide the study. Two research hypotheses were tested at 0.05 level of significance. A survey research design was adopted for the study. The target population of the study consists of all technical student in Niger State College Education offering Woodwork Technical, Metalwork Technical, Automobile Technical, Electrical/Electronic and Building Technical. The target population for the study is 750 technical student comprising of all 50 students each from each option across each levels in technical and vocational studies department in Niger State College Education in Minna, Nigeria State. A constructed questionnaire titled "Self-Regulative Learning Style in College of Education Minna Niger State Questionnaire (SRLSCEMNS)" was used to get the desired information from the students. The instrument was validated by three experts from Department Industrial Technology Education, Federal University of Technology, Minna. The experts' comments and suggestions will be used to correct some mistakes while their suggestions was used to improve on the questionnaire. The Cronbach alpha value of 0.875 ascertain the reliability of the instrument. Mean and standard deviation are used to analyse the research questions while t-test was used to test the hypothesis at 0.05 level of significance. The finding of the study revealed that technical student's achievement through self-regulative learning style in college of education Minna, Niger state, types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger state. It could be concluded that the use of self-regulative learning style will increase the students' academic achievement. The finding of the study also disclosed that Self-monitoring, self-instruction, goal-setting, Strategic planning among others are types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger state. There is no significant difference between the mean response of male and female on the type and achievement on self-regulative learning style in technical education at $p > 0.05$. the researcher thereby recommends students should adopt self-regulative learning styles to increase their technical education subject academic achievement. There should be continuous public enlightenment campaign on the importance of learning styles, self-regulated learning skill as well as achievement motivation. This enlightenment campaign should be carried out at all levels; Federal, State and LGA.

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CHEAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Education is a process of training designed to give knowledge, develop skills and abilities that could lead to the development of mental alertness and the right attitude to life (Aderibigbe, 2017). This implies that if education is adequately inculcated in human-kind, individuals would meaningfully help themselves and positively contribute to the growth and welfare of their immediate community (Colthorpe et al., 2019). In essence, education remains the single factor that guarantees both individual growth and community development. According to Vijay (2017), education is a tool that improves functional and analytical ability and thereby opens up opportunities for individuals and groups to achieve greater access to labour markets and livelihoods. Education is not only an instrument of enhancing efficiency but is also an effective tool of widening and augmenting democratic participation and upgrading the overall quality of individual and societal life.

To this end, one of the philosophies of education as enshrined in the National Policy on Education federal Republic of Nigeria FRN (2014) is the belief that education is an instrument of national development and social change. It is a universal fact that no society can develop beyond the educational level of its citizenry. Therefore, to develop a nation economically, one needs to develop the educational system. Education provides individuals with the opportunity for self-empowerment through intellectual development, skill acquisition, vocational development and, environmental awareness (Whyte et al., 2018). The achievement of educational objectives depends on the effective teaching and learning through a qualify teacher. Teachers play a significant and important role in human development. According to Whyte et al. (2017), define teacher as a person who helps to acquire knowledge, competence or values. They are the ones who are behind the academic achievement and development of student

behaviour at each stage of learning. Teachers are responsible for impacting knowledge and educating students at all levels. Their duties include guiding students through the learning process, evaluating their performance, grading them based on their performance, and documenting their progress, among others. As a teacher, one must bring out the best in students and inspire them to strive for greatness. Students are considered as the future of the nation and humankind, and a teacher is believed to be a credible guide for their advancement. Not only to guide students in academic or extracurricular activities, but are responsible for shaping student's future to make them better human being. One of the basic responsibilities of a teacher is to impact the necessary and adequate knowledge and skills to student's life (Steiner et al., 2018). The duty and responsibilities of a teacher is complete when learning has taken place.

Learning has been explained as a quantitative increase in knowledge, memorizing of facts, skills, and methods that can be retained and used when the need arises. It is a progressive change in behaviour of an individual which influences his/her reactions to situations (Pintrich and DeGroot, 2017). It is also viewed as making sense or abstracting meaning, relating parts of the subject matter to each other and to the real world, interpreting and understanding reality and comprehending the world by reinterpreting knowledge (Pintrich and DeGroot, 2017). Thus, learning is a complex process, it is a process by which all organisms, as a result of its interaction in a situation acquires a new mode of behaviour which tends to persist and affect his behaviour in the future. Learning take place in both formal and informal setting. In a formal setting such as primary, secondary and tertiary institutions. In tertiary institutions such as university, polytechnics and colleges of education.

According to (FRN) (2014), College of Education is a well-established institution dedicated to providing prospective teachers with the necessary knowledge and skills to impact knowledge in a variety of fields of study. It is an educational institution programmme where school teachers are trained or is a professional training college for teachers (Porter & Lawler, 2016).

The development of education is a major aspect of national development and a concrete laid down foundation of teacher education. It would be impossible to effect a purposeful development orientation and adequate teaching and learning in college. It is on the recognition of this important aspect of national development that since the end of colonialism in Nigeria, the various regimes in the country have devised various educational programmes, established primary and secondary schools and indeed tertiary institutions with the aim of laying the foundations for other field of national development. One way, the government has taken a bold step in the area of teacher's education.

Thus, from the early 1960s, apart from the establishment of teachers training colleges, the government went a step further to establish a higher level of teacher training institution, hitherto known as Advanced Teachers Colleges. These institutions were aimed as mid-point institutions, which would train teachers for the primary schools. Indeed, those of them established in 1960s made their modest contributions to the development of teacher education in the country. Today, with the demise of the Grade Two Teachers Colleges, these institutions, now known as Colleges of Education have taken on the challenge of training teachers for the primary schools and the lower secondary school level.

The role of colleges of education in National Development in Nigeria have played a vital role especially in the education sector. The teaching function of colleges of education in Nigeria for instance, has contributed immensely to national development particularly in the development of middle-level manpower for the nation's primary and junior secondary schools. The ideas of experts on field of education are put into productive use has enhanced the nation's development.

Another contribution of Colleges of Education to national development is in the structural integration of Nigeria. Through public lectures, seminars, workshops, conference, inter-

collegiate sports competition and the implementation of their curriculum, especially in General Studies Courses like Citizenship Education, they have raised the level of national unity, and national consciousness, sense of oneness, common citizenship and common purpose amongst Nigerians, thus enhancing the development of the nation. College of education are divided into special college of education, conventional college of education and college of education (Technical) (Aderibigbe, 2017). Colleges of Education in Nigeria have waded into the task area of producing professionally trained teachers for our vocational and technical secondary schools in order to meet the nation's requirements for technological take-off as provided in the (FRN) (2014).

According to Okafor (2014) College of education (Technical) is an institution which was founded with the aim of grooming and producing teachers in technical, vocational and commercial academic driplines. It is an institution that prepared students to be technical teachers. It is an institution which offers the award of Nigeria Certificate in Education (NCE) (Okafor, 2014). The task above them is high which the teaching and learning that takes place in the classroom may not be enough to impact the necessary skills need for them to achieve the aim and objectives of college of education (Technical). Therefore, there is need for extra activities or learning styles which one of them is self- regulative learning style learning.

Self-regulative learning is defined as a functioning and useful procedure whereby learner set objectives for their learning and after that endeavour to screen, regulate, and control their cognition, motivation, and behaviour, guided and compelled by their objectives and the contextual features in the environment (Pintrich and De Groot, 2019). Self-regulative learning is a conscious effort made by learners in achieving their learning objectives, the learners continuously put in their until they achieve their objectives with maximizing their self-ability adapted to environment. Since the mid-1980s the concept of self-regulation learning is the

most widely concept discussed by researchers and scholars whose concern is of educational psychology. Self-regulation is commonly characterized as the essential capacity of a person which is utilized in various logical circumstances which are considered significant to the advancement of life (Rayner, 2017). It can also be looked at as the manner by which an individual can expand the capacity in apprehending, using and assessing opportunities that exist in the environment, so as to accomplish their set-goals (Rayner, 2017). Self-regulated learning style is considered as one of the safest learning style that influence the success and academic performance of the student (Newman, 2018). On this light the researchers sought to assess the self-regulative learning style on technical student's achievement in college of education Minna, Niger State.

1.2 Statement of the Problem

The concept of self-regulated learning is becoming increasingly relevant in the study of learning and academic achievement, especially in technical education, where quite distinctive demands are placed on students. The main goal of introducing technical education into the college curriculum is to prepare the students for the need to be technologically literate, which would eventually lead to self-reliance and sustainability, or to become gainfully employed or self-employed, and to become technical teachers, which is yet to be achieved (Godwin and Oksana, 2016). Technical teachers are trained beginning in college.S tudents at this level are mentally, physically, and academically fit and sound. This will prepare them to meet the state's goal of obtaining a college education.

According to Okafor (2014), the College of Education (Technical) is an institution that was founded with the aim of grooming and producing teachers in technical, vocational, and commercial academic disciplines. It is an institution that prepares students to be technical teachers. It is an institution that offers the Nigeria Certificate in Education (NCE).

Overpopulation is one of the factors contributing to the lack of interest among technical students. According to the National Commission for Colleges of Education (NCCE), the Federal Republic of Nigeria (FRN) (2014) stated that the teacher-student ratio is estimated to be 1:20, which is not so in Nigeria's colleges of education. Another factor affecting technical colleges of education is the lack of a public address system, which will be used to effectively argue the teaching in the classroom.

Similarly, time is another factor that influences technical education students' ability to cover topics in college curricula. All of the issues or challenges mentioned above contribute to college students' lack of achievement. But evidence showed that most students still lack the adequate understanding and knowledge required, which greatly affects their performance in technical and vocational courses. Numerous researchers have taken an interest in addressing these challenges by revealing different learning styles that will aid motivation, interest, and performance in technical and vocational courses (Newman, 2018; Pintrich & De Groot, 2019; Onyedika, 2017). It is in light of this that the present study sought to investigate the self-regulative learning style in the college of education at Minna, Niger State.

1.3 Purpose of the study

The aim of the study is to assess self-regulative learning style in college of education Minna, Niger State.

Specifically, the study tends:

1. To determine the technical student’s achievement through self-regulative learning style in college of education Minna, Niger State.
2. To determine the types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger State.

3. To determine the effect of gender difference of technical students on self-regulative learning style in college of education Minna, Niger State.

1.4 Significance of the Study

This study will be of great benefits to the students, teachers and society.

The students will benefit from the study because it will promote self-development and boost confidence in the students when they learn how to handle academic problems by themselves which may help them and enable them to adapt to academic challenges in school. Students may realize the importance of learning style, self-regulated learning skill and achievement motivation to improve their academic performance. Being able to regulate reaction based on negative emotions such as frustration, anger and embarrassment. Encourages students to seek out knowledge proactively rather than merely reacting to situations that provide them with the opportunity to learn.

The study would also promote teacher's effectiveness and efficiency using different learning strategy as it may help teacher to shift from teacher centered method to student centered method which may improve the technical students in academic achievement. The findings may be useful to teachers who may realize the need to enhance student learning style, self-regulated learning skill. It will less the stress of the teacher activity in the class and cover topics effectively. Teacher may better understand the development of their students SRL and be better at recognizing and coping with the needs, obstacles, and difficulties their students may face in becoming more self-regulated learners.

The society will benefit from the study because it will promote development of produce technical teachers who can the next coming generation community. It boosts confidence in them when they are teaching in classroom and handle academic problems by themselves which enable them to adapt to academic challenges in classroom. The society may realize the

importance of self-regulative learning styles and achievement motivation to improve society needs.

1.5 Scope of the study

The study will focus on technical education students on self-regulative learning style in college of education Minna, Niger state. The study is delimit to student achievement, types self-regulative learning and gender difference of technical education students on self-regulative learning styles in college of education Minna, Niger state. The study will not cover other faculties.

1.7 Research Questions

The following research questions were developed by the researcher to guide the research:

1. What are the technical student's achievement through self-regulative learning style in college of education Minna, Niger state?
2. What are the types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger state?
3. What are the effect of gender difference on self-regulative learning style in college of education Minna, Niger state?

1.8 Hypotheses

The following null hypotheses were tested at ($P<0.05$) level of significance:

H_{01} There is no significant difference between the mean response of male and female on the achievement on self-regulative learning style in Technical education.

H_{02} There is no significant difference between the male and female response on the types of self-regulative learning skills adopted in technical education.

CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter will be discussed using the following sub-headings;

2.1 Theoretical Framework

2.2 Conceptual Framework.

2.3 Review of Related Emperical Studies.

2.4 Summary of Literature Reviewed

2.1 Theoretical Framework.

2.1.1 Zimmerman's Model of Self-Regulative Learning

Zimmerman model was developed by Zimmerman in year (1983). Zimmerman model hypothesised that environments and behaviours have an interactive effect on humans. Furthermore, Zimmerman defines self-regulation as "self-generated thoughts, feelings, and actions that are planned and cyclically modified to the attainment of personal goals" (2011). Zimmerman's model puts forward three distinct phases: (1) the forethought phase, (2) the performance phase, and (3) the self-reflection phase. Each of these phases in turn reflects specific components: (1) Meta-cognitive, (2) Motivational, and (3) Behavioural (Zimmerman, 2002), in which the learner undertakes particular processes in order to self-regulate.

For example, taking a look at what this means within the forethought phase (an initial phase occurring prior to starting the task). Self-regulating students would approach the task by "analysing it, assessing their capacity to perform it with success and establishing goals and plans regarding how to complete it". Both intrinsic task interest and goal orientation are crucial towards achieving reflective planning and later task performance. Students will "analyse what the task characteristics are by creating a first representation of how it should be performed. Second, they analyse the value the task has for them, this conditions their motivation and effort, and therefore, the attention they will pay during the performance; in other words, their activation of self-regulatory strategies." (Panadero and Alonso-Tapia, 2014).

The model's importance and relevance to the current study cannot be overstated because it provides comprehensive information and links human behaviour, motivation, and metacognition in relation to self-act and assessment toward goal attainment, and the current study is assessing self-regulative learning as a learning style for student achievement of academic goals. This makes the model an important one for this study to explore as a theoretical background.

2.1.2 Pintrich's Model of Self-Regulative Learning

Pintrich model was developed by pintrich in the year (2000). Pintrich's Model postulates that both motivational and cognitive elements can be self-regulated by the learner. On the other hand, there are certain differences between models, and consequent value behind incorporating an integrative model to observing and defining self-regulative learning within technology-enhanced learning environments (Manso *et al*, 2014). Pintrich's comprehensive model of self-regulative learning (elaborated below), provides us with, between other comprehensive intersecting oversights on SRL, the addition of contextual sensitivity.

In the words of Pintrich (2000), SRL is defined as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment". Pintrich's model proposes four phases and four components, that in-turn lead to several self-regulation processes. Although a more comprehensive account can be retrieved from Pintrich (2000), self-regulatory processes can be seen to fall into four phases (also termed as stages within the model but will employ phases for consistency): (1) planning and goal setting, (2) self-monitoring, (3) controlling and (4) reflecting. These phases are then equally overlapped by four components: (1) cognition, (2) motivation, (3) behaviour and (4) context, under which interactions are produced as learners' progress and employ particular self-regulating processes accordingly to complete a set learning task.

"The final stage of reflecting includes evaluations that learners make regarding execution of the task. Processes in this stage include comparison of the executed task to previously established criteria that were determined by the learner and/or provided by the instructor, internal and external feedback about the results of the task, consequences for the results, behaviour to be followed, as well as overall assessments about the task."

The Pintrich model is related to this study as it explains the importance of motivational and cognitive elements for goal attainment. As the present study assesses the self-regulative learning style of students and its impact on their performance, motivation and the cognitive element are important factors that can influence the effectiveness of the self-regulative learning style among students. Hence, the model serves as the manifest background for this study.

2.1.3 Boekaerts' Model of Self-Regulative Learning

Boekaert model was developed by Boekaert in year (1999). Boekaerts' model proposed (1) research on learning styles, (2) research on metacognition and regulation styles, and (3) theories of the self, including goal-directed behaviour for learning guide. This is directly related to self-regulative learning as it provides a clear illustration of the relevance of learning style, perceived academic personal control and peer and self-assessment constructs. Boekaerts recognises the significance of each of the constructs in more emphatic and explicit terms, stating that our understanding of self-regulated learning has been informed by, and shaped by, three schools of thought: learning style research; theories of the self; and research on metacognition.

Boekaerts proposes a three-layered model of self-regulated learning. By 'quality' Boekaerts is referring to the association which some learning style theorists have drawn between certain styles or approaches and regulation style. An example is Vermetten *et al*., (2015), who present evidence of associations between a deep approach to learning and a preference for opportunities for internal regulation of learning, and between a surface approach to learning and a preference for external regulation. The second of Boekaerts' layers represents the use of metacognitive knowledge and skills to direct learning. The development and utilization of metacognition is presented as a regulatory process and includes monitoring, evaluating and correcting skills. These skills clearly reflect elements of student peer assessment and self-assessment skill and –

according to Coffield *et al*. (2014) and Rayner (2017) – may represent the future pedagogical utility of learning style approaches, i.e. to develop metacognitive knowledge and awareness.

The third and final layer of Boekaerts' model is concerned with regulation of the self and motivation (i.e. 'motivation control system'). Information about the self-perceptions of learners is presented as an essential element for understanding self-regulation, why students are prepared to do what they do and don't do what they may be expected to do. Work examining academic self-efficacy and academic locus of control is clearly situated within this motivational control system, within which Boekaerts (1999) refers to the students' ability to 'activate positive scenarios' and to 'value the task and to consider oneself competent to perform it'.

This study is related to the Boekaerts' model because it proposed: (1) research on learning styles; (2) research on metacognition and regulation styles; and (3) theories of the self, including goal-directed behaviour as a learning guide. As the present study sought to assess the self-regulative learning style of students and its impact on their performance, motivation and the cognitive element are important factors that can influence the effectiveness of the self-regulative learning style among students. Hence, the model serves as the manifest background for this study.

2.2 Conceptual Framework

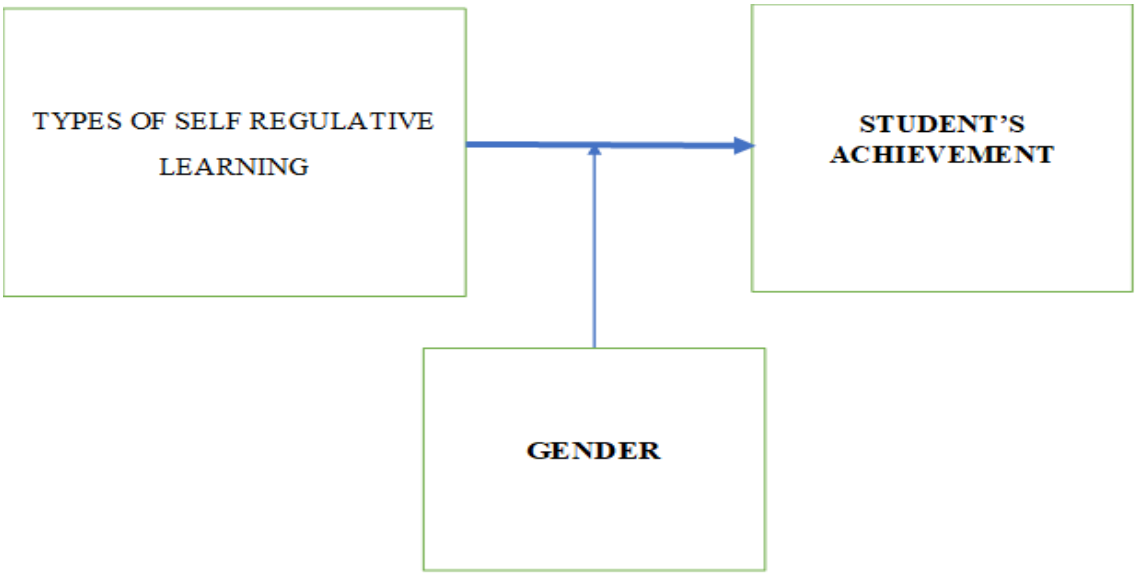

Figure 2.1 Conceptual Framework for the Study

Figure 2.1 shows the schematic representation of the scope of the study. From the Figure, the types of regulative learning style adopted by the student will be investigated alongside the assessment of student view on the impact of self-regulative learning on their academic achievement. Also, gender serves as a moderating factor to measure whether there is a difference in the impact of self-regulative learning on male and female students' achievement.

2.2.1 Concept of Education

Education is the oldest field of endeavour known to humanity. Nations are in a race to develop and improve their educational system because, according to Vijay (2017), education is a tool that improves functional and analytical ability and thereby opens up opportunities for individuals and groups to achieve greater access to labour markets and livelihoods. Education is not only an instrument of enhancing efficiency but is also an effective tool of widening and augmenting democratic participation and upgrading the overall quality of individual and societal life. To this end, one of the philosophy of education as enshrined in the National Policy on Education (FRN) (2014) is the belief that education is an instrument of national

development and social change. It is a universal fact that no society can develop beyond the educational level of its citizenry. Therefore, to develop a nation economically, one needs to develop the educational system. Education provides individuals with the opportunity for self-empowerment through intellectual development, skill acquisition, vocational development and, environmental awareness.

2.2.1 Education

Education entails a shift in one's way of life. It means the upgrading of a man's ability to choose the best alternative available in any circumstance he faces. It means the development of the person to prepare him to adopt the best approach to a problem at any given time (Imazeki & Reschorsky, 2018).

Education is defined as 'adjustment ability to a changing situation and environment'. Education is more than an economic investment: it is an essential input upon which life, development and the survival of man depend. It is the responsibility of everyone in a country to be educated, whether we are parents, adults, children, or teachers in the public or private sector. But however, we see the needs and problems, most of us would agree that the role of education is to help provide the opportunity for all people to develop as fully as possible (Ross & Wu, 2019).

Education should be a means to empower children and adults alike to become active participants in the transformation of their societies. Education therefore has a crucial long-term role in developing a knowledge and understanding of human rights, the values base they represent and the skills required to strengthen a democratic culture (Charles & Albert, 2016).

2.2.2 Colleges of Education

For any country to achieve meaningful development, the socio-economic and political system must be enhanced. This is why the successive Nigerian governments placed much emphasis on

the development of the individual as a means to national development. Education stems out to be the sure means of developing individual's potentials. Little wonder, therefore, that the FRN (2014) postulates that education is "the greatest investment that the nation can make for the quick development of its economic, political, sociological and human resources.

Among the various educational institutions through which the nation hopes to achieve its developmental goals, the Colleges of Education, were identified as higher institutions of learning. Following the publication of the FRN (2014), the policy articulated the dream of having Nigeria Certificate of Education (NCE) as the minimum qualification for entry into the Teaching profession. This dream was to be realised by the establishment of the National Commission for Colleges of Education (NCCE) by its enabling Decree No.3 of April, 1989, thus completing what is known as the "tripod of excellence" (National Universities Commission, NUC; National Board for Technical Education NBTE; and National Commission for Colleges of Education, NCCE) as the supervisory and regulatory bodies of tertiary institutions: Universities, Polytechnics, and Colleges of Education. Colleges of Education in Nigeria started at the inspiration of external aid from the UNESCO to the Nigerian Government. They were named Advanced Teachers Colleges which later transformed into Colleges of Education. Today, Colleges of Education are classified into Federal, State, Military or Private, according to their proprietors. Another level of classification is according to the bias of the programmes. Thus, we have "Conventional," "Technical," and "Special" types of Colleges of Education. Undoubtedly, the realisation that Colleges of Education are tools for national development, have led to an unbridled quest for, and vigorous expansion of Colleges of Education in Nigeria. According to a National Commission for Colleges of Education (NCCE) report (2017), "there are ninety-three (93) accredited Colleges of Education comprising twenty (21) federal, forty-two (42) state owned, twenty-one (21) private, one (1) each for military and NTI, and seven (7) Polytechnics. Colleges of Education are essentially

set up to achieve certain stated goals and objectives. Broadly, a College of Education's main functions, among others are:

i) contribute significantly to meeting in numerical terms the recurrent and expanding needs of a highly motivated, conscientious and efficient classroom teachers for primary and secondary levels of education;

ii) Epitomise a strong tradition of excellence in teaching functional or job-oriented research activities, scholarship, institutional organisation and management, and community related services;

iii) Impart to its students the occupational knowledge and skills needed for the teaching of technology relevant to the Nigerian economy as well as develop the capacities for national self-management.

The performance of these onerous tasks by Colleges of Education depends upon the quantity, quality, and calibre of the staff the Colleges' system are able to employ, train, develop and maintain. According to Likert (2017), All the activities of any enterprise are initiated and determined by the persons who make up that institution. Plants, offices, computers, automated equipment, and all else that a modern firm use are unproductive except for human effort and direction of all the task of management, managing the human component is the central and most important task because all else depends on how well it is done.

Hence of all the organisational resources which are made up of men, materials, money, machines, and, methods (the 5-m of organisational management), the human resources (men) stands out as most crucial (Likert, 2017).

2.2.2.2 Technical of Education (Technical)

Technical and vocational education is used as a comprehensive term in the educational process involving, in addition to general education, the study of technologies and related sciences and acquisition of practical skills, attitudes, understanding and knowledge relating to occupations

in various sectors of economic and social life (FGN, 2014). Ojimba (2017) quoting Momoh (2012) defines vocational education as a form of education whose primary purpose is to prepare persons for employment in recognized occupation. In the same vein he defines technical education as a post-secondary vocational training programme which the major purpose is the production of technicians.

The terms technical education and vocational education are often used interchangeably but, they are separate and distinct terms. For the purpose of this paper there is the need to do some clarifications. Vocational education refers to skill-based programmes which are designed for skill acquisition at lower level of education. Vocational education programmes focus on specific vocations for entry into defined workplace. Technical education, in the other hand is not designed for any particular vocation but provides general technical knowledge. This type of education prepares people for entry into recognized occupation at a higher level but usually lower than the first degree. In fact, technical and vocational education is usually a merger of technical education and vocational education i.e the inclusion of basic technical and scientific knowledge with the skill based vocational programme.

According to Uwaifo (2019), technical education is the training of technically oriented personnel who are to be the initiators, facilitators and implementers of technologically development of a nation. In his own opinion, this training of its citizens on the need to be technologically literate would eventually lead to self-reliance and sustainability. He observed that technical education more than any other profession has direct impact on the development of the country.

Again, technical education contributes so much ranging from electrical and electronics technology, metal work technology, mechanical/automobile technology, building technology, woodwork technology etc, technical education is practical oriented education which makes it unique in its content and approach thereby demanding special attention.

2.2.2.3 Education and National Development

Commenting on the relationship between education and national development generally, philosophers like Aristotle, Socretes and John Dewey acknowledge formal education as a prerequisite for peace and national development (Ehiametalor, 2018).

Plato, in his book, the "Republic", argued that the „good life" or felicity is obviously the end at which all men aim. The purpose of the educational system is to facilitate the attainment of this end. Chmiliar (2014) stated among other things that: In order to develop a country must have a very consideration promotion of trained educated citizens as doctors, teachers, engineers, etc (Fafunwa, 1974). The importance of education in national development has also been recognized, stressed and eulogized in many official policy statements in Nigeria. In the National Policy on Education (NPE) for instance, it is stated that: The Federal Government of Nigeria has adopted education as an instrument par excellence for effecting national development (Federal Republic of Nigeria, 2014). Accordingly, it is stated on page 8 of the political document that: Education will continue to be highly rated in the national development plans, because education is the most important instrument of change as any fundamental change in the intellectual and social outlook of any society has to be preceded by an educational revaluation.

Thus, according to Agbocha and Okobia (2014) as societies and national development plans change, so should the education system if it is to remain relevant, useful and functional.

From the above analysis, there seem to be a symbiotic relationship between education and national development. We cannot have one without the other. If we consider this as a self-evident truth, then the place of high quality teachers is logically central in the educational and national development processes.

2.2.3 Teachers

A teacher, also called a schoolteacher or formally an educator, is a person who helps students to acquire knowledge, competence or virtue. Informally the role of teacher may be taken on by anyone (e.g., when showing a colleague how to perform a specific task). In some countries, teaching young people of school age may be carried out in an informal setting, such as within the family (homeschooling), rather than in a formal setting such as a school or college. Some other professions may involve a significant amount of teaching (e.g. youth worker, pastor) (Artelt et al., 2018).

In most countries, formal teaching of students is usually carried out by paid professional teachers. Teachers play a significant and important role in human development (Porter & Lawler, 2018). They are the ones who are behind the academic achievement and development of student behavior at each stage of learning. This role attempt in accordance with their pedagogical beliefs include how they acknowledged themselves a teacher or a kind of pedagogical methods which they consider is most effective, these two things are likely to influence their interpretation and pedagogical practices that are implemented in the classroom (Alvi & Gillies, 2015). This belief also influences the way teachers participated in their professional community, such as how teachers collaborate and take a position in curriculum development, and how they utilize the expertise of other teachers in developing their own work and school (Alvi & Gillies, 2015). Therefore, teachers play central role in attainment of quality education (Artelt et al., 2018).

2.2.3.1 The role of a teacher

In some countries the role of a teacher has a different emphasis adapted to the culture of the society. In Nigeria, the teacher's role is moving away from teacher professional to the model of teacher as a technician which aims to help students to acquire good grades (Dunlosky & Bjork, 2018). Teachers do excessive development on the cognitive abilities of students at all

ages and grade levels. This succeeded in making progress for students in academics but fail to foster affective attitude among them. Whereas in Finland the role of the teacher is expected to help the improvement of the entire individual as opposed to only the human intellectual area. It recognizes the significance of the social and full of feeling spaces in students' improvement, including enthusiastic and moral concerns (Denzler & Wolter, 2019). The different roles and functions of teachers ultimately affect the quality of education in each of these countries, and this is globally motivated by the quality of teacher education institutions.

2.2.3.2 The Role of Colleges of Education in National Development

Colleges of Education in Nigeria have played a vital role in our national development, especially in the education sector. The teaching function of colleges of education in Nigeria for instance, has contributed immensely to national development particularly in the development of middle-level manpower for the nation's primary and junior secondary schools (Porter & Lawler, 2018). Over the years, colleges of education have produced a large number of non-graduate professional (NCE) teachers that teach in our primary and junior secondary schools, thus alleviating the manpower problems of the nation at those levels (Pfiffner & Sherwood, 2016).

These teachers have also laid the foundation of whatever formal education that is received later in life by that now appear in different forms as accountants, teachers, lawyers, economists, engineer, doctors, agriculturalists, architects, etc. The ideas of these people put into productive use has enhanced the nation's development (Porter & Lawler, 2018).

Colleges of Education in Nigeria have plan waded into the task area of producing professionally trained teachers for our vocational and technical secondary schools in order to meet the nation's requirements for technological take-off as provided in FRN (2014).

Another aspect of the role of Colleges of Education in national development according to Nwankwo (2018) is their ability to adapt quickly to the educational needs of their immediate environment.

Another contribution of Colleges of Education to national development is in the structural integration of Nigeria. Through public lectures, seminars, workshops, conference, inter-collegiate sports competition and the implementation of their curriculum, especially in General Studies Courses like Citizenship Education, they have raised the level of national unity, and national consciousness, sense of oneness, common citizenship and common purpose amongst Nigerians, thus enhancing the development of the nation. In addition, they provide in-service courses, extra-mural classes and sandwich programmes to raise the literacy level of the members of the communities around them (Okafor, 2014).

Finally, they have assisted in national development by providing compulsory and agricultural extension services to the communities around them. The consultancy services boost the economic activities of the communities around them, while the agricultural extension services enhance the improvement of agriculture and thus, the national economy (Pfiffner & Sherwood, 2016).

2.2.3 Teaching methods

Teaching and learning are the two sides of a coin. The most accepted criterion for measuring good teaching is the amount of student learning that occurs (Gilbertson et al., 2022). There are consistently high correlations between students' ratings of the "amount learned" in the course and their overall ratings of the teacher and the course.

There are different types of teaching methods that can be categorized into four broad types (Renau-Renau, 2016).

i. Teacher-centered methods,

ii. Learner-centered methods,

iii. Content-focused methods; and

iv. Interactive/participative methods.

Instructor/Teacher Centered Methods

Here the teacher casts himself/herself in the role of being a master of the subject matter. The teacher is looked upon by the learners as an expert or an authority. Learners, on the other hand, are presumed to be passive and copious recipients of knowledge from the teacher. Examples of such methods are expository or lecture methods – which require little or no involvement of learners in the teaching process (Renau-Renau, 2016). It is also for this lack of involvement of the learners in what they are taught, that such methods are called "closed-ended".

Learner-Centred Methods

In learner-centered methods, the teacher/instructor is both a teacher and a learner at the same time. In the words of Lawrence Stenhouse, the teacher plays a dual role as a learner as well "so that in his classroom extends rather than constricts his intellectual horizons" (Renau-Renau, 2016). The teacher also learns new things every day which he/she didn't know in the process of teaching. The teacher "becomes a resource rather than an authority". Examples of learner-centered methods are the discussion method, the discovery or inquiry-based approach, and Hill's model of learning through discussion (LTD).

Content-Focused Methods

In this category of methods, both the teacher and the learners have to fit into the content that is taught. Generally, this means the information and skills to be taught are regarded as sacrosanct or very important (Renau-Renau, 2016). A lot of emphasis is laid on the clarity and careful analyses of content. Both the teacher and the learners cannot alter or become critical of anything

to do with the content. An example of a method that subordinates the interests of the teacher and learners to the content is the programmed learning approach.

Interactive/Participative Methods

This fourth category borrows a bit from the three other methods without necessarily laying emphasis unduly on either the learner, content, or teacher (Renau-Renau, 2016). These methods are driven by the situational analysis of what is the most appropriate thing for us to learn/do now given the situation of learners and the teacher.

2.2.4 Learning

Learning has been defined by the educational psychologists in different ways and meanings. It has been explained as a quantitative increase in knowledge, memorizing of facts, skills, and methods that can be retained and used as necessary (Mary, 2018). It is also viewed as making sense or abstracting meaning, relating parts of the subject matter to each other and to the real world, interpreting and understanding reality and comprehending the world by reinterpreting knowledge (Mary, 2018). Learning is a key process and is necessary for all educational process. It pervades everything we do and think learning plays an important role in the languages we speak, our customs and beliefs. It involves ways of doing things in an individual attempt to overcome obstacles or to adjust to new situations. It is a progressive change in behaviour as individual reacts to a situation in an effort to adopt his behaviour effectively to the demands made upon him, thus learning is change in behaviour and learning is a complex process (Mary, 2018). It is a process by which all organisms, as a result of its interaction in a situation acquires a new mode of behaviour which tends to persist and affect his behaviour in the future. Learning takes place when an organism reacts to a situation. It consists of certain changes in behaviours or adjustments and this type of behaviour is utilized to some degree in other situations. It is

very difficult to decide what actually happens when an organism learns. It is also defined as adjustment, or adaptation to a situation or improvement (Mary, 2018).

2.4.4.2 Self-Regulative Learning (SRL)

Self-regulative learning (SRL) can be defined as the application of "general self-regulation (or the self-regulation used by persons in their daily life) to the specific conditions of learning situations." Self-regulated learning refers to our ability to understand and control our learning environments. To do so, we must set goals, select strategies that help us achieve these goals, implement those strategies, and monitor our progress towards our goals (Schunk, 1996).

Self-regulation is a composite concept, allowing for interrelationships between key learning constructs to be considered within a single framework rather than exploring these areas in isolation. SRL is a potential antidote to poor academic achievement in Technical education environments (Chmiliar, 2014). In the context of human development, self-regulations can be traced back to the 1960s and 1970s. However, by the mid-1980s, "four largely separate bodies of historic research on cognition/metacognition, motivation, behavioural control, and developmental processes set the stage for the emergence of integrated research on self-regulation" (Boekaerts *et al*., 2015)." Barry Zimmerman (1986) can be credited with developing an integrated definition of SRL, which examines the extent students are metacognitively, motivationally, and behaviourally active in their learning. In self-regulation theory, the focus is on "how students personally activate, alter, and sustain their learning practices in specific contexts" (Zimmerman, 1986). It is the self-directing mechanism by which learners convert their mental efforts into academic skills (Zimmerman, 2002). More precisely, SRL is defined as "the control that students have over their cognition, behaviour, emotions and motivation through the use of personal strategies to achieve the goals they have established" (Pandero & Alonso-Tapia, 2014). Ultimately, SRL represents a shift in how student achievement has been investigated. Instead of focusing on student aptitudes, a teacher's

teaching abilities, or one's environment--school or home, the role of the learner in the learning process is prioritized.

In college, learning strategies that go beyond memorization and passive knowledge acquisition are essential, as students who use higher-level metacognitive strategies are more successful in their courses (Kitsantas, 2017). For example, students who are taught to monitor their comprehension and evaluate their learning as they read show deeper processing of the material and better retention than students who passively read the text (Nash-Ditzel, 2016). In addition, first-year students who successfully manage their time and seek out existing resources show greater achievement in the first year (Tuckman, 2013).

A self-regulated college student knows a variety of strategies, understands when to use them, and is mindful of his progress toward short- and long-term goals. Many students enter college believing that they are prepared for this challenge due to their success in high school (Balduf, 2019). However, because learning tasks at the college level require different skills and greater personal responsibility for managing those skills, many high school students begin to show deficits in these abilities once they reach the college level (Colthorpe et al., 2019). This is not limited to poor performing students. While bright students may have better self-regulation strategies than their peers in middle and high school (e.g., Zimmerman & Martinez-Pons, 1990), those same students may reach the ceiling of their strategic ability in college where more active learning strategies are required (Balduf, 2019). This suggests the teaching of self-regulated learning strategies is important for college students of all achievement levels.

Ample evidence shows that self-regulated learning strategies, as primary contributors to academic success (Pintrich & DeGroot, 2017), *can* and *should* be taught (Colthorpe et al., 2019), yet faculty attempting to teach them may face challenges. For example, despite negative feedback and poor grades in their initial semesters of college, many students are reluctant to change the learning strategies with which they were successful in high school (Dembo & Seli,

2014). Furthermore, many students are unable to appropriately judge whether or not they are actually learning—a key aspect of self-regulated learning—which can lead to overconfidence (Koriat & Bjork, 2015). When strategies are embedded in or taught alongside a content area, students are better able to transfer the strategies to future tasks and reflect on the outcome of that transfer (Steiner *et al*., 2018). In sum, the self-regulated learning strategies important for success in college are built through deliberate practice within an authentic context that has value for the student.

2.2.5.2 Self-Regulative Learning Consensus: Phases, Components and Strategies.

Potentially visible within the aforementioned models, general agreement amongst the scientific literature and theorists can be found regarding phases and components of self-regulated learning, albeit whilst employing slightly different vocabulary (Zimmerman & Schunk, 2001; Beishuizen & Steffens, 2011). The identification and shared agreement amidst these models shed greater light on the self-regulatory sub-processes that can be understood to impact learning outcomes, and in-turn provides pathways and opportunities for targeted SRL interventions (Fontana *et al.*, 2015).

Therefore, although slight distinctions exist, when establishing concurrence with the learning episode (Manso *et al*., 2014), three distinct phases of self-regulated learning (cyclical in nature), can be established as follows:

1. Forethought, Planning and Activation.
2. Performance, Monitoring and Control.
3. Evaluation, Self-Reflection and Reaction.

Self-regulative learning consists of three main components: cognition, metacognition, and motivation. Cognition includes skills necessary to encode, memorise, and recall information. Metacognition includes skills that enable learners to understand and monitor their cognitive

processes. Motivation includes beliefs and attitudes that affect the use and development of cognitive and metacognitive skills. Each of these three components is necessary, but not sufficient, for self-regulation. For example, those who possess cognitive skills but are unmotivated to use them do not achieve at the same level of performance as individuals who possess skills and are motivated to use them (Zimmerman, 2002). Similarly, those who are motivated, but do not possess the necessary cognitive and metacognitive skills, often fail to achieve high levels of self-regulation.

The Self-Regulative Learning strategies are*:*

Cognition

The cognitive component includes three general types of learning skills, which we refer to as cognitive strategies, problem solving strategies, and critical thinking skills. Cognitive strategies include a wide variety of individual tactics that students and instructors use to improve learning. One example is the use of student-generated questions before or during reading to focus the learner's attention (Chinn & Brown, 2017). A second example is the use of active learning strategies such as constructing graphs and tables. A third strategy is to use cloze assessment tasks such as the Koch–Eckstein technique to promote deeper understanding. Previous research indicates that self-regulated learners of all ages use a variety of cognitive learning strategies in a flexible way (Manso *et al*., 2014). Problem solving strategies are more complex in nature than cognitive strategies. Problem solving strategy instruction usually focuses on either the development of a general problem-solving strategy or situated practice using that strategy. One example is the predict–observe–explain (POE) technique studied by Rickey and Stacy (2019). Recent studies report that general problem solving can be broken down into smaller individual steps that are teachable and improve learning.

Explicit problem-solving instruction helps students to develop deeper levels of understanding compared to students who do not receive problem solving training. Critical thinking involves

a variety of skills such as the individual identifying the source of information, analysing its credibility, reflecting on whether that information is consistent with their prior knowledge, and drawing conclusions based on their critical thinking (Linn, 2018). Research in argumentation and critical thinking indicates that many students fail to utilise sophisticated reasoning even at the college level. Critical thinking can be improved through instruction, although it typically requires an extended instructional sequence (e.g., three months) to do so (Huffman, 2017).

Metacognitive Strategies

Skill-related, or metacognitive SRL strategies, have been found to correlate with academic performance in higher education (Dunlosky & Bjork, 2018), especially when applied over the duration of a learning task (Greene & Azevedo, 2012). Metacognition is considered to be a necessary component of SRL but is not by itself sufficient for SRL. Rather, SRL is one of many conceivable domains where metacognition – or "thinking about thinking" – can be applied. Metacognition of learning, or 'meta-learning', involves monitoring cognitive processes, and responding by selecting and implementing task-appropriate actions ("thinking about learning"). Metacognition is often divided into 'monitoring' and 'control' strategies (Dye & Stanton, 2017). Most students monitor their learning (Colthorpe, *et al.*, 2019), though to be considered 'metacognitive', students must then adapt their study regimes based on the information drawn from self-monitoring. The combined influence of metacognitive monitoring and control has been found to lead to a deeper conceptual understanding of the content, more efficient and targeted study, and an overall reduction in effortful learning (Hartwig & Dunlosky, 2017).

A core metacognitive monitoring strategy is the judgement of learning (JOL), or a self-evaluation of one's understanding of a particular topic. Students who make JOLs tend to outperform those who do not evaluate their understanding, though this seems to depend on the quality of the JOL. Students who self-evaluate their learning based on subjective factors such

as ‘fluency’ – or how easy it feels to learn something – tend to make JOLs that inaccurately represent their actual level of understanding (Koriat & Ma’ayan, 2015). Thus, JOLs are most effective when they are grounded in objective indicators of understanding, allowing for appropriate adjustments of attention and effort. For example, study tactics like self-testing (Hartwig & Dunlosky, 2017) and spaced study (Kornell & Bjork, 2018), are associated with high JOL accuracy and exam prediction accuracy, whereas passively re-reading material is not. There is, however, some evidence to suggest that EOL-based judgements – while generally detrimental – constitute a useful tool for highly self-regulated learners. One study found that self-regulating students were more likely to adopt study practices with high initial confidence, but high risk of error (e.g., memorising material extensively prior to self-testing). In doing so, the negative experiences associated with making high-confidence errors allowed for encoding of stronger memories of the content (Butterfield & Metcalfe, 2016).

Motivational Strategies

Ultimately, metacognition is driven by students’ effort, which is mediated by underlying motivation, or ‘will’. Motivation is typically described as either intrinsic (e.g., personal bests) or extrinsic (e.g., competition) (Vallerand & Blssonnette, 2019). Intrinsic motivations tend to be more stable over time and across academic contexts than extrinsic motivations. As such, intrinsically motivated students tend to reap performance benefits; extrinsic motivations, on the other hand, do not (Pintrich, 2014). Importantly, intrinsic motivations form only part of the motivational profile of self-regulated students. The attributions students make about the causes of positive or negative exam results strongly impacts performance on subsequent assessments. For example, self-regulated learners tend to attribute academic failures to controllable factors, like an inadequate study regime, whereas unregulated students explain results in terms of fixed or absolute causes, like the quality of teaching, or the fairness of the exam (Robbins *et al.*, 2014). In addition to motivation type and attributional style, students’ self-efficacy – or their

perceived level of academic competence – has been found to be one of the strongest predictors of performance in higher education (Robbins *et al.,* 2014). Thus, high-achieving students are often intrinsically driven toward success, all the while believing they have what it takes to achieve it. Evidence also seems to suggest that aiming for positive outcomes ('performance approach') – as opposed to wanting to avoid failure – is associated with improved performance. In fact, a 'performance avoidance' attitude towards assessment has been found to negatively correlate with performance, meaning students who are desperate to avoid underperforming end up with lower marks (Richardson *et al.,* 2017).

Students' motivation is a key regulator of strategy use, persistence, effort, and performance. But can motivation itself be regulated? Regulation of motivation has been argued to be almost as essential as cognitive and metacognitive control (Pintrich, 2014). Self-efficacy, task perceptions, and interest in the subject matter can be monitored and controlled during learning. As a prime example, self-regulators employ self-talk to direct themselves toward positive mindsets ("I know I can do this"), and away from negative mindsets brought on by test anxiety ("don't think about grades right now"). Self-regulated learners may even temporarily recruit extrinsic motivational factors to drive them through periods of high effort ("I'll reward myself if I get through this next section of study"). Thus, while intrinsic motivations are generally more effective than extrinsic motivations in driving effort and persistence, the targeted application of extrinsic factors may play a supplementary role in SRL. Similarly, performance avoidance attitudes, while generally detrimental to performance, can be applied discreetly to aid study practices. Some have suggested that briefly reminding oneself of the shame or regret that might follow from failing an exam constitutes an effective motivational SRL strategy (Pintrich, 2014). Self-regulated learners may even implement strategies to boost intrinsic motivation in the short-term, which often occurs when students feel disinterested or disengaged. They may do this by regularly raising the perceived value of academic tasks,

thereby making it more relevant or useful to them (e.g., applying the content to real world scenarios) (Andrew *et al*., 2015). Therefore, active self-regulation of both cognition (metacognition) and motivation, in a context-specific manner, constitutes an effective approach to learning in higher education.

2.2.5.4 The Challenges of Becoming a Self-Regulated Learner

As pointed out by Pintrich (2000), the assumption that learners can monitor and control their cognition, motivation, and behaviour does not mean that all individuals would be able to self-regulate in all contexts and at all developmental stages. Biological, developmental, contextual, and other individual differences may promote or inhibit an individual's chances of becoming a self-regulated learner. Despite the fact that educational psychologists seldomly pay attention to biological or genetic issues in learning and education, it is nevertheless clear that these factors play a significant role in the foundation and the development of an individual's SR. For instance, Posner and Rothbart (2017) found evidence that genes contributed to children's executive control of attention—a factor that may influence several facets of SRL. However, what is positive from an educational point of view is that these regulation capacities present some malleability; they interact with and are significantly influenced by environmental variables, such as socialization or specific training, at least during childhood. These observations underscore the fundamental responsibility of parents and educators to adapt the contextual conditions for the positive development of SRL skills.

Whereas governments and the OECD (Teachers Matter, 2018) have given a lot of attention to the issue of how to reduce the effects of socioeconomic factors on students' school achievement, there is still a lack of research that examines how the home environment may contribute to the development of SRL abilities (Artelt *et al*, 2018). However, it seems obvious that several factors in the home environment can strongly impede or encourage children's and adolescents' development of SRL including parents' attitudes to school (e.g., the value of

schooling and the provision of help during homework), the kind of issues that are usually discussed in the family, and how parents communicate with and relate to their children. Each of these factors is assumed to influence knowledge, beliefs, thinking habits, and behavioural approaches to learning.

Regarding what Winne (2018) termed "cognitive conditions" (i.e., the various forms of knowledge and beliefs that form a background influence on the learning process), several recent reviews have highlighted the function of various motivational beliefs and cognitive factors on students' SRL. For instance, Zimmerman (2011) outlines how several motivational constructs including goal orientation, intrinsic motivation, task value, self-efficacy, future time perspective, and causal attribution may influence students' deployment and development of SRL skills. Furthermore, Boekaerts (2011) explains how affect relates to learning and metacognition, Muis (2017) theorizes how students' epistemic beliefs relate to their SR while learning, and Greene and Azevedo (2017) provide suggestions about how a large body of research on various motivational and cognitive constructs (e.g., domain knowledge) could be reconceptualized and related to SRL in the light of Winne and Hadwin's model. Given that all of the aforementioned factors play important roles in SRL and are, to some extent, quite stable traits of a person, we assume that these factors also extend their influence over time to hinder or promote the development of students' SRL (Paris and Newman, 2019).

Finally, the classroom milieu has implications for students' development of SRL. A significant body of research indicates that the classroom behaviour of both students and teachers can have a serious impact on students' SRL (Perry *et al.,* 2012). For instance, regarding students, research reveals how both the disruptive behaviours of peers and the students' pattern of social interactions can influence an individual's engagement, behaviour, SR, and learning outcome (Jones *et al*., 2018); regarding teachers' behaviour, factors such as classroom goal structure and the teachers' ability to manage the class and catch and hold students' attention are also

highly important in terms of an individual's opportunities to develop and deploy SRL. Taking all of these factors into account, the development of SRL appears to be dependent on a myriad of interacting factors, which suggests that there are many potential levers that are available to foster it.

2.2.7 Achievement / Performance

Academic achievement or academic performance is the extent to which a student, teacher or institution has attained their short or long-term educational goals. Completion of educational benchmarks such as secondary school diplomas and bachelor's degrees represent academic achievement (Paris and Newman, 2019).

Academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important—procedural knowledge such as skills or declarative knowledge such as facts. Furthermore, there are inconclusive results over which individual factors successfully predict academic performance, elements such as test anxiety, environment, motivation, and emotions require consideration when developing models of school achievement. Now, schools are receiving money based on its students' academic achievements (Paris and Newman, 2019). A school with more academic achievements would receive more money than a school with less achievements performance achievement is a strengths-based approach to supporting employees to achieve the best for themselves, their teams, and the organisation. The approach embraces frequent learning and growth at every level. It requires continuous communication between the employee, manager, and team, and involves ongoing coaching and collaboration.

2.3 Related Empirical Studies

Onwubumpe and Okigbo (2021) investigated the effect of Self-regulated learning Cycle (S-RLC) on secondary school students' interest in mathematics in Onitsha Education Zone of

Anambra Sate, Nigeria. Two research questions guided the study and two hypotheses were tested at 0.05 alpha level. The design was quasi-experimental pre-test, post-test nonrandomized control group. A sample of eighty (80) senior secondary two (SS2) students selected by purposive and simple random sampling techniques from a population of two thousand three hundred and twenty-eight (2,328) students was used for the study. Mathematics Interest Scale (MIS) developed by the researchers was used for data collection. The instrument was validated by three experts and its reliability index was found to be 0.85 using Cronbach alpha method. The experimental group was taught using S-RLC while the control group was taught using conventional method for four weeks. The MIS was administered as pretest and posttest. Data collected were analyzed using mean, standard deviation and Analysis of Covariance. The result revealed among others that the use of S-RLC significantly enhanced the interest of students taught algebra more than Conventional method. The findings also revealed that the use of S-RLC in the learning of mathematics enhanced interest of female students more than the male students. The researchers recommended among others that mathematics teachers should adopt the use of Self-Regulated Learning Cycle in teaching and they should be trained by Education ministries through workshops and conferences on the use of S-RLC in mathematics classroom. In terms of independent variables, the study is similar to the current study because it also assessed the effect of self-regulatory learning on students, but it differs in terms of targeted population and methodology because the study considered secondary school mathematics students in the Onitsha Education Zone of Anambra State, Nigeria, and an experimental research design was used, whereas the current study considers technical college students in the Niger State College of Education and used a research survey.

Jirgba and Bur (2019) also examined the effects of self-regulated learning instructional strategy on students' achievement in basic science among Upper Basic 2 in Makurdi Local Government Area of Benue State. The study employed non-equivalent group pre-test-post-test quasi

experimental design. The population of the study was 638 upper basic school levels. The sample for this study was 128 students from six co-educational schools within Makurdi Local Government Area of Benue State. Two research questions and two hypotheses guided the study. The instrument used for data collection was Basic Science Achievement Test (BSAT) and was trial tested using Kuder-Richardson (K-R, 20) formula to determine the reliability coefficient of BSAT which was found to be 0.99. Descriptive statistics of means and standard deviation were used to answer all the research questions and inferential statistics of Analysis of Covariance (ANCOVA) was used to test all the hypotheses at 0.05 significant level. The results of the study showed that demonstration method enhanced students' achievement in basic science better than self-regulative strategy. There is no significant difference between the mean achievement score of students taught basic science using self-regulated learning strategy and those taught using demonstration method. There was no significant difference between the mean achievement scores of male and female students taught basic science using self-regulative learning strategy. Basic science Teachers should not only use demonstration method to teach but also allow the student to actively participate in the learning. This can foster confidence in the students and enhance better achievement in basic science.

In terms of independent variables, the study is similar to the current study because it also assessed the effect of self-regulatory learning on students, but it differs in terms of targeted population and methodology because the study considered Upper Basic 2 in Makurdi Local Government Area of Benue State, and an experimental research design was used, whereas the current study considers technical college students in the Niger State College of Education and used a research survey.

Tella (2017) conducted an investigation on self- regulated learning strategies as predictors of Chemistry students' attitude to Chemistry in senior secondary schools in Ondo State. The

research adopted survey research design. 400 students were used for the research work which was drawn randomly using simple random sampling technique. The research instruments for the study were SRLS questionnaire containing 10 items on each of the component and students' attitude to Chemistry (SATC) questionnaire with 25 items. The validity of the instruments was assessed and found to be adequate by the experts. Cronbach alpha was used to determine the reliability of SRLS with a coefficient of 0.86, 0.89, 0.85 and 0.96 and 0.78 for (SATC) at 0.05 level of significance. The data collected was analysed using descriptive and inferential statistics such as: mean standard deviation, Pearson Product Moment Correlation and Analysis of Variance. The study revealed that there was significant relationship between goal setting ($r = 0.063$; $P>0.05$) and students' achievement in Chemistry. Self- monitoring ($r = 0.025$; $P<0.05$), self evaluation ($r = 0.012$; $P<0.05$) and self-efficacy ($r = 0.064$; $P<0.05$) had significant relationship with students' achievement in Chemistry. The result also revealed that there was no composite contribution of SRLS on students' achievement in Chemistry ($F(4,395) = 0.673$; $P>0.05$). None of the independent variables predicts students' achievement in Chemistry. Based on the findings it was recommended that students should be encouraged to develop enough self-regulated learning strategies that will facilitates their learning while Government should supply new materials like Chemistry textbooks so that students would be exposed to more facts about Chemistry and teachers on their part should improve themselves academically whenever such opportunity are available so that they can get better.

In terms of independent variables, the study is similar to the current study because it also assessed the effect of self-regulatory learning on students and also used survey research type, but it differs in terms of targeted population and methodology because the study considered Chemistry in senior secondary schools in Ondo State, whereas the current study considers technical college students in the Niger State College of Education.

Nwafor *et al*. (2015) explored the effect of self-regulated learning approach on junior secondary school students' achievement in basic science. Quasi-experimental design was used for the study. Two coeducational schools were drawn for the study through simple random sampling technique. One school was assigned to the treatment group while the other was assigned to the control group through a simple toss of the coin. Basic Science Achievement Test (BSAT) was the instruments used to collect data. Three research questions and three null hypotheses guided the study. The data for the research questions were answered descriptively using mean and standard deviation, while the hypotheses were tested using the analysis of Covariance (ANCOVA) at an alpha level of 0.05. The findings of the study reveal that self-regulative learning strategy enhanced higher students' achievement in basic science than the conventional method. Introduction The term self-regulated learning can be used to describe 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. In particular, self-regulated learners are cognizant of their academic strengths and weaknesses, and they have a repertoire of strategies they appropriately apply to tackle the day-today challenges of academic tasks.

Similarly, in terms of independent variables, the study is similar to the current study because it also assessed the effect of self-regulatory learning on students, but it differs in terms of targeted population and methodology because the study considered different population, and an experimental research design was used, whereas the current study considers technical college students in the Niger State College of Education and used a research survey.

Achufusi (2015) studied the effects of self regulated and metacognitive learning cycle on the academic achievement of secondary school physics students. Five research questions were raised and five hypotheses tested at 0.05 level of significance. The population was all physics students in Anambra State from where a sample of 325 students were drawn with purposive

sampling techniques. The design was a quasi – experimental design (two treatment groups and control group) and the instrument was a physics achievement test administered to 325 students after six weeks of teaching. The data collected were analysed using a 3 way Analysis of variance (ANOVA). The result showed the students exposed to selfregulated learning group performed better than students taught with metacognitive learning cycle and lecture method. This showed that self-regulated group had the highest mean score of 44.5 as against the metagonitive learning group which had a mean of 41.18 and lecture method group with a mean of 33.56. The difference in scores for the groups shows that gender had a significant effect on achievement with male students performing better than female students. School location was a factor as there was significant difference between mean scores of urban and rural schools. It was recommended that self-regulated learning strategy should be adopted as an effective strategy in schools alongside the metacognitive learning cycle.

In terms of independent variables, the study is similar to the current study because it also assessed the effect of self-regulatory learning on students, but it differs in terms of targeted population and methodology because the study considered different population, and an experimental research design was used, whereas the current study considers technical college students in the Niger State College of Education and used a research survey.

2.4 Summary of Literature Reviewed

This chapter reviewed based on theoretical, conceptual, and empirical review. Three model (Zimmerman's, Pintrich's, and Boekaerts') were linked to this study. The models proposed Meta-cognitive, Motivational, and Behavioural element to influence self-regulative learning.

Various concepts on concept of education, colleges of education (technical), teaching method, self-regulative learning and academic achievement were reviewed in this study as part of the assessment of self-regulated learning and its adoption by technical students from colleges of education.

Related empirical studies reviewed so far have revealed that research is lacking in the assessment of self-regulative learning among technical students in the college of education. Hence, the present study sought insight into the self-regulative learning style in college education in Minna, Niger State.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

The research design used in carrying out this study was the survey research design. A survey research design was chosen as an appropriate method for the research as it seeks the view of people about a particular issue that concerns them, give room for research to study the group of people and items to source for information from the respondents. (Sambo, 2015).

3.2 Area of the Study

The study will be covered Niger State College of Education in Minna, Nigeria. Minna is a city in Middle Belt Nigeria. The Niger State College of Education, Minna was established as an Advanced Teachers' College by the defunct North Western State Government on November 1st, 1975 when there was need to establish an additional Advanced Teachers' College in order to meet the soaring teachers needs in the State.

3.3 Population of the Study

The population for this study consists of all technical student in Niger State College Education offering Woodwork Technical, Metalwork Technical, Automobile Technical, Electrical/Electronic and Building Technical. The target population for the study is 750 technical student comprising of all 50 students each from each option across each levels in technical and vocational studies department in Niger State College Education in Minna, Nigeria State.

3.4 Sampling and Sampling Techniques

In order to determine the sample size from the entire population, Krejcie and Morgan (1970) formula was used to the sample size of two hundred and fifty – four (See Appendix I). A random sampling technique will be used to select the sample population from the entire population

3.5 Instrument of Data Collection

A constructed questionnaire titled “Self-Regulative Learning Style in College of Education Minna Niger State Questionnaire (SRLSCEMNS)” was used to get the desired information from the students. The questionnaire was divided into two parts (A and B). Part A will be for collection of information on personal data of respondents while Part B which consist of the sections (A - C), Section A will address research question one which contain item, Section B will address research question two and finally Section C will address research question three.

3.6 Validation of the Instrument

The instrument will be validated by three experts from Department Industrial Technology Education, Federal University of Technology, Minna. The experts' comments and suggestions will be used to correct some mistakes while their suggestions will be used to improve on the questionnaire.

3.7 Reliability of the Instrument

The reliability of the research instrument will be used to determine using a split half test using the odd and even numbered items to form the two halves. The two halves will have administered to a sample of teacher and workshop technicians teaching motor vehicle mechanic trade in Niger State College Education. The Cronbach alpha test will be used to determine the reliability of the instrument.

3.8 Method of Data Collection

The researcher will collect the needed data through the administration of questionnaire to student in the Department of technical and vocational studies Niger State College Education. The administration of the questionnaire will be carried out by the researcher. A total of 254 copies of the questionnaire will be distributed to obtain responses from the students and retrieved on the spot by the researcher.

3.9 Method of Data Analysis

Responses from the questionnaire will be analyzed using the descriptive statistics of frequency counts, percentage, mean and standard deviation and t-test. Descriptive statistics of frequency counts and percentages were used in analyzing demographic variables and mean and standard deviation will be used for the research questions. The t-test will be used for the hypotheses testing at 0.05 level of significance

CHARTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Research Question One

What is the technical student's achievement through self-regulative learning style in college of education Minna, Niger State?

Table 4.1: Responds of the respondents on technical student's achievement through self-regulative learning style in college of education Minna, Niger State

SN	Item	$\bar{X}$	SD	Remark
1	The use of self-regulative learning style has improved my understanding to a large extent	2.59	1.07	Agree
2	Most technical and vocational course have been made easy through use of self-regulative learning style	3.11	0.80	Agree
3	My academic performance has improved via the use of self-regulative leaning style	2.56	0.68	Agree
4	The self-regulative learning helps in managing my time and acquiring my goals	2.57	0.80	Agree
5	I am always motivated to using self-regulative learning style	2.80	0.97	Agree
6	Self-regulative learning style improve my learning interest	2.51	1.08	Agree
7	Self-regulative learning style improves my social-relationship with other students	2.53	0.87	Agree
8	Self-regulative learning style help me work independently on an assignment unsupervised by teacher	2.72	0.97	Agree
9	Self-regulative learning style help me to work on my course without consulting the teachers.	2.33	0.91	Disagree
	Grand Mean	2.62		Agree

Table 4.1 shows the technical student's achievement through self-regulative learning style in college of education Minna, from the result, it revealed that items 1, 2, 3, 4, 5, 6, 7, and 8 with the mean ranging from 2.53 to 3.11 indicate that the responds agree with the items. While item 9 with the mean of 2.33 indicate that the respond disagreed with the item. The standard

deviation ranging from 0.68 to 1.83 indicate that the response of the respondent did not far from each other.

4.2 Research Question Two

What are the types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger State?

Table 4.2 Responds of the respondents on the types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger State

	Item	$\bar{X}$	SD	Remark
1	Self-monitoring	2.72	1.03	Agree
2	Self-instruction	2.81	0.99	Agree
3	Goal-setting	2.77	0.80	Agree
4	Strategic planning	2.68	0.76	Agree
5	Self-reinforcement.	2.82	0.79	Agree
6	Keeping records and monitoring	2.77	0.77	Agree
7	Environmental structuring	2.99	0.75	Agree
8	Attention focusing	2.88	0.81	Agree
9	Self – experimentation	2.71	0.84	Agree
10	Self-evaluation	2.72	1.03	Agree
11	Watching of education videos	2.81	0.99	Agree
12	Using internet to search for information	2.77	0.80	Agree
Grand Mean		**2.79**	**0.86**	**Agree**

Table 4.2 show the respondents agreed with all the items with the mean ranging from 2.71 to 2.77 responses on the types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger state. From the result, it was revealed that both self-regulative learning agree that: Self-monitoring, self-instruction, goal-setting, strategic planning, self-reinforcement, keeping records and monitoring, environmental structuring, attention focusing, self – experimentation, self -evaluation, and watching of education videos using internet to search for information are main types of self-regulative learning skills adopted

by technical students of the college of education Minna with mean value ≥ 2.50. The standard deviation ranging from 1.03 to 0.75 indicate that the response of the respondent did not far from each other.

4.3 Research Question Three

What is the effect of gender difference on self-regulative learning style in college of education Minna, Niger state?

Table 4.3 Effect of gender difference on self-regulative learning style in college of education Minna, Niger state

Statement	$\bar{X}_M$	SD_M	$\bar{X}_F$	SD_F
1 The use of self-regulative learning style has improved my understanding to a large extent	2.72	0.93	2.67	1.03
2 Most technical and vocational course have been made easy through use of self-regulative learning style	2.81	0.95	2.62	0.99
3 My academic performance has improved via the use of self-regulative leaning style	2.77	0.81	2.85	0.80
4 The self-regulative learning helps in managing my time and acquiring my goals	2.68	0.76	2.71	0.76
5 I am always motivated to using self-regulative learning style	2.82	0.77	2.85	0.79
6 Self-regulative learning style improve my learning interest	2.77	0.72	2.75	0.77
7 self-regulative learning style improves my social-relationship with other students	2.99	0.68	2.88	0.75
8 Self-regulative learning style help me work independently on an assignment unsupervised by teacher	2.88	0.82	2.89	0.81
9 Self-regulative learning style helps me to work on my course without consulting the teachers.	2.51	0.23	2.58	0.84
Grand Mean	**2.77**	**0.74**	**2.76**	**0.84**

$\bar{X}_M$&SD_M: Mean and Standard Deviation response of Male
$\bar{X}_F$&SD_F: Mean and Standard Deviation response of Female

Table: 4.3. Show the respondent responses on the effect of gender difference on self – regulative learning style in college of education Minna Niger State. From the result, it was

revealed that both male and female agree that: The use of self-regulative learning style has improved my understanding to a large extent, Most technical and vocational course have been made easy through use of self-regulative learning style, My academic performance has improved via the use of self-regulative leaning style, The self-regulative learning helps in managing my time and acquiring my goals, I am always motivated to using self-regulative learning style, Self-regulative learning style improve my learning interest, self-regulative learning style improves my social-relationship with other students, Self-regulative learning style help me, work independently on an assignment unsupervised by teacher , Self-regulative learning style help me to work on my course without consulting the teachers, with mean ≥ 2.50. The standard deviation of male and female ranging from 0.23 to 0.95 and 0.75 to 1.03 indicate that the response of the respondents did not far from each other.

4.4 Research Hypotheses One

H_{O1} There is no significant difference between the mean response of male and female on the achievement on self-regulative learning style in technical education.

Table 4.4: Summary of t-test of difference between the mean response of male and female on the achievement on self-regulative learning style in Technical education

Variables	N	$\bar{X}$	SD	df	$p_{\text{-value}}$	Decision
Male	431	2.79	0.74	602	0.069	NS
Female	172	2.77	0.84			

Table 4.4 shows the Mean score of 2.79 with standard deviation of 0.74 for male and Mean score of 2.77 with Standard Deviation of 0.84 at df = 602, give the p-value of 0.069. Therefore, the null hypothesis one (H_{O1}) was not rejected because p-value of 0.069 is greater than 0.05 alpha level. This indicates that, there was no significant difference between the mean responses of male and female on the achievement on self-regulative learning style in Technical education.

4.5 Research Hypotheses Two

H_{02} There is no significant difference between the male and female response on the types of self-regulative learning skills adopted in technical education.

Table 4.5: summary of T-test of difference between the male and female response on the types of self-regulative learning skills adopted in technical education

Variables	N	$\bar{x}$	SD	df	p-value	Decision
Male	431	2.79	0.86	602	0.071	NS
Female	172	2.73	0.78			

Table 4.4 shows the Mean score of 2.79 with standard deviation of 0.86 for male and Mean score of 2.73 with standard deviation of 0.78 at df = 602, give the p-value of 0.071. Therefore, the null hypothesis two (H_{O2}) was not rejected because p-value of 0.071 is greater than 0.05 alpha level. This indicates that, there was no significant difference between the mean responses of male and female response on the types of self-regulative learning skills adopted in technical education.

4.6 Summary of Findings

The following are summary of finding of the study:

1. The respondents agreed that there is technical students' academic achievement using self-regulative learning style in college of education minna Niger State.
2. The respondents agreed that all the types of self-regulative learning styles identify are adopted by technical students in college of education minna Niger State.
3. From the findings of the study on research question three revealed that there no much difference in the effect of self-regulative learning style in college of education Minna based on gender.

4. From the findings self-regulative n research hypothesis one it was revealed that there was no significant different between the mean responses of male and female on the achievement on self-regulative learning style in Technical education.

5. From the findings on research hypothesis two it was revealed that there was no significant different between the mean responses male and female response on the types of self-regulative learning skills adopted in technical education.

4.7 Discussion of Findings

This study assesses self-regulative learning style in College of Education Minna, Niger State Nigeria. The findings of the study on the effect of self-regulative learning style on student achievement has been positive as majority strongly opined that has self-regulative learning style improved their understanding to a large extent, most technical and vocational course have been made easy through use of self-regulative learning style. The study agrees with the findings of Jirgba and Bur (2019) who examined the effects of self-regulated learning instructional strategy on students' achievement in basic science among Upper Basic 2. The results of the study showed that demonstration method enhanced students' achievement in basic science better than self-regulative strategy. There is no significant difference between the mean achievement score of students taught basic science using self-regulated learning strategy and those taught using demonstration method. Therefore, self-regulative learning as agreed by the respondents in carrying the student academic achievement.

The finding also disclosed the type of self-regulative learning style adopted by student among these are: self-monitoring, self-instruction, keeping records and monitoring, environmental structuring, attention focusing, self–experimentation, self-evaluation, watching of education videos using internet to search for information are types of self-regulative learning skills adopted by technical students of the college of education Minna.

The finding of the study also revealed that there was no difference on the effect self-regulative learning style in college of education Minna, Niger State based on gender. This corroborated the findings of Jirgba and Bur (2019) the resarchers opined that there was no significant difference between the mean achievement scores of male and female students taught basic science using self-regulative learning strategy. Basic science Teachers should not only use demonstration method to teach but also allow the student to actively participate in the learning.

The study of contradicted that of Achufusi (2017) who studied the effects of self regulated and metacognitive learning cycle on the academic achievement of secondary school physics students. It was opined that the difference in scores for the groups shows that gender had a significant effect on achievement with male students performing better than female students.

The finding from the research hypothesis one revealed that there was no significant different between the mean responses of male and female on the achievement on self-regulative learning style in technical education. And also, the findings on research hypothesis two revealed that there was no significant different between the mean response's male and female response on the types of self-regulative learning skills adopted in technical education.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Based on the findings of the study on the assessment of self-regulative learning style in college of education Minna, Niger State Nigeria. The finding of the study revealed that technical student's achievement through self-regulative learning style in college of education Minna, Niger state, types of self-regulative learning skills adopted by technical students of the college of education Minna, Niger state. It could be concluded that the use of self-regulative learning style will increase the students' academic achievement.

The finding of the study also disclosed that Self-monitoring, self-instruction, goal-setting, Strategic planning, Self-reinforcement, keeping records and monitoring, Environmental structuring, attention focusing, self – experimentation

Similarly, it could be asserted the use of self-regulative learning style has improved my understanding to a large extent, most technical and vocational course have been made easy through use of self-regulative learning style, my academic performance has improved via the use of self-regulative leaning style, the self-regulative learning helps in managing my time and acquiring my goals, i am always motivated to using self-regulative learning style, self-regulative learning style improve my learning interest, self-regulative learning style improves my social-relationship with other students, self-regulative learning style help me work independently on an assignment unsupervised by teacher, self-regulative learning style helps me to work on my course without consulting the teachers.

5.2 Recommendations

Based on the conclusion of the study following recommendation were made:

1. Students should adopt self-regulative learning styles to increase their Technical education subject academic achievement.
2. There should be continuous public enlightenment campaign on the importance of learning styles, self-regulated learning skill as well as achievement motivation. This enlightenment campaign should be carried out at all levels; Federal, State and LGA.
3. There is need to help colleges of education students overcome every problem associated with learning styles, self-regulated learning skill and achievement motivation. Such help and effort, by school guidance counselors, school authorities, parents and teachers, will go a long way to increasing students' technical education subject achievement and at the same time help students to reduce the stress caused by failure.
4. Teachers should be trained on the strategies which are related to the learning styles, self-regulative learning skills and achievement motivation and at the same time help students to belief in their own capability, attribute their success or failure to internal factors as well as reduce their anxiety level.

5.3 Suggestions for Further Studies

The following suggestions for further studies are made:

1. Replicate the study by involving other moderating variables such as study level, age and school location.

2. Investigate learning style, self-regulated and achievement motivation as correlates of Technical education subject.

3. Investigate learning style, self-regulated and achievement motivation as predictors of technical education subject achievement among students with attention-deficit disorder in Minna Niger State.

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Department of Industrial and Technology Education
Federal University Technology, Minna,
Niger State.

Dear Respondent,

I am an undergraduate student of Industrial and Technology Education in the above-named University. I am presently conducting research on Assessment Self-Regulative Learning Style in College of Education Minna, Niger State. The Questionnaire is designed as part of the study to collect relevant information for a successful completion of this research.
Please kindly provide response to these questions; assuring you that it will purely be used for academic purposes alone.
Thank you for your anticipated cooperation.

Yours sincerely,

JAGABA, Saidu
2016/1/62617TI

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

M.B 65, MINNA NIGER STATE
NIGERIA

SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION
DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION

ASSESSMENT SELF-REGULATIVE LEARNING STYLE IN COLLEGE OF EDUCATION MINNA, NIGER STATE

Instruction:
Below are respondents' personal information. Please tick (√) the appropriate information in the spaces provided.

SECTION A

RESPONDENT'S PERSONAL DATA

1. Sex
   Male ( ) Female ()
2. Age
   23 – 32 ( ) 33 - 42 ( ) 43 and above ( )

3. Level: _____

SECTION B

INSTRUCTION:

Below are some questions to Assessment Self-Regulative Learning Style in College of Education Minna, Niger State. Please tick (√) the appropriate column to indicate the extent to which these skills are required.

SA = Strongly Agree SD = Strongly Disagree

A = Agree D = Disagree

Question One: what are the technical students achievement through self-regulative learning style in college of education Minna, Niger State.

SN	Item	SA	A	SD	D
1	The use of self-regulative learning style has improved my understanding to a large extent				
2	Most technical and vocational course have been made easy through use of self-regulative learning style				
3	My academic performance has been improved via the use of self-regulative leaning style				
4	Most of our learning activities is guide with self-regulative learning style				
5	The impact of self-regulative learning style cannot be underestimate on aca				
6	The self-regulative learning helps in managing my time and acquiring my goals				
7	Overall performance of me and my colleague increased general with self-regulative learning style				

Question Two: What are the types of self-regulative learning skills on technical students of the college of education Minna, Niger state.

SN	**Item**	SA	A	SD	D
1	Self-monitoring				
2	Self-instruction				
3	Goal-setting				
	Strategic planing				
4	Self-reinforcement.				
5	Keeping records and monitoring				
6	Environmental structuring				
7	Attention focusing				
8	Self – experimentation				
9	Self evaluation				

Question three: effect of gender difference of technical students on self-regulative learning style in college of education Minna, Niger State.

SN	**Item**	SA	A	SD	D
1	The use of self-regulative learning is gender bias				
2	Male tends to perform better than their female counter part while use self-regulative learning style				
3	Most activities of self-regulative learning is more convenient for male than female or vice versa.				
4	The use of self-regulative learning improves both male and female students understanding of technical subjects				
5	Self-regulative learning is more suitable for one gender that the other.				
6	Teacher use of self-regulative style is more ease to manage female students than their male counterpart.				
7	More importantly the male students have high academic achievement than female when they are both exposed to self-regulative learning				
8	Majority of time female student does not get along with self-regulative learning as compared to male students				

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970