

**EFFECTS OF MASTERY LEARNING AND SELF-MANAGEMENT STRATEGIES
ON LEARNING OUTCOMES IN CIVIC EDUCATION AMONG SENIOR
SECONDARY SCHOOL STUDENTS IN IBADAN, NIGERIA**

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DEDICATION

This research work is dedicated to my Lord Jesus Christ, the great provider and all sufficient God.

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ABSTRACT

Civic education builds students attitudes, morals and values necessary for good citizenship and effective life in the society. The academic performance of Senior Secondary School (SSS) students in Civic Education (CE) has been on the decline in recent past which has resulted in moral decadence and alarming incidence of social vices such as rape, cultism, unwanted pregnancies and addiction to social media. Previous studies have centred on the utilisation of conventional methods to foster academic achievement and positive attitude in CE with little efforts on new strategies for enhancing learning outcomes among secondary school students. This study, therefore, determined the effects of Mastery Learning (ML) and Self-Management Strategies (SMS) in enhancing learning outcomes (academic achievement and attitude) in CE among public SSS students in Ibadan. It also examined the moderating effects of gender and Academic Self-Concept (ASC).

Bloom taxonomy model provided the theoretical framework while pretest-posttest control group quasi experimental design with a 3 x 2 x 3 factorial matrix was used. Multistage sampling procedure was used. A simple random sampling technique was used to select three local government areas (LGAs) from the eleven LGAs in Ibadanland. Three SSSs were randomly selected from the three LGAs within Ibadan municipality. Ninety SS II students were randomly selected from the participants from the three selected secondary schools. This consisted of 45 male and 45 female participants. The participants were randomly assigned to the two treatment and control groups and exposed to eight-week training of ML and SM strategies. Civic Education Achievement test ($\alpha = 0.75$), Students' Attitude to CE Questionnaire ($\alpha = 0.72$), Academic Self Concept scale ($\alpha = 0.67$) and Learning Preference Assessment ($\alpha = 0.87$) were used for data collection. Data were subjected to Analysis of covariance and Duncan Post hoc test at 0.05 level of significance.

There was significant main effect of treatment on students' academic achievement ($F_{(2,74)} = 3.65$ partial $\eta^2 = 0.43$) and attitude ($F_{(2,74)} = 3.21$; $\eta^2 = 0.56$) to CE. Mastery Learning Strategy (64.97) had highest mean score followed by those in Self-management strategy (58.53) and control (53.77). The mean score on attitude to CE of participants exposed to MLS (102.56) was significantly different from those in SMS (100.36) and control (87.73). There was no significant main effect of ASC on academic achievement and attitude to CE. There were no significant main effect of gender on academic achievement and attitude to CE. The two and three-way interaction effects of treatment and gender and treatment, academic self concept and gender on both achievement and attitude to CE were not significant.

Mastery learning strategy was more potent in enhancing learning outcomes in Civic Education among senior secondary school students in Ibadan metropolis than self-management strategy. Educational psychologists and teachers should adopt the two strategies to enhance students learning outcomes in Civic Education.

Keywords: Mastery learning strategy, Self-management strategy, Academic Achievement and attitude to civic education.

Word count: 464

CERTIFICATION

I certify that this work was carried out by Mrs. Saudat Oluwakemi, OLOKO in the Department of Counselling and Human Development Studies, Faculty of Education, University of Ibadan.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Education quality is measured in terms of its contribution to the development of cognitive skills and behavioural traits, attitudes and values considered necessary for good citizenship and effective life in the society. The guiding principle of education in Nigeria is the equipping of every citizen with such knowledge, skills and values so as to enable him/her to derive maximum benefits from his/her membership of the society, live a fulfilling life and contribution to the development and welfare of the community.

The aims and objectives of our national educational policy at all levels include but not limited to inculcating national consciousness and unity; inculcating correct types of values and attitude; and training for understanding the world around us. The acquisition of appropriate skills, abilities and competencies as a tool for the individual to contribute to the development of his society is also emphasized (Adebayo, 2012). The importance of learning outcomes in a nation's senior secondary educational system cannot be overemphasized. Secondary school education enhances cognitive development and enables its beneficiaries to contribute their own quota to the development of the country. It serves as a medium of training potential undergraduates and future leaders. Secondary school education in Nigeria is aimed at preparing youths for effective and functional living in the society (Aregbagu and Nwokolo 2007).

The performance of Nigerian students in senior school certificate examinations has been used by stakeholders as one of the primary indicators to the standard of education in the country. A two year review on the performance of students in Oyo State during SSCEs in 2014 and 2015 revealed that Oyo State had the worst WAEC/SSCE result in South Western Nigeria. According to Adepeju (2014), in 2014 Oyo State had the worst WAECs Senior Secondary Examination result in South-West of Nigeria. The state's performance on the national level was abysmal as Oyo State was ranked 24th in performance out of the 356 states and the FCT.

Moreso, only 19% (14, 754 students) of the 77,672 students that wrote the May/June 2014 WAEC examination had 5 credits and above. This implies that one out of every 5

students that sat for the exam failed. During the 2015 May/June 2015 West African Senior School Certificate Examination, Oyo State dropped two positions from the previous year (May/June 2014) national ranking, emerging 26th out of 36 states and the FCT. This suggest a success rate of 21% with only 16,588 out of 78,896 students that sat for the exam having five credits including English and Mathematics (Nwachukwu 2016).

In the same vein, there is an emerging decadence of morals, values, attitudes and alarming rates of social vices such as raping wide spread cultism popularly known as ITU (International Terrorist Union) among senior secondary school students, human trafficking and prostitution among girls in senior secondary schools popularly known as (papapa connection), drug abuse, night clubbing, addiction to social media and unwanted pregnancies. All these have contributed to poor academic achievement and attitude of students towards various subjects including civic education. Thus, these form the bedrock of most cases in which professional Educational and Counseling psychologists handle on educational, vocational and socio-personal challenges in their various clients in schools.

Civic Education builds students attitudes, morals and values necessary for good citizenship and effective life in society. The introduction of Civic Education into the school curriculum as a compulsory subject plays a landmark role in providing the knowledge and skills required for students' efficiency and effectiveness. Civic Education is an essential element of whole-person education which aims at fostering student's positive values and attitudes through the school curriculum and the provision of diversified learning experiences (Oyeyemi, 2008). Civic Education is recognized widely as being of great importance both for economic well-being of nations and because of the right morale and values of the citizenry. Therefore, civic education is the type of educational and learning activities, specifically meant to create awareness, teach right values, right attitudes and behaviours that are acceptable to the society where an individual lives (Oyelami, 2011).

Civic Education also develops students' ability to analyse issues relating to personal, family, social, national and global issues at different developmental stages, and enhances their willingness to make commitment and contributions. It also allows the teachers to engage their students in exploring issues of identity membership in group labeling, peer pressure, judgment and the importance of participation. Civic education educates the youths on democracy-related issues such as good-governance, justice and the rule of law, conflict

management, and gender issues as well as internet use and organizational skills. Civic education is not limited to issues of politics, civic rules, democracy, rights of a good citizen but it is broad and wide in scope, as it also deals with important topics such as values, morals, ethics, culture, good parenting, interpersonal relationship, inter-communal relationship, interpersonal skills, conflict resolution, peer group influence, cultism, human trafficking, drug abuse, drug trafficking, emerging issues on HIV/AIDS, sexually transmitted diseases (STD), discipline, commitment, courage etc. The importance of civic education in the life of senior secondary school students cannot be over emphasized. It enhances their capacity to understand their roles, obligations and duties among their fellow citizens and their duties to the government. Also, it creates awareness in students on the duties of the government to the citizen. Fijabi (2011). Civic education generates concern for the values by which a civilized society is identified in terms of tolerance, respect for constituted authority, responsible parenthood, respect for individual opinions, equity, justice, democracy respect for the rule of law, resolution of conflict and the fundamental human rights etc (Adebayo, 2012).

Student learning outcome is the particular knowledge, skill or behaviour that a student is expected to exhibit after a period of study (The World Bank (education) 2014) Learning outcomes reflect a nation's concern with the level of knowledge acquisition among student population. Measuring learning outcomes provides information on what particular knowledge (cognitive) skill or behaviour (affective) students have gained. Salami (2004) and Aremu (2002) findings revealed that learning outcome has become a phenomenon of interest to all and this necessitates the reason teachers, examination bodies and counselors have been working hard to unravel the factors affecting good academic performance. Adeyemo (2007) pointed out that teachers, institutions, parents, guardians and the society are responsible for how best to enhance academic standard and achievement. This is because educational attainment is highly fundamental to the realization of technological and scientific development, socio-economic and political advancement in life.

Students' attitude reveals the type of behaviour of a student in achieving success in Civic Education. Attitude is an all – encompassing part of everyday life. Adeniyi (2007) defines attitude as a mental state that exerts influence on a person's response to people, objects and situations. Attitude is a complex collection of feelings, beliefs and expectations

regarding people, organizations and things we encounter. In other words, (Lawal, 2004) defines attitude as an organized predisposition to think, feel, perceive and behave towards a referent or cognitive object. He further asserts that attitude is an enduring structure of belief that predisposes the individual to behave selectively towards attitude referents such as any object, events and even construct. In his opinion, such affective behaviour has been recognized to be central to both the means and end of the educational process. It is therefore, considered to promote or inhibit students' behaviour in the classroom and the home and ultimately learning and the choice of career. To this effect, attitude remains a variable of concern in educational research. Attitude towards a subject greatly influences achievement in that subject. Evidence has shown that positive attitude promotes learning while negative attitude debases it (Yoon, 2002).

Studies have revealed that students' attitude towards Civic Education is very important in the teaching – learning processes as well as in learning outcomes (Yoon, 2002). Yoon emphasized that by and large, the teaching-learning context is significantly affected by our value systems or attitude. In his opinion, teachers are role models whose attitudes easily affect the students, Ewedeyi (1991) stated that students' negative attitude towards a subject describes the growing index of dislike and unstable performance in the subject as well as the low moral attitudes and loss of essence of human value by the society. Awofala and Nneji (2012) stressed the importance of developing favourable attitudes as a means of enhancing performance in the learning of Civic Education in relating attitude to achievement under some teaching strategies, and concluded among other things on the relationship between academic ability and students' achievement in Civic Education. He stressed that students' attitude will guide teachers to plan their lessons for different ability groups in the class. He concluded by saying that factors like reading anxiety and lack of reading motivation produces poor achievements which, in turn, produce negative attitude to the subject.

Another immediate outcome of learning is student achievement. Achievement is generally a pedagogical terminology that measures learners' success in education through reports, examinations, researches and ratings with numerous factors or variable exerting influences. A key question then is; how do variables like reading anxiety, reading motivation, classroom environment and methods of teaching influence learning outcome? The answer provides a basis for considering the ways in which the classroom environment and some

other variables contribute to achievement, and how they use information about achievement to review and improve those aspects of its performance most likely to contribute to students' learning. Studies suggest that the aforementioned external factors including students' innate ability, environment and other factors account for 40 to 65 percent of students' learning outcome (Education Review Office, 2002).

In addition to the search for academic achievement and improvement, it is seemingly necessary to explore in predictive terms, students' personal characteristics because most human activities involve psychological constructs which may develop right from birth or in the course of learning. As Chauhan (2003) puts it, poor achievement is a behavioural deviation that is symptomatic. Similarly, national policy on education (FRN, 2004) and Okegbile (2000) noted that students' achievement is not only focused at preparation for useful living but also eligibility for higher education which are attainable through good study skills, attitude or methods. Essentially, the national policy on education (Federal Republic of Nigeria (FRN) 2004) identified achievement contents according to school subjects while scholars and teachers advanced possible causes of low or high achievement of students in school subjects, textbooks used, teachers' method, personality, difficult concepts, curriculum contents, poor motivation, poor study habit, poor attitude, poor adjustment, lack of self concept, among others as possible causes of poor academic achievement (Edozie, 2001). In the study of Papulova (2007), sociologists and development social psychologists have realized that students who value academic achievement and promote intellectual activities achieve better academically. In students' achievement, one talks of the degree to which students have strong senses that they can be successful in meeting academic and school demands (Johnson, 2004).

Ultimately, information on learning outcomes assists countries in making informed decisions about interventions to improve educational quality and help policy makers understand the nature and quality of student learning outcomes. National, regional and international assessments allow for the bench marking of student performance against corresponding standards. In the context of international development assistance, focus on learning outcomes increases stakeholders' attention on deliverables and results and may increase accountability based on performance. Despite the importance of students learning outcomes on civic education, there is little empirical research on it because the subject is new

in the school curriculum. Awofala and Nneji (2012) attempted the studies, it was mainly descriptive in nature. Therefore; there is a dearth of the experimental studies.

Mastery learning is one of the interventions for enhancing learning outcomes in Civic Education, its approach is essentially a group based strategy for adapting instruction to the needs of individual learners. Mastery learning strategy is the process of mastering a particular learning objective. This approach is based on Benjamin Blooms Mastery for learning Model with the refinement made by (Block, 2007). In addition, mastery learning strategy refers to the idea that learning should be organized through ordered steps. (Block, 2007). In order to move to the next step, students have to master the prerequisite step. Mastery learning engages the learner in multiple instructional methods, learning level and multiple cognitive thinking types. The concept of mastery learning strategy can be attributed to the behavioural principles of operant conditioning. According to operant conditioning theory, learning occurs when an association is formed between a stimulus and response (Skinner, 1984). In line with the behaviour theory, mastery learning strategy focuses on overt behaviour that can be observed and measured (Baum 2005). The material that will be learnt in mastery is broken into smaller units, into smaller discrete lessons that follow a logical progression in order to demonstrate mastery over each lesson, students must be able to overtly show evidence of understanding of the mastery before moving to the next lesson (Anderson 2002). Mastery learning strategy breaks subject matter and learning content into units with clearly specific objectives which are pursued until they are achieved (Anderson, 2010). Mastery learning positive effects help in cognitive or achievement outcomes. The process also yield improvements in students', confidence in learning situations, school attendance rates, engagement in class activities, attitudes towards learning the subject and a variety of other effective measures. Thus, mastery learning is effective in students learning outcomes in senior secondary school civic education.

Self management strategies is another effective treatment package used in the study for enhancing student learning outcomes in senior secondary school civic education. Self management strategy is the application of behavioural principles to manage a person's deficient behaviour in order to effect a desirable change. Self management strategy as a treatment package combines psychological, biological and social intervention strategies with the aim of maximal outcome in enhancing student learning outcomes in civic education in

senior secondary schools (Oduneye, 2007). According to Minte – nbeger (2001), self management strategies involve the self-directed implementation of strategies in which antecedents and consequences of target behaviour are modified, making the latter more or less likely to occur in the future, depending on the goals of the intervention.

Although it can be assumed that different variables are responsible for student learning outcomes in senior secondary schools, several researchers and authors have worked on the causative factors associated with poor learning outcomes among senior secondary school students Awofala & Nneji (2012) Swann, Chlang – Schvnader and Mc Clarfy (2007) Yang L. examined the interactive effects of academic self concept and gender on learning outcomes in Civic Education among senior secondary school students. Moreover, previous studies have utilised conventional methods to foster academic achievement and attitude to Civic Education with little efforts on new strategies in enhancing learning outcomes among senior secondary school students. .

Academic self concept is defined as “how a person feels about himself or herself with a school or academic setting or in relation to a students academic progress. (Bracken 2009, Brunner, 2010). Academic self concept is a vital construct which had a long history within education and psychology because it provides a guage to determine the effects of academic and learning outcomes of an individual. Academic self concept can also be defined as an individual’s perception of self-efficacy in academic subjects (Bong & Skaalvik, 2003). Eccles (2005) highlights seven primary features of academic self concept – organized, multifaceted, hierarchical, stable, development, evaluative and differentiable.

Academic self concept powerfully and positively predicts general academic achievement in literature and other subjects Elsevier (2011). Marsh H.W. and Mantin A.J. (2011) affirmed that high academic self concept leads to an increase in subsequent academic achievement and other desirable educational learning outcomes. The researcher examined academic self-concept and gender as moderators. To Akinpelu (2000), Onyilo (2005) and Ogunbiyi (2008) ,it was suggested that self perception has an important individual influence which define for individuals the nature of their relationship with other people , the type of behaviour and task in which they will engage. There is continuous flow between self and the stream of experiences involved in the process of living and learning in school. The students perceive, interpret, accept or reject what they encounter in the light of the ways they view

themselves as persons generally and as students in particular. Hamacheck in Akinpelu (2001) concludes that there is a mounting body of evidence to suggest that students performance in an academic setting is influenced in both subtle and obvious ways by the concept of self.

Gender is interchangeable for sex. Gender is a range of physical, biological, mental and behavioural characteristics pertaining to and differentiating between masculinity and femininity. It also refers to the personal sexual identity of an individual, regardless of the person's biological and outward sex. How people define masculinity and femininity can vary based on the individual's background and surrounding culture. Differing societal expectations in different cultures establish the behaviour. Some research evidence showed that female gender has been stereotyped of having low academics self concept thus resulting in low learning outcomes and male gender with high learning outcomes. However, Busari (2000) was of the opinion that female perform better academically than the male students. Past research suggested that females are in general more successful in school than males. Hartley and Sutton (2013) have recently reported that especially males develop gender stereotypes according to which female are perceived as academically superior with regard to academic achievement and attitude. However, previous studies revealed rather inconsistent results concerning gender and academic achievement and attitude (learning outcomes). The moderating variables for the study were Academic Self Concept and Gender. Ogunsuyi (2006) opines that the academic achievement and attitude of male and female depends on many attributes: the traditional and some family belief that males are superior to females , gave male a feeling of better academic self-concept than females and hence as fair academic achievement and attitude than males.

Mastery learning strategy and self management strategies are effective and useful treatment packages to enhance student learning outcomes in civic education. The goal of both strategies is good success in student's achievement, Mastery learning strategy and self management strategies improve cognitive ability and modify the student's behaviour which results in student good learning outcomes. Both strategies reward students for actual learning and give one-on-one time with the students. Of all the students in senior secondary schools in Oyo State, students in Ibadan constitute a larger group; the research focused on this unique

group to examine the effects of treatment packages on the students learning outcomes in Civic Education.

Additionally, the literature reviewed so far, showed that there is scanty literature on the utilization of Mastery Learning and self management strategies in enhancing students learning outcomes in Civic Education among Senior Secondary School Students in Ibadan. Previous studies have utilized conventional methods to inculcate academic achievement and attitude in Civic Education as a result of little efforts on new strategies in enhancing learning outcomes among secondary school students. Based on this development, this study investigated the effectiveness of Mastery Learning and self management strategies in enhancing the student learning outcomes in Senior Secondary Civic Education in Ibadan, Oyo State, Nigeria.

1.2 Statement of the problems

Poor learning outcomes among senior secondary school students have become worrisome to parents, guardians, teachers, counseling psychologists, government at all levels, and school authorities. Subsequently, students learning outcomes have resulted in various disruptive and delinquent behaviours such as stealing, vandalism at school, including habitual theft, chronic lying, wearing pants or trousers too low which is sagging, yelling back at a teacher over an announcement, bullying, fighting because of frustration in the school environment. Moreover, the alarming rate of social vices such as raping, cultism, gambling, prostitution, smoking, pornography, night clubbing, drug abuse, alcoholism, cheating, examination malpractices, and addiction to social media among senior secondary school students have contributed to the poor learning outcomes in Civic Education and other related subjects such as Social Studies, Government, Economics e.t.c. Thus, it has resulted in poor academic performance, *laisse-faire* attitude towards class work, truancy, unwanted pregnancies, repeating a class several times and dropping out from senior secondary schools.

Poor parental socio-economic background, peer group influence, political instability and other societal factors also contribute to poor learning outcomes in Civic Education.

Scholars and researchers have worked on the student learning outcomes in several subjects but none in Civic Education from various literatures reviewed and to the best of the researchers' knowledge, none of them has combined the mastery learning and self-management strategies in enhancing students learning outcomes in Civic Education.

The researcher seeks to ascertain the effectiveness of Mastery Learning and Self-Management Strategies in enhancing learning outcomes in Civic Education among senior secondary school students in Ibadan.

1.3 Purpose of the Study

The purpose of this study was to find out the effects of mastery learning and self management strategies in enhancing leaning outcomes in Civic Education among Senior Secondary School Students in Ibadan. To determine the differential effectiveness of mastery learning and self-management outcomes in Civic Education among Senior Secondary School Students.

Specifically, the study examines the effect of:

1. Treatment on academic achievement and attitude to civic education among senior secondary school students.
2. Gender on academic achievement and attitude to civic education among senior secondary school students.
3. Academic self concept on academic achievement and attitude to Civic Education among Senior Secondary School Students.
4. Treatment and academic self-concept on academic achievement and attitude to Civic Education among Senior Secondary School Students.
5. Treatment and academic self-concept on academic achievement and attitude to Civic Education among Senior Secondary School Students.
6. Academic self concept and gender on academic achievement and attitude to Civic Education among Senior Secondary School Students.
7. Treatments, academic self-concept and gender on academic achievement and attitude to Civic Education among Senior Secondary School Students.

1.4 Significance of the study

The study would also enable all the stakeholders in education to know the effects of self concept and gender on students learning outcomes in civic education, thus reducing the problems of gender differentiation and low self concept among senior secondary school students.

The findings of this study would not only benefit students in senior secondary schools in Ibadan but also adolescents, teachers, educational psychologists, educational

policy makers, parents, guardians, youths, families, society, governments at all levels and future researchers. The outcomes of this study would create awareness on how to maximize mastery learning and self management strategies on students' learning outcomes in civic education in senior secondary schools in Ibadan. This would enable them to adjust to changes and challenges in life.

Likewise, the findings of this study would enlighten the teachers and parents on the implications of poor students learning outcomes and how best to support their children in improving their learning outcomes in civic education, master and improve on their reading culture. This study would help all the stakeholders in education such as students, parents, teachers, counselors, school management and government to have a vivid understanding of the effects of mastery learning and self management strategies on students learning outcomes in civic education in senior secondary schools and would improve their learning ability to improve and concentrate on the teaching-learning processes. Also, it would enable the teachers to experience better teaching-learning methods with well adjusted students.

Moreover, the findings of this study would help educational and counseling psychologists to know the effectiveness of Mastery Learning and self management strategies on students learning outcomes in civic education, thus adding more to their therapeutic interventions.

The outcomes of the study would assist educational policy makers in particular and Nigerian government in general in designing educational policies and include these strategies into the school curriculum to help in improving and enhancing the student learning outcomes. The findings of this study would serve as a reference to other researchers and likewise add to the existing literature and create research gaps for other researchers to explore.

1.5 Scope of the study

The study was carried out in Ibadan, Oyo State, Nigeria. The study used Mastery Learning and self management strategies to enhance students learning outcomes in Civic education in Ibadan. The senior secondary school students were the focus of this study.

The SSII students were the participants used for the study in three local government council areas in Ibadan i.e. Ibadan North East, Ibadan South East and Egbeda local government respectively. These are Wesley College, Elekuro (Ibadan South East), Ratibi

College, Oke Offa (Ibadan North East), and Urban Day Grammar School, Old Ife Road, (Egbeda Local Government).

1.6 Operational Definition of Terms

Based on the title of this study, terms were operationally defined.

Mastery Learning Strategy: Is the treatment given to the students in improving their cognitive ability by breaking down the learning content and subject matter into smaller units with clearly specific objectives which are pursued until they are achieved in senior secondary school.

Self management Strategy is the application of treatment to manage the senior secondary school students' deficient behaviour in order to effect a desirable change.

Student learning outcomes are the particular cognitive affective and psychomotor abilities a senior secondary school student is expected to exhibit after the enhancement strategies have been used for them in civic education.

Civic education is a behavioural science which teaches right values, attitudes, behaviour and enhanced with mastery learning and self management strategies with improved student learning outcomes in senior secondary schools.

Academic self concept: is the participants self-perception of academic ability formed through their experiences and interaction with the environment in relation to their studies.

Learning outcomes: These refer to the measurable behavioural expectations from students as a result of treatment. The learning outcomes of interest are: Achievement in Civic Education Achievement Test (CEAT). Attitude to Civic Education - these were represented by participants score in the Students Attitude towards Civic Education (SATCEQ).

Achievement in Civic Education: Is the measurable behavioural expectation from students as a result of treatment. The achievement in Civic Education is measured using scores in achievement test in Civic Education.

Attitude to Civic Education: This refers to participants perception of civic education, students' feelings, opinions, beliefs, values, likes and dislikes, behaviour and interest towards civic education. Students' attitudes are measured by students' attitude towards civic education (SATCEQ).

CHAPTER TWO

LITERATURE REVIEW

The literature review cited for the study were based on the nature, concept, development, conceptual, theoretical and empirical literature based on related studies conducted on variables of interest in the study.

Theoretical Review

2.1 Learning

Learning is a process of active engagement with experience. It is what people do when they want to make sense of the world. It may involve increase in skills, knowledge, understanding, values, feelings, attitudes and capacity to reflect. Effective learning leads to change, development and the desire to learn more.' Wenger (1998).

'Learning is an active process in which the learner uses sensory input and constructs meaning out of it. People learn to learn as they learn: learning consists both of constructing meaning and constructing systems of meaning. The crucial action of constructing meaning is mental: it happens in the mind. Physical actions, hands-on experience may be necessary for learning, especially for children, but it is not sufficient; we need to provide activities which engage the mind as well as the hands. Learning involves language: the language we use influences learning. Learning is a social activity: our learning is intimately associated with our connection with other human beings, our teachers, our peers, our family as well as casual acquaintances, including the people before us or next to us at the exhibit. Learning is contextual: we do not learn isolated facts and theories in some abstract ethereal land of the mind separate from the rest of our lives; we learn in relation to what else we know, what we believe, our prejudices and our fears. One needs knowledge to learn: it is not possible to assimilate new knowledge without having some structure developed from previous knowledge to build on. It takes time to learn: learning is not instantaneous. Motivation is a key component in learning.

Wenger (1998) sees learning as a process of engaging in social practice and that can be applied in all kind of settings. This social perspective on learning may be summarized succinctly by the following principles:

Learning is inherent in human nature and is first and foremost the ability to negotiate new meanings.

Learning creates emergent structure and it is fundamentally experiential and social. It transforms our identities and constitutes trajectories of participation. Learning means dealing with boundaries and it is a matter of engagement, imagination and alignment. Learning involves interplay between the local and the global.

Claxton (1999) highlights four main learning strategies aptly referred to as the good learner's toolkit:

Immersion in experience: exploration, investigation, experimentation, social interaction and imitation
Imagination: fantasy, visualization, storytelling to create and explore hypothetical worlds
Intuition: creativity, germination of ideas
Intellect, language reasoning, analysis, communication

2.2 Learning Outcomes

In the context of formal education, learning outcomes can be defined as: "Specific measurable achievements. These are similar to (programme) objectives but described in terms of what the learners will be able to do. The outcomes are student-centred, measurable, achievable, and can therefore be assessed.

According to Hoodles (2008) learning outcomes are generally developed in relation to specific programmes of study or schemes of work in formal education. In universities, for example, programme specifications and module outlines must include an explicit statement of intended learning outcomes linked to assessment criteria for judging student achievement in respect of these outcomes. Lecturers write the learning outcomes and judge individual student achievement against them. Learning outcomes are written with the National Qualifications Framework in mind; this is based on five levels of student achievement from a Higher Education Certificate at level 1 to doctoral level work at level 5. Aims and outcomes are written in respect of knowledge and understanding, and skills and attributes, upon completion of the course of study.

Learning outcomes are expressed in terms of 'can do' verbs. Those recommended include precise and focused verbs such as: compile, plan, analyse, select, apply, demonstrate, assess, reflect, enumerate, combine, and contrast. 'Can do' verbs considered too open to be useful in the context of higher education are: know, become aware, appreciate, understand, enjoy, and learn. Outcomes are usually related to desired changes in learners' behaviour, an

approach that can be used within formal learning contexts where specific learning objectives can be established. (Wenger, 1998).

While learning outcomes may be learner-centred, there is no suggestion that learners in formal education might write their own learning outcomes.

This is seen as the teachers' responsibility as part of effective course design. Teachers devise learning outcomes in relation to a base-line (what students know at the beginning of a programme of study) and assess their students' performance at the end of the programme (have students achieved the desired outcomes?). Use of this approach - known as baseline assessment - is a statutory requirement for all early-years educators in the UK. By assigning numerical levels to children's achievements, schools can set targets which they are then expected to meet. This is a rather mechanistic way of describing and assessing learning and its outcomes.

It has been argued that the material made available to learners in any learning environment should also be used to determine what kind of learning outcomes are set and how they are assessed (Hoodless, 2008). This is particularly challenging in informal settings for learning with very variable availability of resources and material. The setting of learning outcomes in informal and open learning environment is also problematic if there are no study programmes, established learning objectives, or specific target dates for achieving outcomes, and no formal assessment process to which users are subjected. Compared with formal education, learning in museums, archives and libraries tends to be wide-ranging, more self-selected and self-directed, more open, less likely to follow a linear path, and more likely to link to other social experiences and be a group activity.

The implications of these differences for evaluation of learning outcomes outside formal education are a need to put the emphasis on: assessing outcomes that are measurable and can be assessed at critical points in learners' development; giving learners control over assessing learning outcomes that they themselves have set (self-assessment) which could increase their motivation; and being able to accept that learning outcomes may vary greatly for different learners within the same learning context.

2.3 History of learning outcomes and theories of learning

Efforts to classify learning outcomes in the form of taxonomies date back to the 1950s with the publication of *Taxonomy of Educational Objectives* by Bloom and a group of

educational psychologists (Bloom, 1956, Krathwohl 1964). Their efforts were followed by Gagne's taxonomy (1985, Gagne and Briggs 1979). More recently, alternative ways have been developed of studying learning and its outcomes through the application of intelligence theory (Gardner, 1983, Sternberg, 1997) or the concepts of interest and motivation (Csikszentmihalyi and Hermanson, 1995). The two later approaches take a different theoretical stance and use different terminology to describe learning processes.

For better understanding of learning outcomes, we need to look at the different approaches to learning from which the concept of learning outcomes is derived. We will also examine more recent approaches that move away from the idea of learning outcomes and seem to be more appropriate for the needs of open learning environments. As one of the most critical thought processes, learning has traditionally been studied as an aspect of psychology. Although there have been a number of attempts to define learning, definitions are more often in the form of distinctions between different types or styles of learning.

The focus of different learning theories varies according to the assumptions about the nature of knowledge and learning on which they are based. The two dominant theories of learning in psychology are behaviourism, and, since the mid-20th century, cognitive theory. In the past decade, however, new approaches to learning have been recognised: constructivism, which is a psychological theory, and social theories of learning which bridge psychology and anthropology by introducing social interaction into the understanding of learning (Bloom, 1956).

Behavioural psychologists believe that learning is brought about by conditioning (behaviourism") or observing a model (social or observational learning. Cognitive psychologists, on the other hand, focus on internal cognitive structures and view learning as transformations in these internal structures (cognitive-developmental theories and information-processing theories. Constructivist learning theories focus on 'the process by which learners build their own mental structures when interacting with the environment' (Wenger 2008). Other theories that have moved away from a purely psychological approach 'focus on bridging the gap between the historical state of an activity and the developmental stage of a person with respect to that activity' (activity theories) (Wenger, 2008) or study the relationship between people, physical objects and cultural communities (social theory of learning) (Wenger, 2001; Wenger 2008); hence the focus of the latter theories on learning as

social participation. It includes five Categories of learning outcomes and the nine events of instruction. Together, these two themes of Gagne's learning theory provide a framework for learning conditions. Gagne's work (1985) focuses on intentional or purposeful learning, which is the type of learning that occurs in school or specific training programs. He believed that events in the environment influence the learning process. His theory identifies the general types of human capabilities that are learned. These capabilities are the behavioural changes (learning outcomes) in a learner that once the learning outcomes are identified, an analysis of the conditions that govern learning and remembering can occur (Gagne, 1985)

For example, a learner who is participating in a situation where the right conditions for learning are invoked, then he or she will experience the five categories of learning outcomes that include the human capabilities of intellectual skills, verbal information, cognitive strategies, motor skills, and attitudes.

Gagne also relates learning outcomes to the events of instruction. He provides systematic statements of theory to describe the ways that instructional events are designed for each of the learning outcomes or capabilities.

While Bloom, (1956) developed his taxonomy of cognitive outcomes based on increasingly complex levels, Gagne (1985) developed his five categories of learning outcomes based on the characteristics of the content that a learner must learn. His outcomes do not consist of any particular order or complexity of levels, other than the sub-categories within the Intellectual Skills category. Gagne separated Bloom's knowledge class into a category he named verbal information, and he added another category of learning outcomes he named cognitive strategies. He believed cognitive strategies were learning strategies that learners adopted and applied in the process of learning, and that they are not subject specific.

Description of Gagne's Conditions of Learning Theory

Gagne's conditions of learning theory draws upon general concepts from various learning theories in order to define what learning is. The theory looks at the observable changes in human behaviour that confirm that learning has occurred. Gagne's theory provides an answer to the question, "what is learning?" In answering that question, Gagne provides a description of the conditions under which learning takes place by referring to situations in ordinary life and in school where learning occurs, and by referring to experimental studies in learning.

Gagne (1985) postulates the proof of learning shows by a difference in a learner's performance before and after participating in a learning situation. He claims that the presence of the performance does not make it possible to conclude that learning has occurred; but instead, it is necessary to show that there has been a change in performance. In other words, the capability for exhibiting the performance before learning requires consideration as well as the capability that exists after learning.

The following four elements provide the framework for Gagne's Conditions of learning theory.

Conditions of Learning

Association Learning

The Five Categories of Learning Outcomes

The Nine Events of Instruction

Conditions of Learning

Gagne (1985) describes two different types of conditions that exist in learning: internal and external. Capabilities that already exist in a learner before any new learning begins make up the internal conditions necessary for learning. These internal conditions are transformed during the learning process. External conditions include different stimuli that exist outside the learner such as the environment, the teacher, and the learning situation. This means that each new learning situation begins from a different point of prior learning and will consist of a different external situation, depending on the learner and on the learning environment. Therefore, the useful prototypes of learning by association are delineated by internal and external learning conditions.

Association Learning

There are three basic prototypes of learning that demonstrate the characteristics of associative learning: classical conditioning, operant conditioning, and verbal association. Gagne adds a fourth that relates to the three prototypes: chaining. Classical conditioning is the process where the learner associates an already available response with a new stimulus or signal. Operant conditioning is the process where a response in a learner is instrumental and thereby leads to a subsequent reinforcing event. Verbal association occurs when the learner makes verbal responses to stimuli that are words or pairs of words. Chaining is a process

where a learner connects individual associations in sequence. For example, a learner can recite verbal sequences consisting of lists of words, or the alphabet from A-Z.

Gagne (1985) believes these four prototypes of associative learning are components of learned human capabilities and link together as basic forms of learning. Gagne refers to them so he may present a comprehensive picture of how these prototypes of learning relates to the five categories of learning outcomes.

The Five Categories of Learning Outcomes

One of the themes of Gagne's theory is distinguishing the types of outcomes that learning has: the categories of learned capabilities - observed as human performances - that have common characteristics. Gagne describes five categories of human performance established by learning:

- Intellectual skills ("knowing how" or having procedural knowledge)
- Verbal information (being able to state ideas, "knowing that", or having declarative knowledge)
- Cognitive strategies (having certain techniques of thinking, ways of analyzing problems, and having approaches to solving problems)
- Motor skills (executing movements in a number of organized motor acts such as playing sports or driving a car)
- Attitudes (mental states that influence the choices of personal actions)

The five categories of learning outcomes provide the foundation for describing how the conditions of learning apply to each category.

Gagne (1985) postulates that if the five categories of learning outcomes and the ways of analyzing learning requirements are combined in a rational and systematic manner, then it will be possible to describe a set of ideas that make up a theory of instruction. He adds that a theory of instruction should attempt to relate the external events of instruction to the outcomes of learning by showing how these events lead to appropriate support or enhancement of internal learning processes.

The Nine Events of Instruction

The events of instruction are the external events that help learning occur, and are designed to achieve each of the five different learning outcomes. Gagne (1985) numbers the instructional events from one to nine, showing a sequential order.

The nine events are as follows:

Gaining Attention

Informing Learners of the Objective

Stimulating Recall of Prior Learning

Presenting the Stimulus

Providing Learning Guidance

Eliciting Performance

Providing Feedback

Assessing Performance

Enhancing Retention and Transfer

A summary of each of the nine events of instruction is in the Main Elements of Gagne's Learning Theory section of this page.

To Gagne (1985), the conditions of learning, association learning, the five categories of learning outcomes, and the nine events of instruction provide a description of the framework for Gagne's conditions of learning theory. The next section of this page provides detail of the five categories of learning outcomes and the nine events of instruction. In his theory, Gagne (1985) describes five categories of human performance established by learning (learning outcomes): intellectual skills, verbal information, cognitive strategies, motor skills, and attitudes. They are comprehensive and do not follow any specific order. Any learned capability will have the characteristics of one or another of these categories. The links below will take you to a brief summary of each of the five categories, summarized from Gagne and Driscoll (1988) *Essentials of Learning for Instruction*.

- Intellectual Skills
- Verbal Information
- Cognitive Strategies
- Motor Skills
- Attitudes

Intellectual Skills

Gagne (1985) Intellectual skills involve the use of symbols such as numbers and language to interact with the environment. They involve knowing how to do something rather than knowing that about something. Intellectual skills require an ability to carry out actions. Often

they require the interactions with the environment through symbols such as letters, numbers, words, or diagrams. When a learner has learned an intellectual skill, he or she will be able to demonstrate its application to at least one particular instance of the subject matter learned.

Out of the five categories, intellectual skills are the only category that is divided into sub-categories. The division is according to the complexity of the skill level, and how they relate to each other. The more complex skills require the prior learning or mastery of the simpler skills before the learning process is complete. The links below will take you to a brief summary of the five sub-categories of intellectual skills Gagne, (1983).

- Discriminations
- Concrete Concepts
- Defined Concepts
- Rules
- Higher-Order Rules

Discriminations

Discriminations is the first skill to master in intellectual skills. It is the ability to distinguish one feature of an object or symbol from another such as textures, letters, numbers, shapes, and sounds. The human performance or learning outcome achieved by discrimination is the ability to tell the difference among various stimuli. It is the prerequisite to further learning.

Concrete Concepts

Concept learning occurs after discriminations learning is complete. Concrete concepts are the simplest of the two concept types and consist of classes of object features, objects, and events. Some are relational such as up, down, far, near, higher, lower. The performance or learning outcome achieved from mastery of concrete concepts is the ability to identify a class of objects, object qualities, or relations by pointing out one or more examples or instances of the class (Gagne, 1985).

Defined Concepts

Concepts not only require identification, but also definition. Defined concepts require a learner to define both general and relational concepts by providing instances of a concept to show its definition. For example, if a learner were to explain the concept alliteration, he or she must define alliteration, and then be able to identify the components of alliteration, such

as consonant sound, beginning, sentence, etc., and then be able to provide specific examples of alliteration.

Rules

Once concepts are learned, the next sub-category of intellectual skills is rules. A rule is a learned capability of the learner, by making it possible for the learner to do something rather than just stating something. For example, when a learner learns the rule for forming an adverb to modify an adjective, he or she knows that *ly* must be added to the modifier. Because a learner knows the rule to add *ly*, he or she can apply it to an entire class of words instead of learning an adverbial form for every adjective in the language, enabling the learner to respond correctly to words he or she has never seen before. Rules make it possible to respond to a class of things with a class of performances (Gagne, 1985).

Higher-Order Rules

Higher-order rules are the process of combining rules by learning into more complex rules used in problem solving. When attempting to solve a problem, a learner may put two or more rules together from different content in order to form a higher-order rule that solves the problem. A higher-order rule differs in complexity from the basic rules that compose it. Problem solving using higher-order rules occurs in writing paragraphs, speaking a foreign language, using scientific principles, and applying laws to situations of social or economic conflict Gagne (1985).

Verbal Information

Another category of learning outcomes is verbal information. This refers to the organized bodies of knowledge that we acquire. They may be classified as names, facts, principles, and generalizations. Verbal information is referred to as declarative knowledge, or knowing that. The performance or learning outcome achieved through verbal information is the ability of being able to state in a meaningful sentence what was learned. Some examples of acquired verbal information are the ability to define Piaget's stages of cognitive development; or, stating the rules for scoring in a tennis match.

Cognitive Strategies

Cognitive strategies refer to the process that learners guide their learning, remembering, and thinking. Where intellectual skills are oriented toward aspects of the environment by dealing with numbers, words, and symbols that are external, cognitive strategies govern our

processes of dealing with the environment by influencing internal processes. A learner uses cognitive strategies in thinking about what was learned and in solving problems. They are the ways a learner manages the processes of learning, remembering, and thinking.

The performance or learning outcome achieved through cognitive strategies is having the ability to create something new such as creating an efficient system for cataloguing computer discs Gagne (1985).

Motor Skills

Motor skills are the precise, smooth, and accurately timed execution of movements involving the use of muscles. They are a distinct type of learning outcome and necessary to the understanding of the range of possible human performances. Learning situations that involve motor skills are learning to write, playing a musical instrument, playing sports, and driving a car. The timing and smoothness of executing motor skills indicates that these performances have a high degree of internal organization.

Attitudes

Another distinct category of learning outcomes is attitudes, the internal state that influences the choices of personal actions made by an individual towards some class of things, persons, or events. Choices of action (behaviours) made by individuals are influenced significantly by attitudes. For example, an attitude towards the disposal of trash will influence how a person disposes of pop cans, food containers, organics, etc. An attitude towards music will influence the choice of music an individual will listen to. Gagne, (1985).

General classes of attitudes include attitudes that affect social interactions, attitudes that consist of positive preferences towards certain activities, and attitudes that pertain to citizenship, such as a love of country or showing concern for social needs and goals.

The performance or learning outcome achieved through attitudes is evident in an individual's choice of actions. For example, choosing swimming over running as a preferred exercise, or choosing not to participate in group events reflects how attitude motivates choices.

Gaining Attention

The first event of instruction is to gain the attention of students so they are alert for the reception of stimuli. An instructor can achieve this by introducing a rapid stimulus change either by gesturing or by suddenly changing the tone or volume of their voice. Another way of stimulating alertness is by visual or auditory stimuli related to the subject matter. The

stimulus chosen for gaining attention will work equally well for all categories of learning outcomes (Gagne, 1985).

Informing Learners of the Objective

The second event of instruction is to inform the learner of the purpose and expected outcomes of the learning material. This will provide them with an expectancy that will persist during the time learning is taking place. Feedback at the end of the lesson will provide the learner with confirmation of learning.

An important part of this event of instruction is to provide learners with motivation if learner motivation is not apparent. An instructor can achieve learner motivation by relating an interesting career field to the learning material Gagne (1985).

Instructional techniques that will inform the learner of objectives for all five categories of learning outcomes are described below.

- **Intellectual Skills:** Instructors can demonstrate the activity to which the concept, rule, or procedure applies.
- **Cognitive Strategy:** Instructor describes or demonstrates the strategy
- **Verbal Information:** Instructor describes what the learner will be expected to state.
- **Attitude:** The learner encounters attitude later in the process. (This occurs through instructor demonstration or modeling during instructional event five, providing learning guidance.
- **Motor Skills:** Instructor demonstrates the expected performance.

Stimulating Recall of Prior Learning

The third event of instruction asks the instructor to recall skills or knowledge learners have previously learned. The best kind of recall should naturally relate to the subject matter being learned. The instructional technique for stimulating recall will be different for the different learning outcomes as described below.

- **Intellectual Skills:** Instructor recalls prerequisite rules and concepts
- **Cognitive Strategy:** Instructor recalls simple prerequisite rules and concepts
- **Verbal Information:** Instructor recalls well organized bodies of knowledge
- **Attitude:** Instructor recalls a situation and action involved in personal choice. He or she reminds learner of the human model and model's characteristics.

- **Motor Skills:** Instructor recalls the "executive subroutine" (the procedure that constitutes the active framework within which the motor skill is executed, practised, and refined), and part- skills Gagne (1985).

Presenting the Stimulus

The fourth event of instruction is presenting a stimulus that is related to the subject matter. The content of the stimulus should be specific to the learning outcome. For example, if the stimulus is verbal information, printed prose such as a chapter in a textbook or an audio tape will achieve the learning objective. If the stimulus is an intellectual skill, the instructor can display the object and/or symbols that require a concept or rule; or, he or she can present the problem learners need to solve.

The instructor must present the stimulus as an initial phase of learning, so clear indication of stimulus features such as underlining, bold print, highlighting, pointing, or using a change in tone of voice to emphasize major themes is helpful.

The instructional techniques for presenting the stimulus to different learning outcomes are as follows;

- **Intellectual Skills:** Instructor delineates features or the objects and symbols that require defining as a concept or a rule
- **Cognitive Strategies:** Instructor describes the problem and shows what the strategy accomplishes
- **Verbal Information:** Instructor displays text or audio statements, showing or highlighting the distinctive features
- **Motor Skills:** instructor displays the situation at the initiation of the skilled performance, and then demonstrates the procedure
- **Attitude:** Instructor presents a human model that describes the general nature of the choice that learners will be required to make (Gagne, 1985).

Providing Learning Guidance

The fifth event of instruction, providing learning guidance requires the instructor to make the stimulus as meaningful as possible. There are several ways to achieve this, depending upon the learning outcome expected. An instructor can enhance meaningfulness by using concrete examples of abstract terms and concepts, and elaborating ideas by relating them to others already in memory.

The instructional techniques for providing learning guidance to different learning outcomes are as follows:

- Intellectual Skills: Instructor provides varied concrete examples of the concept or rule
- Cognitive Strategies: Instructor provides a verbal description of the strategy, followed by an example
- Verbal Information: Instructor elaborates content by relating to larger bodies of knowledge; uses images and/or mnemonics
- Attitude: Instructor uses the human model and describes or demonstrates an action choice, followed by observation of reinforcement of model's behaviour
- Motor Skill: Continue practicing procedure, focusing on precision and accurately timed execution of movements Gagne (1985).

Eliciting Performance

The sixth instructional event eliciting performance asks a learner to demonstrate the newly learned capability. This may be verbal information, intellectual skills, cognitive strategy, attitude, or motor skill. The learner of verbal information will have the ability to "tell it." The learner of a new concept or rule (intellectual skills) will have the ability to demonstrate its applicability to a new situation not previously encountered during learning. The learner of a cognitive strategy of problem solving will solve an unfamiliar problem whose solution may use the strategy. The learner of a motor skill demonstrates the learned performance. The learner demonstrates the new attitude in the choices the learner makes.

Providing Feedback

The seventh instructional event, providing feedback, asks the instructor to reinforce the newly acquired learning. An instructor can accomplish this through informative feedback where the instructor informs the learner of the degree of correctness or incorrectness of the performance. This feedback may be verbal or written Gagne (1985)

Assessing Performance

The eighth instructional event, assessing performance, consists of assessments to verify that learning has occurred. In order to assure that learning is stable, an instructor will require additional instances of the performance. The instructor assesses performance through testing the learner. The purpose of testing is to establish that the learned

capacity is stable, and to provide additional practice to assist in consolidating the learned material.- Gagne (1985).

Enhancing Retention and Transfer

The ninth instructional event, enhancing retention and transfer, refers to retaining the learned capability over a long period of time and transferring it into new situations outside of the learning environment. Practice ensures retention, especially with verbal information, intellectual skills, and motor skills. Instructors can enhance retention and transfer by conducting spaced reviews. This means conducting recalls of information learned at various intervals of a day or more after the initial learning. However, the recall is further enhanced when additional examples are spaced in time over days and weeks following the initial learning, and when including a variety of different situations. (Gagne, 1985).

2.4 Factors Affecting Learning Outcomes

1. Motivation

Motivation is at the heart of learning. It is sine qua non for learning. It arouses, sustains, directs and determines the intensity of learning effort.

2. Maturation

It makes speedy learning possible. The child who is physically and mentally mature learns a subject at a faster rate.

3. Physical and Mental Development

The child affects learning. The child who is mentally and physically not developed learns at a slower rate.

4. Home conditions and School Environment affect learning.
5. Academic Ability of the Teacher Affects learning.
6. Meaningfulness of Subject-matter makes learning easier.
7. Teaching Methods.

It facilitates learning children learn more by activity or by doing or by play way.

Then there are factors that make learning easy. Such factors that tend to promote learning are intent to learn, distributed effort over learning, capitalizing whole and part learning, knowledge of progress, recitation, active recall, application of what is learned and activity.

To make these factors that facilitate learning more effective, we would have to improve learning conditions by giving audio-visual aids, by giving praise and reprimand, by arousing rivalry and cooperation and by guiding children properly.

Factors that facilitate Learning Outcomes

Intent to Learn

The child learns what he intends to learn. When there is intent or purpose to learn one learns rapidly and that learning is permanent. When children know what goals they are to achieve, and when they accept those goals, they become more active in the pursuit of those goals.

The efforts they make are more intensive and better organized. The attention they pay is more definitely focused to the thing they are required to learn. Such learning is intentional or purposeful. Gagne (1985).

Distributed Effort

It is a simple fact that an hour spent every day in learning a subject results in more thorough and permanent learning than the same number of hours devoted to its study at the end of the term. Spaced or distributed effort at learning any subjects results in more learning than a massed one. Spaced learning is also economical and effective. The reasons are given below:

1. Massed learning by sticking to a task for longer periods'. The child develops a tendency to inattentiveness. One's attention fluctuates if one tries to concentrate, on a job for longer period.
2. Going back to a subject studied a week ago is better than studying and restudying it immediately.
3. Trying to do the same thing again and again within a short space of time is against the natural tendency to resist early repetition of an act. (Gagne, 1985).

It means that the study period should be short and not very long. But how short should the study period be? It depends upon the individual learner, the material to be learnt and the conditions under which the material is learnt. The more mature the individual, the more capable he is for prolonged work. In elementary school the length of the class period is kept 20 to 30 minutes and in colleges, even one hour period is short. If the material requires constant attention and is difficult to learn, shorter periods are more fruitful. In the summer we usually have shorter periods than in winter. Long periods of study are not always fruitless. If the material is too easy, longer periods of study are recommended. If motivation is high,

massed practice is useful. The principle of distributed effort has a great significance for the time-table builders. It is convenient for the student to learn different subjects in different periods. If the child learns Mathematics in the same period on successive days, the teacher can show him the lesson today upon what was learnt yesterday. The idea of distributed effort demands carrying on the same task in the same direction in a period on successive days. The principle of distributed effort indicates that since in massed learning attention begins to fluctuate, individual lessons should have variety; Gagne (1985).

Even a lesson on Mathematics some time may be devoted to explaining concepts and principles and some time to their application and the rest to reviewing what has been learnt a week or two ago in the same period. Massed practice causes boredom and boredom causes errors. Hence, distributed effort is particularly advantageous in learning many motor skills like type-writing Proficiency in simple motor activities can be achieved in relatively short practices periods once or twice a day until competence is gained. The practice periods for younger students should be shorter than those for the older ones. Between the periods of practice certain inner co-ordinations may take place as a consequence of previous practice and present themselves in the next practices period., Gagne (1985)

Over learning

The repetition of some matter after it has been learned to the point of one successful reproduction is called over learning. If learning a poem, means reciting it once, over learning it would mean continued practice after reaching a criterion level. Over learning may be defined as applying oneself to the acquisition of a skill or knowledge beyond the point at which one can say it has been learnt. If we have a topic when it has been learned once, it is forgotten but over learning makes it permanent. For example, if 5 repetitions of a poem are needed to recite it 10 repetitions would fix it in the mind for a longer time. Over learning makes initial learning thorough and permanent. The question arises, “How many more repetitions would make over learning more effective? Would 30 repetitions of a poem make it permanent when initial learning to recite takes place in 10 repetitions? It is scientifically proved that effective over learning takes place only when 50% to 200% additional repetitions are made. But these repetitions should not be simply unintelligent ones; they should involve reviewing the material just read, reciting to oneself, placing the material in a new context and reading similar materials in another context. The educational significance of over learning to

the class-room teacher and the student is great. Students should be encouraged to review immediately the work they have just completed. Teachers should present material in a new context, make applications and hold class discussion. Gagne (1985).

Whole vs Part Learning

Memorization is not only facilitated by over learning. It is also facilitated by the whole method which means that a long poem can be committed to memory by reading and rereading. If on the other hand, the poem or the passage is learnt verse by verse or sentence by sentence, it is learnt by the part method. There are advantages and disadvantages of both these methods. A combination of these methods is suggested. When a child is required to learn a poem or a passage in prose, its meaning should first be made clear to him. Some part of it may be difficult, e.g. some phrases may be hard to understand for the learner. These parts may be learnt by the part method. After that each part may be placed in total context. Such a combination of two methods may be little more time consuming, but it saves total times. Which method should be adopted depends upon the nature and size of the materials to be learnt and the intelligence of the learner. If the material is meaningful, whole method is advantageous; if the size of the material is short it is useful to learn it by part method, and if the learner is intelligent he learns a material by whole method more easily. (Gagne, 1985).

Recitation

Recitation again is a device helpful for retention. Recitation means repeating aloud a poem or a passage from memory. But recitation may be sub vocal. Recitation, vocal or sub vocal is useful to a student because it enables him to use the material before a lapse of time causes forgetting. It immediately motivates the learner by making the learner aware of the degree of success being achieved; it helps the learner to use it. It provides feedback to the teacher and tells him whether or not the class understands him. Recitation does not simply mean repeating what one has learnt. It also means placing the material in a different setting, applying it in a new situation, and viewing it from another perspective. The question given at the end of a chapter in a book and meant to provide opportunities to recite. For recitation to be an effective technique for facilitating learning it should be more than restatement of the printed word. It should mean sensing of information in new context. Teachers can make this technique more effective by employing discussions or conversation or presenting problems before students so that they may make a functional use of knowledge. Gagne, (1985)

Active Recall

While reciting one uses certain cues; for example, when we recite the subject-matter presented in a chapter we make use of the paragraph headings. These headings serve as cues for recitation. While recalling one has to recollect material without the help of such cues. For example, in completion type of items one has to recall because there is nothing to help him, but in matching type items one recites with the help of cues given. Active recall is a challenge to the learner. It requires him to recollect, or reconstruct the material without cues, hints or guides. The more the amount of active recall used in learning, the greater is the speed, precision and permanence of learning. Once a student makes it a habit to recall activity what he has learnt, learning becomes easy to him. He notes headings, emphases, and illustrative material to make an active recall. (Gagne, 1985).

It means that teachers should advise children to be active and vigorous while studying a chapter. They should be encouraged to recall what is learnt just after learning it. They should be encouraged to seek answers to questions such as these. “what have we studied similar to this?” “How does it relate to our lesson of last week?” A few extra moments, spent in active recall will be more economical than re-reading the same materials later.

Applying what is learned

Application of what is learnt is a really useful technique to facilitate speed, precision and permanence of learning. Information is made functional what it is applied. Making applications encourages the use of learning. Making use of knowledge provides a purpose for learning and yields reinforcement. The class-room teacher has in teaching as well as in testing situations, a very great scope for applying what is learned.

After presenting principles in any subject-field, their applications should be encouraged. For example, after teaching theorems in Mathematics, their application in solving problems may be stressed; after teaching rules of grammar, the teacher may emphasize on writing sentences and essays using those rules; after giving information in Civics, he may lead his student to solve problems faced by life community. Students can be encouraged to apply the knowledge gained in the class-room in student government, community projects, and work experiences. Gagne (1985).

Activity is Essential to Learning

By activity, we do not mean simply muscular activity. One has to be mentally active if one wants to learn speedily, precisely and retain it permanently. When the child listens to the lecture given by the teacher, he is mentally active, but he is mentally more active when he recites and discusses. Listening as a process may be derogated but here too the listener has to accept or reject the ideas presented. In a traditional school where the child sits and listens, he does not learn effectively. In a progressive school in which activity is involved in the learning process, there is a better learning provided the activity is meaningful. Even where the school is not in a position to provide such an activity, children may be encouraged to make use of insight and understanding. Gagne (1985).

The concept of motivation and its types and theories.

Motivation plays a vital role in every sphere of life and various phases of activities. Our success and achievement in life depend on motivation. It is, in one form or other, always present at the root of all human activities. Motivation is said to be the “heart of learning:” golden road to learning’ and ‘potent factor in learning’, as all learning is motivated learning. Adequate motivation results in promoting reflection, attention, interest and effort in the pupils and hence promotes learning. Learning cannot be successful, effective or efficient without persistent, purposeful and selective efforts. So teacher’s problem is to discover, direct and capitalize upon these motives and develop interest for educational purpose. Motivation is derived from the word ‘mover’ which means to move’. It is an art of inculcating and stimulating interest in studies and in other such activities in the pupils. It is the process of arousing action, sustaining activity in progress, regulating and directing pattern of activity. Motivation is the combined action of desires and incentives, pushes and pulls. Like a machine, a person must have energy in order to behave. Motive provides the energy. High motivation means high drive. High drive means that organism is set to respond which it does not respond in the absence of stimulation. The two concepts i.e. drive and incentives are important in defining motivation. If we are in a state of need, a drive is aroused that energizes and pushes us into action to seek the things that will satisfy the need. The incentive value of these rewards represents their pulling power as incentives are primarily concerned with the objects, events and state of affairs. Thus people are motivated to achieve or avoid through the application of reward and punishment. Gagne (1985).

2.5 Student Learning Outcomes

Student learning outcomes are the accumulated knowledge, skills, and attitudes that students develop during a course of study Seru (2012). Learning outcomes are a particular category of programme outcomes, which may include broader elements such as graduation rates, student learning outcomes are defined in terms of the knowledge, skills, and abilities that students have attained as a result of their involvement in a particular set of educational experience (Academic Senate 2005). The term student learning outcomes typically refers to either (1) the desired learning objectives or standards that schools and teachers want students to achieve, or (2) the educational, societal, and life effects that result from students being educated. In the first case, student outcomes are the intended goals of a course, program, or learning experience; in the second case, student outcomes are the actual results that students either achieve or fail to achieve during their education or later on in life. The term learning outcomes and educational outcomes are common synonyms.

While the term student learning outcomes is widely and frequently used by educators, it may be difficult to determine precisely what is being referred to when the term is used without qualification, specific examples, or additional explanation. When investigating or reporting on student outcomes, it is important to determine precisely how the term is being defined in a specific educational context. In some cases, for example, the term may be used in a general or undefined sense)“Our school is working to improve student outcomes”), while in others, it may have a specific pedagogical or technical meaning faculty and graduate students’ publications, and job placement. Examples of learning outcomes are:

Learning outcomes should:

- Represent a fundamental result of the course of study or programme, does it assess what is most important?
- Clearly describe what students are asked to do, using action verbs (write an essay, complete a laboratory exercise, compose an original piece of music or art).
- Ask students to apply what they have learned by producing something.
- Include a time frame for students to accomplish this goal (end of second year, end of programme)
- Be specific and measurable

There are three types of learning outcomes, all of which can be assessed.

- **Knowledge outcomes:** address content and methods of the discipline. For example: “students can compare and contrast three major theories of political economic,” or “students will demonstrate advanced proficiency in their language of specialization”.
- **Skills outcomes:** describe the technique and approaches required for work in the discipline. For example: for communication skills: “students can explain their project assumptions clearly and concisely: for critical thinking skills’ “students can evaluate the strength and weaknesses of research designs” or for quantitative skills: “students can analyze data and compare results to theoretical predictions”.
- **Attitude outcomes:** may address commitment, appreciation, or openness. For example: “students appreciate the importance of confidentiality, truthfulness, and integrity in research involving human subjects or “students demonstrate openness to the religion, cultural mores, and philosophy of different cultures”. Seru (2012).

2.6 Importance of students learning outcomes

Apart from their rather utilitarian value within assessment contexts, learning outcomes are increasingly embraced within the senior secondary community for a variety of reasons: (Seru, 2012).

- When students know what is expected of them, they tend to focus their study time and energy better, thus improving learning.
- Student learning outcomes support a “learner-centered” approach to instructional activity, emphasis is on the types of experiences students must have to be able to achieve expected outcomes rather than “coverage of topics” within the curriculum.
- Assessing student learning outcomes can provide information to students on their strengths and weaknesses in relationship to specific learning dimensions.
- Assessing student learning outcomes can provide school with information that can be used to improve educational programme and demonstrate their effectiveness.

Mastery Learning Strategy

Mastery learning strategy is essentially an instructional approach designed with the underlying philosophy that it is possible to bring all or nearly all learners to a specified level of mastery of all course objectives. In other words, under appropriate instructional conditions, all or nearly all students can and will learn well most of what they are taught in school. The approach “has consistently yielded improved student learning under a wide

variety of classroom conditions” (Block, 1975). The Mastery Learning strategy approach is essentially a group based strategy for adapting instruction to the needs of individual learners. It also takes care of individual students’ characteristics as well as their aspirations. It differs from the conventional classroom instruction in the following ways:

- i. It emphasizes the mastery of all objectives in each series of learning units.
- ii. It uses frequent diagnostic-progress tests (formative tests) to identify specific learning problems of each learner.
- iii. It uses systematic feed-back-corrective procedures and alternative learning resources to help the students overcome their learning difficulties.
- iv. It provides additional learning time for those learners who need it for remedial purpose.

An individual’s learning effectiveness under Mastery learning strategy is determined by the level of mastery he achieves, rather than by how his performance compares to that of his classmates. The Mastery Learning strategy approach claims that under appropriate instructional conditions, virtually all the learners can and will learn well most of what they are taught in schools. It aims mainly at reducing individual differences in learning and thus destroying the myth surrounding the normal curve which holds that only a minor proportion of students should be able to learn well what is to be taught. B.S. Bloom, in Bloom, Hasting and Madeaus (1971), has this to say about the myth: There is nothing sacred about the normal curve. It is the distribution most appropriate to chance and random activity. Education is a purposeful activity and we seek to have students learn what we have to teach. If we are effective in our instruction, the distribution of achievement should be very different from the normal curve. In fact, we may even insist that our educational efforts have been unsuccessful to the extent that the distribution of achievement approximates the normal distribution.

The myth of the normal distribution is predicated upon the belief that the performance of students depends upon their innate capacities. Thus the curve of intellectual ability should be a normal curve. Mastery learning strategy, on the other hand, holds that the majority of learners in school have sufficient intellectual ability to master almost all of the learning experiences presented by the teacher, provided the instructional strategy is learner-centred. Based on this assumption, the curve of distribution of performance under effectively

manipulated Mastery learning strategy procedure will not be a normal curve but a negatively skewed curve. This, according to Yoloye, (1980), means that the bulk of the learners are at the higher spectrum of the scale while only a few candidates are at the lower end.

Mastery Learning Strategy is typically concerned with such learning tasks which must be mastered if the learner is to succeed at the next level of instruction. Thus, the instructional emphasis with mastery intentions is to bring all learners to a uniform level of performance on the basic essentials of a course. Each intended learning outcome is, therefore, analyzed in considerable detail while the expected level of performance of the learner is expressed in very specific terms. It is then possible to teach and test each specific learning task on a one-to-one basis (Onasanya, 1983). The limited nature of the objectives and the detailed description of the learning tasks enhance the use of criterion-referenced tests since tests are used to describe specifically what a learner can and can not do in a particular area of learning. They have the characteristics of diagnostic-progress tests and since they are given at the end of each learning unit, are useful in the following ways:

- They are used to improve learning by reinforcing the learning of the high achievers.
- They identify the specific learning errors of the low achievers.
- They provide a basis for the corrective prescriptions given to individual learners.

2.7 Historical Background of Mastery learning strategy

Mastery learning strategy though strongly influenced by the development of instructional technology is not, however, a new concept (Bloom, 1976; Wentling, 1973). Some principles of mastery learning originated with Aristotle and other ancient Greek philosophers. Furthermore, the concept that most students can learn everything that is being taught, if given sufficient time, goes back into the previous century (Block, 1973; Bloom, 1976).

Mastery learning strategy was first introduced into the American educational system over seventy years ago. However, during the 1920s, only a few schools in America were using mastery learning strategy. Washburne (1922) stated, “With the development of the achievement test movement, we may now make units of achievement the constant factor, varying the time to fit the individual capacities of the children”. According to Block (1971) in Vahid(2013 in 1922), there was an attempt by Washburn and others to produce mastery in students’ learning. This plan was known as the Winnetka Plan, in which “primarily self-

instructional practice materials were used, although the teacher occasionally tutored individuals or small groups”. A further attempt was made in 1926 by Morrison in which “a variety of correctives were used – for example, re-teaching, tutoring, restructuring the original learning activities, and redirecting student study habits”. Block stated that Morrison’s method was successful in the 1930s. However, because of a lack of technology, Morrison’s idea of mastery learning strategy failed to be used by teachers across the nation.

In the early 1960s the idea of mastery learning strategy was revived in the form of programmed instruction. Programmed instruction derived initially from work conducted by B.F. Skinner and was further developed by other behaviourists. This program was similar to mastery learning strategy in the sense that the focus was on the role of feedback in learning and on individualized learning. Also, like the original mastery learning strategy model, this method of instruction allowed students to move at their own pace and receive instant feedback on their current level of mastery.

2.8 Founders of Mastery learning strategy

Both Bloom and Carroll are credited with formulating the idea of mastery learning strategy, though many of its elements were strongly influenced by Washburn and Morrison in the 1920s and behaviorists in the 1960s. As cited in Carroll (1963) in Matamedi (2014), Bloom came up with an important component of instruction which is time. In Carroll’s theory, learning is a function of time spent divided by the time needed (Davis & Sorrell, 1995) in Vahid (2013). According to Carroll, the differences in aptitude among students are due to the amount of time spent in learning the material. Carroll (cited in Block Anderson, 1975) defines aptitude as “a measure of learning rate, i.e, as a measure of the amount of time the student would require to learn a given level under ideal instructional conditions”. According to Davis and Sorrell (1995) in Vahid (2013), Carroll indicated that if the student would make the effort to learn a task by allowing himself or herself the time that the student requires for individual learning, then he or she would succeed. Therefore, in a given test, the only thing that varies is student performance.

In the late 1960s, Bloom’s “Learning for Mastery” focused attention on the philosophy of mastery learning strategy. Bloom, interpreted Carroll’s ideas and philosophy of learning in terms of mastery learning strategy. He stated that the mastery learning strategy proponent believes that intelligence and aptitude are not the best indicators of potential

achievement. Furthermore, Bloom (1976, 1979, and 1980) and Vahid (2013) pointed out that “cognitive entry characteristics” (specific knowledge, abilities, and skills), which are necessary prerequisites to a particular learning task, are better predictors of later achievement. These characteristics were seen as identifiable and alterable by Bloom. In addition, with continual academic success, Bloom felt that “affective entry characteristics” (attitude, self confidence, and motivation) would improve over time. According to Bloom “cognitive entry characteristics,” “affective entry characteristics,” and quality of instruction determine the rate of learning for each individual. Bloom along with Anderson (1976), Block (1973 & 1979), Guskey and Gates (1986), and Walberg (1984) and Vahid (2013) argued that under the mastery learning strategy approach, differences in learning rates will decrease and can approach zero. Thus, as students master the prerequisite skills for each new unit, the need for corrective instruction will progressively reduce on each succeeding unit (Bloom, 1976, 1980 and Vahid 2013).

Bloom (1968) is known as the individual recognized for the theoretical formulation of the mastery model. His prediction was that 95% of the students taught by the mastery approach would achieve a level that had previously been reached by only 5%. He suggested that learning outcomes in most of all the subject areas could be enhanced through the mastery learning strategy method. Over time, the model of mastery learning strategy, developed by Bloom, began to take on a number of different variables. According to Bloom, every mastery learning strategy programme divides instruction into small units. Feedback is always a part of mastery learning strategy where students are given an opportunity to practise what they have learned and are given corrective feedback (Motamedi and Sumrall, 2000).

The idea of “cognitive objective objectives” was originated by Bloom. Mastery is defined in terms of objectives. Students will be able to perform at least 90% or higher on a test. According to Bloom’s theory of mastery learning strategy diagnosis is required. For example, if a student is having problems with his studies; the cause needs to be found. Instruction should be supplemented with correctives such as tutoring, additional practice, small group study, games, or even re-teaching the material. The time is always allowed to vary.

Traditionally, many teachers believe that intelligence and aptitude have determined the individual’s potential for learning. Bloom (1974, 1976, and 1980) and Motamedi (2013) states

that all too often, intelligence and aptitude scores have determined opportunities for further education, student support and encouragement, and even quality of interaction between teacher and student. Hence, students with high scores have been the ones to whom the teachers have directed most of their attention. However, in the mastery learning strategy model, Bloom stated that teacher-student relationships are greatly altered and the potential of low achievers is increased.

Bloom recognized that one aspect of mastery learning strategy is learning in sequence, where sequencing is described as hierarchical. Thus, mastery of each step prior to advancing to the next step is essential. This concept goes back to the behaviourists and Skinner in 1954. The learning of most complex behaviour rests upon learning a sequence of less complex component behaviours. If we are learning algebra, for example, an understanding of later material requires a complete understanding of earlier material. This is related to the sequential nature of mastery learning strategy. A student cannot take the next step until that individual has fully mastered the previous material. Slavin and Karweit (1984) refer to Bloom (1976) in Vahid 2013 in his claim that mastery learning “focuses primarily on students’ abilities to understand instruction by attempting to ensure that all students have mastered the previous skill before attempting the next” Jensen (2006) also supports mastery learning strategy wherein a student who masters a skill or subject moves on to the next level of learning. In this process, slow learners are not kept back and gifted students would perform to their own higher capacities.

Bloom was not without criticism, though a few educators who are familiar with the mastery learning strategy approach deny that it can provide some positive effects. However, the claim of mastery learning theorists that achievement variability and time variability can be minimized simultaneously has created considerable controversy (Arlin, 1984). Allowing students the opportunity to achieve mastery of content at different time intervals has proven to be an effective method of increasing student learning. By definition, mastery learning strategy is a method of instruction where the focus is on the role of feedback in learning. Furthermore, mastery learning strategy refers to a category of instructional methods which establishes a level of performance that all students must “master” before moving on to the next unit (Slavin, 1987). Thus, through one or more trials, students have to achieve a

specified level of content Bloom in 1956 knowledge prior to progression on to a next unit of instruction.

2.9 Models of Mastery Learning Strategy

Two models of Mastery Learning are here discussed:

1. Blooms' Model of Mastery Learning Strategy:

This model has its roots in Carroll's (1963) model of school learning which is also referred to as Learning for Mastery (LFW). Carroll postulated that a learner can succeed in learning any subject if allowed sufficient time. He further postulated that success in learning depends on five variables.

- Student's Aptitude,
- Quality of Instruction,
- Ability to understand Instruction,
- Perseverance, and
- Time allowed for learning

Student's Aptitude was defined by Carroll (1963) as a measure of the amount of time a student would require to learn to reach mastery level. A student with high aptitude for a subject will attain mastery level faster than another with low aptitude.

Quality of Instruction was defined as the level to which presentation and arrangement of the elements of the task to be learned approach the optimum for a given learner. In other words, the teacher should determine how best to present the learning task so as to allow the fast and slow learners to gain optimally.

Ability to Understand Instruction is the ability to understand the nature of the task to be learnt and the necessary steps to follow in learning the same. Ability to understand instruction may also be a joint responsibility of the teacher and the learner. The teacher can, therefore, modify his instruction and help the different students with abilities in his class through group study, tutorial help, selection of textbooks and provision of teaching side.

Perseverance includes the readiness of the learner to endure the strains and stresses which the learning task may bring about. This largely determines the amount of time the learner is willing to spend actively engaged in learning. It is also related to attitudes towards the interest in the task to be learnt. There may be a decrease in demand on perseverance if the following conditions are met:

- (a) Appropriate instructional resources are provided for the learner.
- (b) Frequent feed-back coupled with definite help in instruction are given to students,
- (c) Improvement in the quality of instruction in which individual differences are considered. (Carroll, 1963).

Time Allowed for Learning is the classroom time allotted to learning. If this is greater than the learner's perseverance, then his perseverance will determine the amount of time spent in learning. The converse is also true.

Bloom (1968), 1974, 1976) transformed this conceptual model by Carroll into a working model for mastery learning. He assumed that if aptitude can predict the rate and not the level to which a student can learn, then it is possible to fix the degree of school learning expected of each student at some mastery level of performance. The teacher could ensure that each student attains this level by paying attention to the quality of instruction and the time allowed for learning. These are the variables under the teacher's control in Carroll's model. Bloom further stated that if students were normally distributed with respect to aptitude for some subjects and were provided with uniform opportunities to learn and uniform quality of instruction, then a few students will attain mastery and the curve of performance will be normal. But if students receive differential quality of instruction and have differential opportunity to learn, then as many as eighty five percent can be expected to attain mastery and the curve of performance will be negatively skewed.

Bloom then prepared an outline for a Mastery learning strategy that can be used in a typical classroom situation. Block (1971) refined and elaborated on the outline. The strategy attempted to reduce the minimum time a student will need to learn so that it is within the fixed amount of calendar time available for instruction. So under the Bloom's model, mastery could be achieved during the normal school period. This can be achieved through a design whereby the quality of instruction could be maximized. This can be accomplished through two sets of steps. The first set, the pre-conditions, will take place before the actual classroom instruction, while the second, the operating procedures, will occur in the classroom. (Block, 1971).

- A. The Precondition: These are those things the teacher has to do before instruction can begin and these include:

- (a) Adopting the view that most of his students can learn well and that he can teach so well for most to learn well. His preparations will therefore, need to be learner-centred;
- (b) Defining the instructional objectives and determining the level of mastery acceptable to achieve the objectives. This later is frequently done in terms of percentage of test items a learner is expected to answer correctly. Mastery is often set at 80-85% correct for each unit but this should be adjusted to fit various learning conditions;
- (c) Breaking down the course content into smaller teaching units. These may include a week or two of learning activities;
- (d) Developing suitable and validated achievement test items based on each teaching/learning unit and such as to test for the achievement of the set objectives and at the stated mastery level. (Block, 1971).

B. The Operating Procedures: These represent the actual practice of the mastery learning strategy and include:

- (a) Orienting the students to mastery learning strategy procedures;
- (b) Putting into use the determined instructional procedures to bring about optimal learning; The learning tasks within each unit are taught using the regular materials and methods of group based instruction;
- (c) Certification of progress: This is done through the administration of the diagnostic – progress test at the end of each learning unit; the results of the tests are used to reinforce high achievers and diagnose the learning errors of the low achievers;
- (d) Provision of alternative instructional materials on correctives. This stage represents the prescriptive-corrective stage and the techniques that can be used here include reading or re-reading particular references in a textbook, using relevant audio-visual materials, individual tutoring, using programmed materials, small group study sessions and any other effective teaching techniques. Re-testing is usually done after corrective study to determine the learners' level of mastery.
- (e) Administration of a summative test at the completion of the course units and whose results are used principally to assign course grades to the students.

2.10 Keller's Model of Mastery Learning Strategy

The Keller's approach to Mastery Learning Strategy is also known as the Personalized System of Instruction (PSI). It is based on the individual and each student learns independently. It has its theoretical base in Skinner's theory of 'Operant conditioning' which also applies to programmed instruction. Programmed Instruction has a number of defects. In the mid 1960's, F. S. Keller and his associates transformed the programmed instruction strategy into the personalized system of Instruction. Two defects of the programmed instruction were not corrected in this transformation. These were:

- i. Suitability for only individualized learning as against group-based; and
- ii. Small units which did not fit the existing classroom practices.

So, Keller and his colleagues further modified the strategy. The modification included teaching whole classes instead of individuals. The size of the steps to be taught/learned were expanded to become learning modules (units). Proctors and assistants were used to provide immediate feedback and to introduce elements of social interaction. The outcome of this modification was still referred to as the Personalized System of Instruction (PSI). Keller (1981)

The distinguishing features of the PSI may be summarized as follows:

- i. The go-at-your-own pace feature, which permits a student to move through the course at a speed commensurate with his ability and other demands upon his time.
- ii. The unit-perfection requirement for advancement which permits a student to go ahead to new material only after demonstrating mastery of that which preceded it.
- iii. The use of lectures and demonstrations as vehicles of motivation rather than sources of critical information.
- iv. The stress upon the written word in teacher-student communication.
- v. The use of proctors which permits repeated testing, immediate scoring, almost unavoidable tutoring and a marked enhancement of the personal (social) aspect of the educational process. A proctor is an undergraduate who has been chosen for his mastery of the course content, for his maturity of judgment, for his understanding of the special problems which confront the beginner and for his willingness to assist. A proctor may also be a classmate or senior who is always willing to assist.

- vi. No penalties for errors in learning.(Block and Burns, 1976) (Block and Burns, 1976).

The Keller's approach recognizes that the student learnt at different rates. What is important is the mastery of the content while the time in which the student can do so is immaterial. In the traditional classroom situation, time is often held constant and the learner's achievement is allowed to vary. In Keller's approach, achievement is held constant at the predetermined mastery level and the time is allowed to vary with the individual's need and characteristics only constrained by the total time available during the school's calendar year. The student can learn a lot within the period if the teacher can provide the right contingencies of reinforcement.

The procedure for implementing the approach is described below:

A Defining Mastery:

- (a) the whole course is divided into a series of teaching/learning modules (units) by the teacher;
- (b) the course objectives to be mastered in each unit will be determined;
- (c) the determination of the grading policy especially whether a summative test will be taken or not. If there will be no summative test, a student's grade will be determined by the cumulative grades of the different units. However, if a summative test will be taken, it will not carry more than twenty five percent of the total mark. Keller (1981).

B. Planning for Mastery

- (a) development of the study guide which will include study questions and suggested study procedures. The study guide is keyed primarily to the course textbook.
- (b) preparation of feedback/corrective procedures for each unit. This is always a set of parallel-form tests which may involve oral interviews. The mastery level is usually ninety five percent and above.

The steps involved in implementing the Keller's approach are:

- (a) The teacher discusses the policies, features and the benefits of the approach with the students;
- (b) Each student is free to proceed through the teaching/learning units at his own pace until he has mastered enough units to earn him an 'A' or until the instructional time expires;

- (c) A proctor, who may be a classmate or an advanced student, will provide all the study materials and will administer the proficiency test on each unit. He will recommend when a student is to proceed to the next unit. There can be testing, re-study, re-testing cycle until a student's performance reaches mastery level on a unit.
- (d) Grading for Mastery:
Students are graded on the predetermined policy of what describe mastery level of the course. (Keller, 1981).

A Comparison of Bloom's and Keller's Models:

A number of similarities and dissimilarities exist between the models whose main characteristics have been examined above. First the similarities.

Similarities of the Two Models:

1. Both models begin with the assumption that many more students are able to learn well what they are taught than has traditionally been the case.
2. As an extension from the above, both believe that the teacher should design his instruction so that all who can learn well, do learn well.
3. Both strategies agree that the teacher should begin by pre-specifying the set of instructional objectives which each student will be expected to achieve to some high level.
4. They both agree that the course should be broken down into a sequence of smaller learning units where each unit is designed to attain only a few of the course's over-all objectives and mastery of one unit is required to move on to the next.
5. Also each unit should consist of two parts. The first part is the original instructional component where the student is exposed to the material to be learned presumably, for the first time. This functions to monitor the effectiveness of the original instruction on each student's learning and to take appropriate corrective actions when the original instruction has proved to be insufficient.
6. Finally, both strategies agree that the student should be graded and that the student's grade should depend solely on what he has or has not learned, rather than how well he has learned relative to his mates. That is, the student's grade should be determined solely on the basis of his absolute performance over the learning material rather than

on the basis of his relative performance. Thus, each student is in competition with the materials rather than with his classmates. (Keller, 1981).

2.11 Essentials of Mastery Learning Strategy

The concept of ML could be dated back to 1963, when John B Carroll first described the radical proposition that aptitude, instead of being a proxy of intelligence, is a measure of the amount of time needed for a person to learn, suggesting that all students are able to achieve the same degree of learning if sufficient time and learning opportunities are provided (Carroll, 1963, 1989). Inspired by Carroll's learning paradigm, Benjamin Bloom later developed the theory of ML. Contrary to conventional group-based teaching where uniform instruction results in learning variation, ML sets an achievement goal and provides students with individualized instruction and varying instructional time to attain the predetermined achievement level. Bloom considered how teaching was conducted in one-to-one individual tutoring and examined the study techniques of high achievers in conventional group-based classrooms. It was revealed that the key to higher grades lies in prompt feedback where the students' mistakes were analyzed and corrected (Bloom, 1968; Guskey, 2001).

As people possess varying degrees of intellectual capabilities, it is impossible to expect equal achievement outcomes from a standardized didactic approach (Kazu, Kazu, & Ozdemir, 2005). Conventional group-based instruction further widens initial individual differences because slower learners are unable to acquit the cognitive and affective prerequisites to master subsequent units with the limited amount of instructional time provided. Slower learners, therefore, require more time and additional assistance in order to attain smaller achievement outcome and minimize the achievement gap (Arlin, 1984b). Two essential features of ML have been defined. The first is feedback, both corrective and for enrichment (Guskey, 2007). Unlike summative assessments, which are used solely for the purpose of ranking students, the assessments administered in ML are diagnostic and prescriptive. Students receive feedback on their mistakes and they are paired with specific correctives to address errors. Enrichments are provided for stronger students, who manage to score above the mastery criterion on their first attempt, so as to enhance their learning. The second defining feature of ML is alignment of objectives (Guskey, 2007). All three components of teaching, namely learning goal, instruction and evaluation, should focus on the same objective. For instance, if one expects his students to learn a particular skill, he

should provide the students with ample opportunities to engage in that skill during the instructional process; the final evaluation should also assess the degree to which the students have mastered the specific skill. Other unique characteristics of ML include frequent testing and the establishment of a mastery criterion, where students can only proceed to the next level if they have satisfied the criterion (Slavin, 1987).

The general procedure of ML is summarized in (Guskey, 2001, 2007). Instructors are first required to divide a topic into smaller instructional units and define them with clear objectives. Instructional, which can be done via either Learning Mastery or personalized system of instruction, then ensues. A formative assessment is given after the initial instruction to assess students and diagnose individual learning difficulties. Students then receive specific and individualized feedback, with corrective and enrichment activities based on the results of the formative assessment. Following feedback and correctives, a second formative assessment is administered to offer students a second chance of achieving success and to check if the correctives are working. The process of remedial work and reassessment continues till all students have achieved the mastery criterion. A conventional summative assessment is administered in the end to evaluate students' overall mastery and understanding of that particular topic.

As mentioned, Mastery Learning can be implemented in two different ways, namely LFM and PSL. Developed by Bloom himself, Learning Mastery involves small groups of around 30 students, where the teacher is the main knowledge imparter and pacer. Though LFM is more widely used due to its ease of adaptation to conventional classrooms, where instructional time and the curriculum are relatively fixed, it is more difficult to ensure that all students in a group are rendered a sufficient amount of time and attention (Gusky & Pigott, 1988). PSI was designed by Fred Keller in 1968 to mitigate this problem. It consists of small self-paced modularized units of instructions and were written materials, instead of teachers, direct learning (Fox, 2004). Lectures are supplementary and optional in PSI, because unlike lectures, which are ephemeral, students can easily access written materials repeatedly, thereby enabling self-pacing. Students undertake formative assessments when they are ready. They can take the tests, each time similar but not identical, as many times as they wish until the mastery criterion is achieved (Slavin, 1987). Proctors are employed to provide students

with individualized feedback and specific correctives in PSI. The major differences between LFM and PSI are presented in Table (Kulik, Kulik, & Bangert-Drowns, 1999).

2.12 Merits of Mastery Learning

Mastery Learning has proven to be effective in a wide variety of subject areas, including mathematics, science, language, social science, athletics training and medical education (Fox, 2004, Guskey & Monsaas, 1979; McGaghie, Issenberg, Cohen, Barsuk, & Wayne, 2011; Schellhase, 2008). In addition, ML has also been extensively applied across different grade levels and institutions, ranging from elementary schools, high schools, and colleges to hospitals, militaries, prisons and business companies (Fox, 2004; Guskey & Gates, 1986;. ML is highly flexible because only the general framework, but not the minor details, in which instruction should be carried out is specified (Guskey, 1980). One of the major claims of Mastery Learning is the high level of educational outcome. Numerous studies have indeed supported the positive effects of ML on academic achievement (Block and Airasian, 1971; Block and Burns, 1976; Burns, 1979; Hyman and Cohen, 1979). Specifically, Bloom and his students demonstrated that ML was able to raise the students' mean scores to at least one standard deviation greater than that of conventional group-based instruction (Bloom, 1984). Various meta-analyses conducted over the years, though they reaffirm the positive impacts of ML, were unable to reproduce the high effect size (ES) of one standard deviation achieved by Bloom. In addition, large variations in the mean ES of ML corrupted by different reviewers were also apparent (Guskey and Gates, 1986; Kulik et al., 1990; Slavin, 1987). In fact, it might even be inappropriate to measure a central tendency due to the extremely variable nature of ML (Guskey and Pigott, 1988). These inconsistencies can be attributed to a multitude of factors, such as different focus, inclusion criteria and analytical procedure used in each review. The existence of multiple confounding factors in a typical classroom setting can also augment or diminish the overall effectiveness of ML (Anderson and Burns, 1987; Kulik et al., 1990).

Aside from higher level of educational outcome, ML also contributes significantly to knowledge retention, demonstrating better scores on follow-up examinations (Block, 1972, Wentling, 1973). The favourable effects of ML are also transferable to other subjects. Students were able to retain the effective learning strategies of ML and apply them to other

subjects and more advanced courses even after ML was discontinued (Jones, Gordon, and Schetman, 1975).

Lastly, Mastery Learning exerts significant improvements on the affective and emotional well-being of both students and teachers. Through correctives and re-assessment, ML offers students multiple opportunities to achieve success, leading to increased self-confidence and improved readiness to learn (Damavandi and Shekari, 2010). Students generally acquired a more positive learning attitude, accepted greater learning responsibility and were better prepared cognitively and emotionally for the subsequent learning tasks (Guskey & Gates, 1986; Guskey and Pigott, 1988; Living son and Gentile, 1996). At the same time, teachers also felt better about teaching and accepted more responsibility for their students' achievement (Guskey, 1984). A few studies, however, indicated that ML was more stressful and could diminish individual self-esteem, as slower students were perceived to be intellectually inferior for participating in correctives (Cox & Dunn, 1979, Frick, Frick, Coffman, and Dey, 2011). Critics have also cited short study duration, lack of follow-up study and a possible Hawthorne effect, which means that people modify their behaviours simply because they know they are being studied but not as a result of the experimental treatment, to account for the highly favourable effects of ML on the students' (Guskey and Gates, 1986, Guskey and Pigott, 1988).

2.13 Factors Affecting the Effectiveness of Mastery Learning Strategy

Experimenter-made tests are able to generate higher ES than standardised tests for ML, because experimenter-made tests are usually more specific and aimed at the objectives taught in ML (Slavin, 1987). The insignificant impact of ML on standardised tests has been indicated in many studies (Anderson, 1976; Slavin and Karweit, 1985). There is also a concern regarding possible trade-off between content mastery and coverage, since ML encourages students to delve deeper into mastering certain objectives and, as a result, neglect some other essential objectives (Torshen, 1977). However, this claim is not supported because ML students still scored at least as well as, and sometimes even better than, the students of conventional group-based instruction on standardised tests (Kulik et al., 1990).

While it is undeniable that experimenter-made tests may be biased toward ML, it is in fact in line with the basic ML principle of objective alignment. ML focuses both teachers and students on a clearly defined set of objectives to be mastered (Guskey, 1980). The results of

formative assessments focus teachers on the objectives that their students have not mastered and help them prepare better and more specific corrective materials to assist their students to master those missed objectives (Zimmerman & Dibeneditto, 2008). Both types of assessment have their own advantages and disadvantages and it would be premature to discredit either one of them, as both are able to provide valuable and useful information about students (Kulik et al., 1990). In terms of university education, experimenter-made tests are a more dominant form of evaluation than standardised tests. It is rare for different universities to share a single set of examination questions, even if both institutions are offering the exactly the same course. Faculties usually exercise autonomy and design the test papers themselves to include questions that examine specific objectives that were taught in class. The more favourable effect demonstrated by ML on experimenter-made tests may enhance the effectiveness of ML in universities.

One major criticism of ML is its substantial time cost. While some studies argued that ML improved academic performance and reduced achievement variability by providing significantly more time to slower students (Arlin, 1973; Arlin and Webster, 1984), there are also others who believed that the increased instructional time was modest and reasonable (Guskey and Pigott, 1988; Kulik et al., 1990). Supporters of the latter claim often cite the following two reasons to bolster their arguments. Firstly, the additional time required for ML can be derived from the increased quality of learning time, as ML was able to increase students' engaged time, reduce off-task behaviours and improve class time efficiency (Anderson, 1976; Dillashaw and Okey, 1983; Fitzpatrick, 1985; Tennyson, Park, and Christensen, 1985). Secondly, unequal provision of time is only a temporary inconvenience (Garner, 1978). Weaker students who require more time initially will need progressively less time as they acquire the necessary prerequisites and entry behaviours to master subsequent units (Arlin, 1984). With more students attaining a similar level of proficiency, the teaching pace of later units can be more rapid (Guskey, 2007). This is known as the Vanishing Time Hypothesis. Although some studies have supported this hypothesis (Block, 1970; Merrill, Barton, & Wood, 1970), detractors have expressed harsh criticisms, demonstrating instead stable or even increasing learning time variability with ML (Arlin, 1984, 1984; Livingston and Gentile, 1996).

ML trades achievement equality for time inequality. Learning rate may eventually replace academic grades as the new criterion to rank and stratify individuals (Arlin, 1984; Mueller, 1976). While the idea of the vanishing time hypothesis is enticing, additional time for feedback and correctives, be it substantial or modest, is certainly inevitable. Students with higher aptitude tend to benefit less with ML because they have to wait for their peers to complete and master the concepts that they have already mastered (Arlin, 1984; Johnson & Henning, 1979). Even though enrichment activities are available to engage students with higher aptitude while their peers are receiving remediation, it is challenging to develop good enrichment activities that can benefit the students without boring or causing them to advance too fast (Kazu et al., 2005). Indeed, ML has only provided marginal benefits to students with higher aptitude (Arlin & Webster, 1984; Kulik et al., 1990; Wyckoff, 1974). It was postulated that students with higher aptitude might have already endorsed the right learning strategies and learning goals that enable them to achieve success regardless of the instructional method used (Ironsmith & Eppler, 2007). ML essentially shifted learning from high to low achievers, replacing artificial differences with artificial similarities. This phenomenon is known as the Robin Hood Effect (Arlin, 1984).

In order to eliminate the Robin Hood Effect, individualized and self-paced ML programme such as PSI can be employed. Unlike LFM, which is group-based and teacher paced, faster students will no longer be held back because students of PSI learn at their own pace and decide if they are ready to proceed to the next unit themselves. Based on the principle of mastering certain prerequisites before proceeding to the next and more advanced unit, it is expected for ML to perform better with subjects that can be hierarchically organised, such as Mathematics and Foreign Language (Gagne, 1973; Slavin, 1987). ML is also more beneficial for subjects where students possess minimal prior knowledge, as there will be less learning deficiency to correct (Block & Airasian, 1971).

Instinctively, one might suppose ML to be better suited for Mathematics and Science, as these subjects are more objective and sequentially ordered. Reviews have, however, observed slightly superior academic improvements in Language Arts and Social Studies as compared to Mathematics and science (Guskey & Gates, 1986; Guskey & Pigott, 1988). It was suggested that some elements of ML might have already been incorporated into the conventional way of teaching Mathematics and Science, as they are highly ordered by nature.

Since Language Arts and Social Studies are less well defined and more subjective, the use of ML might have led to a more drastic improvement in the way the content of these subjects was delivered. In a university setting where students major in one or two specific subject area(s), many university courses are, in fact, hierarchically ordered. For instance, a Mathematics student would have to complete linear algebra 1 before he is allowed to take linear algebra 2; a medical student would have to first understand the basics of human physiology before learning about the diseases that alter normal human physiology. Therefore, ML may be more effective for university courses where comprehensive understanding of previous units are pivotal for the mastery of subsequent units.

Generally, ML works better for younger students in earlier grade levels. Pftgherriean effect sizes were observed in elementary and high schools as compared to colleges (Cabezón, 1984). This can be attributed to the fact that it is more difficult to modify the cognitive entry behaviours of more mature students due to extensive accumulation of learning deficiencies over the years from uniform group-based instruction (Guskey & Gates, 1986; Guskey & Pigott, 1988). While ML may seem to be less effective in universities where the students are slightly older, one advantage that older age offers is maturity and self-discipline, which are vital for the success of PSI. Younger students often lack the sophistication and motivation necessary to be effective self-managers of learning (Guskey & Gates, 1986).

It was also observed that studies with shorter duration tend to engender slightly higher ES than those of longer duration. This is because treatment fidelity might be more difficult to maintain in longer term and larger-scale studies (Guskey & Pigott, 1988; Kulik et al., 1990). The relatively shorter duration of a semester, as compared to the typical yearlong academic calendar of elementary and high schools, may allow for more faithful implementation of ML in universities. Students who were aware that they were participating in ML tended to record higher achievements than those who were unaware (Ritchie & Thorkildsen, 1994). Students also performed better if they were familiarized with the feedback and corrective process of ML (Guskey, 1980). Therefore, in order to augment the effects of ML, specific information sessions can be organised to explain the concept and process of ML to students before initiating ML. Teacher quality can also have a significant impact on the effectiveness of ML. Most studies employed dedicated and experienced

teachers which tends to overestimate the ES of ML (Kulik, Jaksa, & Kulik, 1978; Martinez & Martinez, 1999). On the other hand, the effects of ML could be masked if a single excellent teacher was used to teach both control and ML groups. This is because good teachers might have employed certain principles of ML unconsciously even when they were teaching the control group, hence leading to diminished or insignificant academic differences between ML and conventional group-based instruction (Kulik, Kulik, & Cohen, 1979; Martinez & Martinez, 1988).

In addition to the quality of instructors, the quality of instructional materials is also critical to the success of ML. These materials should be qualitatively different from the initial instruction, creative, attractive and specifically designed for the needs of individual students (Guskey, 2010). The difficulty levels of the instructional and corrective materials must also be modulated to prevent over-practising of simple questions (MacLaren & Koedinger, 2002). Lastly, higher levels of cognitive skills such as problem solving, principle application, analytical skills and creativity should also be incorporated, as these skills, unlike plain information, are more likely to be retained and utilised long after instruction (Guskey, 2001).

As students are not allowed to proceed to the next unit of instruction unless they have met the mastery criterion, the higher the mastery criterion, the higher the academic performance (Kulik et al., 1990). However, ceiling effects may be observed if the mastery criterion is set too high since it is not possible to exceed the maximum mark, which can lead to perceived lower levels of variation (Anderson & Burns, 1987; Mevarech, 1991). As such, ways to eliminate the ceiling effects, such as the inclusion of examination questions that are slightly outside but still related.

2.14 Self Management Strategies

Self-management involves the application of behavioural principles to manage an individual behavioural related deficiency in an attempt to promote desirable changes. (Oduneye, 2009). It demands an individual exerting a level of certain control over some aspects of his or her decision-making and selected behaviours. It is a treatment that features biological, psychological and social intervention techniques with the goal of maximizing the functioning of regulating processes. This involves self directed implementation of strategies in which antecedents and consequences of target behaviour are modified, making the latter more or less likely to occur in the future depending on the goals of the intervention (Milite-

Berger, 2001). There are various self-management procedures (Nelson, Smith, Young, and Dodd, 1991; Evans and Sullivan, 1993). These are self-monitoring, self-reinforcement, studying an individual's behaviour. It is useful in the assessment of problem behaviours in evaluating treatment effectiveness and in promoting behaviour change on personal ability or willingness to record its behaviour on the choice of a recording method, and on the accuracy of recording (Evans and Sullivan, 1993).

The implication of this is that self-instruction, a system in which an individual is responsible for teaching himself/herself the designated intervention should be involved (Nelson, Smith, Young and Dodd, 1991) opine that self-reinforcement was to do with evaluating whether one's behaviour reaches criteria for rewards and then rewarding oneself (Bornstein and Quevillon, 1976) is another factor. Beside this, comparing a behaviour to a set standard and identifying if the behaviour matches or exceeds that standard, then the person engages in self-rewards. This view is supported by (Evans & Sullivan, 1993). They describe it as self-evaluation.

Findings have discovered that self-management strategies can foster independent growth and development of people's social skills (Fish and Mendola, 1986). It has further been identified to be effective in a variety of settings and with a variety of people. For instance, in the home or in the classroom (Cole and Bambara, 2001) to target academic and behaviour problems, even with behaviour disordered.

In order to define and describe self-management, several items are used, sometimes interchangeably, depending on the situation surrounding the discussion. These include: Self-management preparation/training; patient empowerment, and self care. Although, generally they are meant to describe the same entity, the terms imply varying specification regarding attributes, roles and responsibility of both people with chronic health conditions and health care providers. Self-management is said to take place when an individual takes part in treatment (Creer, 1976) or when the individual participates in a particular type of education, such as interdisciplinary group education based on principles of adult learning, individualized treatment and case management theory. (Alderson, Starr, Gow, and Moreland, 1999). Others have explained self-management as a treatment intended to bring out specific outcomes. A treatment that features the goal of maximal functioning of regulatory processes (Nalagawa-ICogan, Garber, Jarrett, Egan and Hendershot, 1988). Redman (2004) opines that self-

management preparation refers to the training that people with chronic health conditions need to be able to deal with taking medicine and maintaining therapeutic regimens, maintaining everyday life such as employment and family, and dealing with the future, including changing life plans and frustration, anger and depression. Lorig (1993) also asserts that self-management is learning and practising skills necessary to carry on an active and emotionally satisfied life in the face of a chronic condition. He emphasizes that self-management is not an alternative to medical care. Rather, self-management is "aimed at helping the participant become an active, not adversarial partner with health care providers. Thus, self-management is a therapy that spans every aspect of human lives especially that which relates to psychological well-being.

Alternatively, self-management has been observed as practising particular behaviour and have the ability to reduce the physical and emotional impact of illness, regardless of the degree to which the individual participates in the education/treatment or the type of education/treatment received: Grunian and Von Korff (1996) added that an individual joins in activities that protect and promote health, monitor and manage symptoms and signs of illness, *manage* the impacts of illness on functioning, emotions and interpersonal relationships and adhered to treatment regimes. Or according to Glasgow, Wilson and McCall (1985), self-management is used to describe the cluster of daily behaviour that people perform to manage their problems. In addition, self-management is set to take place when the individual engages in certain behaviours that control or reduce the impact of disease but in collaboration with healthcare providers. Self-management is" also known to be a day-to-day task an individual must undertake to control or reduce the impact of disease on physical health strain. At home, management tasks and strategies are undertaken with the collaboration and guidance of the individual's physician and other health care providers (Clark, Becker, Janz, Lorig, Rakowski and Anderson, 1991). In another vein, self-management is referred to as individual abilities regardless of how they were acquired, Barlow, Wright, Sheasky, Turner, and Hainsworth, treatment, physical and psychosocial and life styles changes inherent in living with a chronic condition. Efficacious self-management encompasses ability to monitor one's condition and to effect the cognitive, behavioural and emotional responses necessary to maintain a satisfactory quality of life.

Thus, a dynamic and continuous process of self-regulations established (Barlow, Wright, Sheasby, Turner and Hainsworth, 2002).

Self-management strategies include a range of strategies such as students changing their behaviour. The goal of instruction in this area is to shift the responsibilities of instruction from the teacher to the student. These strategies can actually help in skill acquisition together with reduction in teacher's time required for instruction and monitoring of behaviour, promoting generalization and maintenance of behaviours, and reinforcing the cultural value of education in which learners leave school independent and competent (Agron, 1997).

2.15 Self-Concept

Self-concept is the image that we have of ourselves. This image is found in a number of ways, but it is particularly influenced by our interactions with important people in our lives. Self-concept is our perception or image of our abilities and our uniqueness. At first, one's self-concept is very general and changeable. As we grow older, these self-perceptions become much more organized, detailed, and specific" (Pastorino and Doyle-Portillo, 2013). Self-concept is a collection of beliefs about one's own nature, unique qualities, and typical behaviour. Your self-concept is your mental picture of yourself. It is a collection of self-perceptions. For example, a self-concept might include such beliefs as 'I am easy-going or 'I am pretty' or 'I am hardworking'. (Weiten, Dunn, and Hammer, 2012).

2.16 Components of Self-concept

A number of theorists have proposed different ways of thinking about self-concept. According, to a theory known as social identity theory, self-concept is composed of two key parts: personal identity and social identity. Personal identity includes personality traits and other characteristics that make each person unique. Social identity includes the groups we belong to including our community, religion, college, and other groups.

Bracken (1992) suggested that there are six specific domains related to self-concept:

- ◀ - Social - the ability to interact with others
- ▶ - Competence - ability to meet basic needs
- Affect - awareness of emotional states
- Physical - feelings about looks, health, physical condition, and overall appearance
- Academic - success or failure in school
- Family - how well one functions within (the family unit

Humanist psychologist Carl Rogers believed that there were three different parts of self-concept:

1. Self-image, or how you see yourself. It is important to realize that self-image does not necessarily coincide with reality. People might have an inflated self-image and believe that they are better' at things than they really are. Conversely, people are also prone to having negative self-images and perceive or exaggerate flaws or weaknesses. For example, a teenage boy might believe that he is clumsy and socially awkward when he is really quite charming and likeable. A teenage girl might believe she is overweight, when she is really quite thin. Each individual's self-image is probably a mix of different aspects including your physical characteristics, personality traits, and social roles.

1. **Self-esteem** or how much you value yourself. A number of different factors can impact self-esteem, including how we compare ourselves, to others and how others respond to us. When people respond positively to our behaviour we are more likely to develop positive self esteem. When we compare ourselves to others and find ourselves lacking, it can have a negative impact on our self-esteem.
2. **Ideal self:** or how you wish you could be. In many cases, the way we see ourselves and how we would like to see ourselves do not quite match up.

2.17 Self-concept

Psychologists Carl Rogers and Abraham Maslow paved the way for this concept. According to Rogers, everyone strives to become more like an "ideal self. The closer one is to their ideal self, the happier one will be. Rogers also claimed that one factor in a person's happiness is unconditional positive regard, or UPR, from others. UPR often occurs in close or familial relationships, and involves a consistent level of affection regardless of the recipient's actions. Rogers explained UPR as neither approving nor disapproving of someone based on their behaviours or characteristics but rather accepting them without judgment. From a therapy frame of reference", Rogers identified the significance of a client perceiving a therapist's UPR towards them, so that the client would not feel judged as they attempt to accurately express themselves. Evidence of UPR in self-concept research apparent in studies by Benner and Mistry (2007) and Tiedemann (2000). Research has indicated that adolescents whose mothers and teachers had high expectations for their future educational attainment experienced more academic success than those whose adult influences had lower

expectations. Adults' high expectations for children are also reported as being important buffers from the negative effects of other parties' low expectations by developing feelings of positive regard in adolescents. In research about parent stereotypes, the correlation between parents' beliefs about their early elementary age children's Mathematics abilities and the children's actual abilities increased as children age. This demonstrates the strong relationship between adults' beliefs about children and children's beliefs about themselves, indicating the importance of developing unconditional positive regard for students so they can develop it themselves.

An important theory related to self-concept is the self-categorization theory (SCT) which states that the self-concept consists of at least two "levels" a personal identity and a social identity. In other words, one's self-evaluation relies on both one's self-perception and how one fits in socially. The self-concept can alternate rapidly between the personal and social identity. Research by Trautwein (2009) indicates that children and adolescents begin integrating social comparison information into their own self-concept in elementary school by assessing their position among their peers. Gest (2008) research findings reveal that peer acceptance has a significant impact on one's self-concept by age 5, affecting children's behaviour and academic success. Both of these research examples demonstrate the social influences on a person's self-concept.

2.18 Model of Self-concept

The Self-concept is an internal model that uses self-assessments in order to define one's self-schemas. Features such as personality skills and abilities, occupations(s) and hobbies, physical characteristics, etc are assessed and applied to self-schemas, which are ideas one has of oneself in a particular dimension (e.g. someone that considers himself a geek will associate geek-like qualities and be an expert on those qualities) A collection of self-concept make up one's overall self-concept. For example, the statement "I am lazy" is a self-assessment that contributes to the self-concept. It is important to note that statements such as "I am tired" would not be part of someone's self-concept, since being tired is a temporary emotional state and therefore cannot become a part of self-schema. A person's self-concept may change with time as reassessment occurs, which in extreme cases can lead to identity crises.

Effects of success and failure

Various studies have examined the effects that success and failure can have on an individual's self-concept. Individuals often form their self-concept based on past experiences of success or failure, attributing the outcome to their own personal worth. By doing this, individuals can commit the fundamental attribution error. In this case, the error may arise when the person falsely believes that a specific aspect of who they are determines the positive or negative outcome. By attributing a negative outcome to oneself, self-concept can be unnecessarily harmed. However attributing positive outcomes to oneself can increase self-concept. These attributions can even have an effect on self-perception, achievement behaviours in the future, and expectancies. Austin and Vispoel (1998) found strong links between where an individual attributed success or failure and, specifically, musical self-concept.

Changes in self-concept can be mediated and predicted by various factors. One important factor in academies is evaluation of performance by peers, or peer academic reputation (PAR). Gest, Rulison, Davidson, and Welsh (2008) found evidence for the predictive ability of PAR with regard to students' in upper grades academic self-concept. If a student has a reputation for success or failure in the academic setting, the student may develop a negative self-concept. This shows that it may not only be the actual success or failure that has an effect, but may also be the secondary effects of poor academic reputation among peers that influence students' self-concept. There are also effects that have been studied by looking at how self-concept can influence success or failure and attributions of success and failure. In a study of university undergraduates, self-esteem was studied by examining students' attributions for their success or failure after being given a word association. Button and Brown (1997) found that self-esteem could predict participants' attribution of their success or failure in the word test. Individuals with high self-esteem tended to make more self-esteem.

Gender differences

Gender has also been shown to be an important factor in the formation of self-concept. Early research inspired by the differences in self-concept are culture which suggested that men tend to be more independent while women tend to be more interdependent. Independent self-concept refers to the fact that representation; of others are separate from the self.

Interdependent self-construct refers to the fact that representations of others are considered as part of the self. However, more recent research has shown that while men and women do not differ between independence and interdependence generally, they do differ in the distinction between relational and collective interdependence. Men utilize collective interdependence while women utilize relational interdependence. In other words, women identify more with dyadic (one-on-one) relationships or small cliques, whereas men define themselves more often within the context of larger groups. Research also shows that as gender roles become blurred in Western society (e.g., more men are staying at home and women are being empowered in the workplace), these differences may change.

Women have often been stereotyped as being more emotional than men. This area of gender differences is important to research, as self-concepts may also encompass the self-conscious emotions or tendencies associated with gender. Women, for example, allegedly show more guilt, shame and embarrassment whereas men show more pride. Research shows that women, in fact, do show more guilt, shame and embarrassment than men but that men and women show the same amount of pride. Furthermore, gender differences in self-conscious emotions are different between ethnicities and are greatest within white population when compared to Black or African, Asian, and Latin American samples. More research in this area is needed to extrapolate the gender differences across different cultures and ethnicities, as most of the samples used in gender studies are white samples. This reliance on a specific sample can lead researchers to overestimate the magnitude of gender differences in terms of emotions of women in comparison to men.

Academic Self-Concept

Academic self-concept has a research history spanning decades and is often mentioned as an important factor in educational attainment. Although there appears to be some agreement on the definition of academic self-concept issues remain unsettled.

Academic self-concept, broadly defined, can be thought of as a student's self-perception of academic ability formed through individual experience and interactions with the environment (O'Mara, 2006; Valentine, 2004). Regardless of the scope of specific research, researchers generally employ this central definition of academic self-concept.

A major contribution offered by the educational literature is to distinguish the concept of academic self-concept from self-concepts in other domains of activity. In theory, a

positive academic self-concept should lead to gains in academic achievement. Specifically, students with positive views of their academic abilities are likely to engage in more achievement-related behaviours, which might include completing homework, studying for tests, and participating in class activities (Valentine, 2004). The key to understanding self-concept in an academic context and from an applied educational perspectives is to understand conceptually what academic self-concept represents and its specific relationship to numerous academic outcomes.

Global Self-Concept and Domain-Specific Self-Concept

One of the more important distinctions within the definition of academic self-concept is that between global and domain-self-concepts. Academic self-concept globally is a student's perception of his or her general ability in school. However, many researchers have argued that academic self-concept is multidimensional and varies across school subjects. Therefore, a large number of researchers have drawn distinctions between, for example, Math self-concept (i.e. students' belief that they can do well in Mathematics) and literacy self-concept (i.e. students' belief that they can do well in reading or Language Arts). The educational psychology literature demonstrates that students distinguish between the various domain-specific (e.g. math, reading, science) elements of academic self-concept (see, for example, Yeung, 2000). A synthesis of this literature is beyond the scope of this review, but to understand the relationship between academic self-concept and academic achievement outcomes, it is necessary to recognize that general and domain-specific self-concepts may be different.

The Causal Relationship between Academic Self-Concept and Achievement

Importantly, academic self-concept is formed and developed through interactions with a student's significant others (i.e., parents, teachers, or peers) and therefore is dynamic as a student progresses through schooling. The question of causality between academic self-concept and achievement outcomes has been featured prominently in the academic self-concept literature. However, the direction of causality remains somewhat unsettled; three popular models describe different causal relationships between self-concept and academic achievement: the skill-development model, the self-enhancement model, and the reciprocal effects model.

In the skill-development model, academic self-concept is a consequence of prior academic achievement. Academic self-concept, be it global or in relation to a specific academic domain, develops as a student gets feedback on academic work (Guay et al., 2003). In the self-enhancement model, prior self-concept is a strong determinant of academic achievement. The reciprocal effects model argues that prior self-concept predicts subsequent self-concept *and* subsequent academic achievement (Marsh & Craven, 2006). Furthermore, prior academic achievement predicts subsequent self-concept, hence reciprocal effects.

2.19 Civic Education

Civic Education is a newly introduced subject to the school curriculum. It was introduced by the Ex-Minister of Education, Prof. Rukayat Rufai. The subject is compulsory for all students in primary, junior secondary and senior secondary schools in Nigeria.

Civic Education was derived from citizenship education, which simply means an educational or learning activity, specifically meant to create awareness, teach right values, right attitudes and behaviours that are acceptable to the society where an individual lives. These acceptable norms and values in the society are what the members of the society cherish and nurture. They are passed from one generation to the other through tradition, religion and other ways of doing things that are found in their respective traditions and cultures.

Civic Education is therefore a type of educational and learning process that is meant to expose and create awareness in students at all levels of education (formal or informal), to the right values, attitudes and behaviour that are acceptable in the society where they live in. It is a kind of teaching and learning process that individuals and groups in the community must learn in order to relate well with other people. Civic education is also a learning process whereby individuals learn and accommodate the traditions of other people apart from their own ethnic group. For example, Nigeria being a multi-ethnic state, has made effort by adopting civic education as a subject in the school curriculum and creating awareness through the media to encourage citizens to learn and accommodate one another irrespective of tribe, religion and ethnic diversity. (Oyelami, 2011).

Citizenship or civic education is important for every student and the general public. This is because:

- (i) It enhances people's capacity to understand their rights, roles and duties as citizens and that they might respect that of others,

- (ii) It creates awareness among citizens on the duties of the government to them, as well as their obligations as citizens to the government,
- (iii) It brings out leadership qualities in students; a process of developing future leaders.
- (iv) Civic education also generates concern for the values by which a civilized society is identified in terms of equity, justice, democracy, tolerance, respect for constituted authority, respect for individual opinion, respect for the rule of law, fundamental human rights etc.
- (v) It promotes unity by encouraging one to learn and have the knowledge of other tribes, particularly their traditions and culture.
- (vi) It brings about harmonious relationship and peaceful coexistence in the community.
- (vii) It enhances civic re-orientation and awakening to social responsibilities of the people to the government.
- (viii) It instils the spirit of nationalism and patriotism in the hearts of the students, a prerequisite for sustaining national unity. (Oyelami, 2011).

2.20 Scope of Civic Education

Civic Education has no limited scope. This is because it covers all aspects of human life and activities. It is expected that in a civilized society, citizens must be dedicated, disciplined, law-abiding, have respect for constituted authority (teachers in secondary schools student must respect their principals/seniors and even their classmates). They must be patriotic, patient, self-reliant, have values, defend the nation (when necessary) etc. Hence, civic education has no boundary because it covers areas like right attitude, good behaviour, good character, good leadership, good followership, relationship, tolerance etc. Civic Education, though a teaching and learning process, is practical in nature because it deals with the interaction among citizens; relationship between people and the government and how its agencies work. Civic Education observes the effect of right values, attitudes and the fundamental human rights and responsibilities of citizens in relationship to the government and society. Thus, the resulting effect and benefit of the practicality of Citizenship Education is felt by all. In turn, it encourages the citizenry to be true to their rights and duties as well as ensure that the government is true to theirs. (Oyelami, 2011).

2.21 Aims and Objectives of Civic Education

(i) The broad aim of Civic Education, either to the students at all levels of education or to the general public, is to create the necessary awareness that will make one function effectively well in the community where one lives and to contribute toward national and global development, devoid of conflict, disaffection, war, disaster, among others. The specific objectives of Civic Educations include:

- (i) Teaching right attitude: Students must understand what right attitudes and wrong attitudes are. For instance, laziness, truancy, keeping bad company, drug abuse, bribery etc. should be discouraged, while hard work, truth, integrity, loyalty should be encouraged. Citizens should also do away with bad behaviours such as: indecent dressing, cheating in examination, stealing, bullying others etc
- (ii) To encourage good citizenship: A good citizen is someone who contributes positively toward community growth, national growth and world development. Civic Education has the objective of exposing students and general public to various ways of achieving community and national development, such as right values, religious tolerance, rights and duties of citizens among others. All these will enhance the capacity of an individual to contribute to community, national and global development.
- (iii) To teach good leadership and followership: Leaders should be role models for the society to follow. A good leader, therefore, should be someone who is truthful in discharging his/her duty, uphold the rule of law and one who works hard to solve followers' problems. Good followers work hard and perform their expected duties and obligations to the state and community where they reside.
- (iv) To promote religious tolerance: Nigeria is a nation of multiethnic groups and cultural diversities. The constitution of Nigeria specifies the right to freedom of association and religion. Religious tolerance, therefore, simply means that no religion is superior to the other and no one may be persecuted for his/her religion. Hence, the need to respect other people's religions and that effort should be made by not using provocative language when preaching or during awareness creation by the adherents of any religion.
- (v) To encourage spirit of friendship and co-operation: It is usually said, "united we stand divided we fall". Civic Education promotes the spirit of friendship, co-operation,

harmonious relationship, religious tolerance etc; among others are vital toward individual, community and national development. (Oyelami, 2011).

Values and importance of Civic Education

- i. Civic Education is necessary for the proper up-bringing of an individual. Just like the saying, "charity begins at home", the adults at home, starting with the parents, owe if a duty to educate the child informally and to inculcate in him good behaviour. In the school system, both teachers and community members alike must also work hard enough to teach the acceptable rights and values.
- ii. Civic Education is essential for self-reliant, focused and indigenous individual. Teaching Civic Education in schools will therefore enhance the capacity of an individual and group on how to be an independent person. An independent person is one that can contribute to community and national development. He or she will strive to become an employer of labour and entrepreneur per excellence.
- iii. It enhances individual growth, thereby encouraging national development and rapid progress. Civic education breeds individual growth through learning in awareness creation, self-growth, self-reliance and other ways of contributing to personal community, national and global development. (Oyelami, 2011).
- iv. It encourages peaceful co-existence among people of diverse ethnic groups i.e. it exposes one to learn and have knowledge of other tribes particularly their traditions and culture. Civic Education creates avenue for people to live in peace, and harmony particularly in a country like Nigeria- it brings about harmonious relationship and peaceful co-existence in the community
- v. Civic Education encourages good leadership and good followership. It enhances civic re-orientation and awakening to social responsibilities by the people to the government.(Oyelami, 2011)

Agencies of Civic Education

All hands must be on deck in order to create the necessary awareness that would help the teaching and learning of right attitudes, right values, proper upbringing of the child and other attributes notable of any civilized community in the world. The agencies for civic education include: the National Orientation Agency, NOA, ICPC, EFCC, CLO, CD, INEC, NLC, TUC, Code of conduct etc.

It is often said that "charity begins at home". Family is the first agent of socialization and the first to educate the child on "dos and don'ts" in the society. The family is expected to teach the child right values, positive attitudes, hard work, sincerity, faithfulness, thankfulness among others. The family is expected to lay a good foundation for the child in terms of the best and acceptable ways of living in the society. (Oyelami, 2011).

The community Members

The community consists of male and female members, ranging from Pre-teens to teenagers, youths, adults and the elderly. The senior members of the community, in particular, are all in a better position to further put the child toward right direction in the community. Doing so ensures a healthier society and prospect for stronger development of such community and the nation at large. A well disciplined and cultured individual is said to be the "child of the community", whereas a failure, uncultured, and undisciplined individual belongs to his or her family. It is often said that "four eyes saw to the birth of a child; all eyes must see to the success of the child". Clearly, this saying emphasizes the rights and duties of the community members as agents of Civic Education. (Oyelami, 2011).

The Religious Bodies

The African Traditional religion, Islam and Christianity have a major role to play in training and teaching morals in the society. It is expected that the religion would make man a complete human being. It is a moral obligation of the religious organizations to initiate children and adults into a religious belief. Therefore, the balanced combination of good academic performance in school and sound morals with the fear of God would make a complete man because it is said that "the fear of God is the beginning of wisdom". Religious organizations as agents of Civic Education deal with our duties to God, to our fellow citizens and to our nation at large. Oyelami, (2011)

The school

Schools at all levels are designed to teach, train, educate, socialize among others an individual to become a complete human being. Schools help to transfer acceptable societal values to the learners (both young and adults) through teaching and learning process. The school is an agent of socialization through which the child first acquires the organized learning experiences. The school provides a conducive environment in which the child can

follow and adjust to socio-economic conditions of his/her nation and the world at large. (Oyelami, 2011).

Both the print and electronic media are agents of Civic Education because through various media channels, a learner and citizen interacts with the happenings not only in their immediate environment but the world. In fact, the media has reduced the world to a "global village." For example, on both radio and television stations, scheduled hours for awareness creation are on air. Eminent personalities and professionals are, from time to time, called upon to discuss issues relating to awareness creation. Other specialized agencies of Civic Education in Nigeria include:

- i. NOA- National Orientation Agency
- ii. ICPC - Independent Corrupt Practices and other Related Offences Commission
- iii. EFCC - Economic and Financial Crimes Commission
- iv. INEC - Independent National Electoral Commission
- v. Human Rights Organization such as; Civil Liberty Organization, Campaign for Democracy etc
- vi. Labour Unions such as: Nigeria Union of Teachers, Nigeria Union of Journalists Labour Congress, Trade Union Congress, Nigeria Medical Association, Nigerian Bar Association etc. Code of conduct (Oyelami, 2011).

2.22 Theoretical Framework for the study

This work is anchored on the Bloom's Taxonomy Model. The Blooms Taxonomy Model (BTM) is a psychological model that attempts to explain learning behaviour as "the goals of the learning process i.e. after learning episode, the learner should have acquired new skills, knowledge and attitudes.

Bloom taxonomy classified different objectives that teachers set for student learning outcomes. It divides educational objectives into three learning domains, cognitive, affective and psychomotor, sometimes loosely defined as knowing./head feeling/heart and doing/hard respective. The cognitive domain involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories, which are listed in order below, starting from the simplest behaviour to the most

complex. The affective domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes.

The psychomotor domain includes physical movement, co-ordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. Within the domains, learning at higher level is dependent on having attained prerequisite knowledge and skills at lower level. A goal of Bloom Taxonomy is to motivate teachers and students to focus on all the three domains creating a more holistic form of education.

2.23 Related Theories and Learning Outcomes

The Cognitive Learning Theory

Cognitive learning theories are based on how people think (Ormrod, 2008). The information processing model takes us through steps to explain how people learn. As information is acquired through one's senses, it is transferred to working short-term memory. If the information is rehearsed and practised through elaboration, the information then moves to long-term memory. Once in long-term memory, information may be later retrieved through other connections (Laureate Education Inc., 2008). There are three types of long-term memory: declarative (facts), procedural (how to do things), and episodic (events in your life). The cognitive learning theory has four key components/processes that enable us to remember information:

Limited short-term / working memory

Elaboration

Paivio's dual Coding hypothesis

Network model of memory

(Laureate Education Inc., 2008)

There are multiple strategies that enhance learning through cognitive processes such as using cues, questioning, and advanced organizers, summarizing and note taking, and virtual field trips.

Howard Pitler et al. have provided strategies to enhance students' ability to retrieve, use, and organize information. The first strategy encourages teachers to use cues, questions, and advanced organizers to enhance learning (Pitler 2007), Cues, questioning, and advanced organizers should focus on pertinent information and use higher-level questioning to

encourage deeper learning. Advanced questions are effective learning tools when asked before the activity so the students may concentrate on the essential idea(s) (Pitler, 2007). Teachers should avoid unusual or tricky cues and questions that may lead students in the wrong direction. This strategy supports the cognitive learning theory because cues and questions can tap into students episodic memories to access prior knowledge. Throughout the lesson, students are able to focus on essential ideas. Once the essential ideas are established, advanced organizers enable students to organize information in a meaningful way, thus promoting the main concept(s). Advanced” organizers also provide a visual for students to use. This supports cognitive learning because students’ are not only using, but creating the visual that supports Paivio’s dual coding hypothesis (Laureate Education Inc., 2007). While creating the advanced organizer, students are using higher-level thinking skills that are more effective in the learning process (Forehand, 2005).

Concept maps are a type of advanced organizers that allow students to create an outline or web of pertinent information. Concept maps are valuable web-based tools that can allow students to synthesize their learning in a way that replicates the network model of memory. They allow students to outline the information in a way that is conceptually clear. They may then connect the new concepts with prior knowledge or schema (Novak & Canas, 2008). Concept mapping also supports dual coding of information where students can visualize the information, and therefore, be more likely to retain the information (Laureate Education Inc., 2008).

Summarizing and note-taking is another strategy suggested by Pitler (2007),. that supports the cognitive learning theory. Summarizing is the ability to delete, substitute and/or keep information in order to record important information. Teachers may provide templates and ready-made notes for students to use. (Pitler, 2007) suggest teaching and modeling summarizing as well as giving students opportunities to create their own notes. Summarizing and note-taking promote the cognitive learning theory because students are creating episodic memories through the experience of note-taking. They are also creating a visual that may aid in later retrieving the information. When students attempt to remember information, it is more likely that their brains will be able to make connections because the visual imprint has been previously introduced into their memory.

Another tool that promotes the cognitive learning theory is the use of Virtual field trips which are web-based tools, mainly provided on the Internet, which allow students to visit places that they would not otherwise be able to physically visit. Virtual field trips enhance learning because they create experiences, or episodes, that have a strong possibility to transfer into episodic memory (Laureate Education Inc., 2008). Effective teachers attempt to create experiences that will enhance episodic memories because these types of experiences are meaningful to the learner. Through virtual field trips, students no longer rely on the pictures in the textbooks, but are actually able to witness the places or events in which they are learning about. From this, teachers are able to engage students in critical thinking activities that can further encourage life-long learning.

When implementing cognitive learning theories, technology can be used to incorporate all of the strategies mentioned: cues, questioning, advanced organizers such as concept maps, summarizing, note-taking, and virtual field trips. Technology is beneficial to use while implementing the cognitive learning theory because it enables students to elaborate information, tap into episodic memory, and use images effectively (Laureate Education Inc., 2008). The information processing model allows educators to understand the importance of integrating multiple senses during presentations to improve learning. Teachers should offer a wide variety of visuals, audios, and other techniques to tap into students' senses (Laureate Education Inc., 2008,). Cognitive technologies are tools that may be provided through any medium. These tools aid students in gaining memory, promoting critical thinking, and providing opportunities for problem solving (Orey, 2001). Word processors, spreadsheets, organizing software, and multimedia applications can aid students when conceptualizing new information (Pitler et al., 2007). Though this, students will more likely transfer information into long-term memory, and therefore, have truly learned.

2.24 Bloom's Taxonomy of Learning Domains

Bloom's Taxonomy was created in 1956 under the leadership of educational psychologist, Dr Benjamin Bloom in order to promote higher forms of thinking in education, such as analyzing and evaluating, rather than just remembering facts (rote learning).

The Three Types of Learning

The committee identified three domains of educational activities or learning (Bloom, 1956):

- Cognitive: mental skills (Knowledge)

- Affective: growth in feelings or emotional areas (Attitude or self)
- Psychomotor: manual or physical skills (Skills)

Since the work was produced by higher education, the words tend to be a little bigger than we normally use. Domains can be thought of as categories. Trainers often refer to these three categories as KSA (Knowledge, Skills, and Attitude). This taxonomy of learning behaviours can be thought of as “the goals of the learning process.” In other words, after a learning episode, the learner should have acquired new skills, knowledge, and/or attitudes.

While the committee produced an elaborate compilation for the cognitive and affective domains, they omitted the psychomotor domain. Their explanation for this oversight was that they have little experience in teaching manual skills within the college level.

This compilation divides the three domains into subdivisions, starting from the simplest behaviour to the most complex. The divisions outlined are not absolutes and there are other systems or hierarchies that have been devised in the educational and training world. However, Bloom’s taxonomy is easily understood and is probably the most widely applied one in use today.

Cognitive Domain

The cognitive domain involves knowledge and the development of intellectual skills (Bloom, 1956). This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories, which are listed in order below, starting from the simplest behaviour to the most complex. The categories can be thought of as degrees of difficulties. That is, the first ones must normally be mastered before the next ones can take place.

Bloom’s Revised Taxonomy

Lorin Anderson, a former student of Bloom, revisited the cognitive domain in the learning taxonomy in the mid-nineties and made some changes, with perhaps the two most prominent ones being, 1) changing the names in the six categories from noun to verb forms, and 2) slightly rearranging them (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, Wittrock, 2000; Pohl, 2000).

Alternative to Bloom; Structure of Observed Learning Outcome (SOLO) Taxonomy.

While Bloom's Taxonomy has been quite useful in that it has extended learning from simply remembering to more complex cognitive structures, such as analyzing and evaluating newer models have come along. It has also become more useful with the revised taxonomy.

However, one model that might prove more useful is the Structure of Observed Learning Outcomes (SOLO) taxonomy; it is a model that describes levels of increasing complexity in a learner's understanding of subjects (Biggs, Colls, 1982). It aids both trainers and learners in understanding the learning process. The model consists of five levels in the order of understanding:

- Pre-structural, - The learner doesn't understand the lesson and uses as much too simple means of going about it the learner is unsure about the lesson or subject.
- Uni-structural – The learner's response only focuses on one relevant aspect – the learner has only a basic concept about the subject.
- Multi-structural – The learner's response focuses on several relevant aspects but they are treated independently –the learner has several concepts about the aspect but they are disconnected. Assessment of this level is primarily quantitative.
- Relational – The different aspects have become integrated into a coherent whole-the learner has mastered the complexity of the subject by being able to join all the parts together. This level is what is normally meant by an adequate understanding of a subject.
- Extended abstract – The previous integrated whole may be conceptualized at a higher level of abstraction and generalized to a new topic or area-the learner is now able to create new ideas based on her mastery of the subject.

Affective Domain

The affective domain (Krathwohl, Bloom, Masia, 1973) includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major categories are listed from the simplest behaviour to the most complex.

Psychomotor Domain

The psychomotor domain (Simpson, 1972) includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in

terms of speed, precision, distance, procedures, or techniques in execution. The seven major categories are listed from the simplest behaviour to the most complex.

Other Psychomotor Domain Taxonomies

Over the years, many research studies based on mastery learning have been conducted. Studies ranging in population from elementary through university and in some cases using educational technology have taken place.

Whiting and Render (1984) In Vahid provided research findings to support the hypothesis that mastery learning does produce successful learning experiences for at least 80% of the students in their programme. Their study also indicated very strong positive outcomes in the affective domain with strong indications of satisfaction and pride in the learning accomplishments along with a steady increase in enrolment in the classes comprising the study. A high level of retention was illustrated with students motivated to remediate unlearned materials even though at times they were not required to retake a test. The authors made a strong case for the use of mastery learning while at the same time they clearly outlined some of the difficulties encountered in the “corporate culture” when such a programme is implemented.

Guskey and Gates (1986) in Vahid conducted a research synthesis of studies of group based mastery learning in elementary and secondary classroom. Twenty seven studies were selected for the synthesis. Guskey and Gates reported “that without exception the studies showed positive effects on a broad range of student learning outcomes, including student achievement, retention of learned material, involvement in learning activities, and student effect:. The synthesis revealed that the magnitude of the effect on student achievement varied widely across studies. Several studies investigated variables related to time. Although Guskey and Gates contend that student learning rates are alterable to Bloom’s model hypothesizes, their synthesis report does state that” Arlin (1984, 1984, Motamedi 2014) that learning rates are fairly stable and unalterable characteristics”.

Lai and Biggs (2004) conducted a study with educationally disadvantaged students in grade 9 Biology classes. Students were classified into surface biased and deep biased. The results of the study indicated that mastery learning benefited surface biased students while the deep biased students’ interest levels tended to progressively diminish using mastery learning. Thus deep and surface biased learners increasingly diverge in performance and

attitude, where surface learners did better than deep learners from unit to unit. Lai and Biggs stated that surface students seemed to be motivated by the success they have obtained; a success that is a rare event to these students.

Ritchie and Thorkildsen (2014) used the videodisc-based instruction method “to examine the factor of accountability in mastery learning programmes. The videodisc-based instruction was chosen to help minimize differences in instructional materials, instructional time, and instructional delivery”. Results of this study indicated a significance in achievement test scores. Two possible reasons for the significant increase among mastery learning students were such that their awareness of participating in a mastery learning quiz and test results will directly influence their progression and re-mediation of ensuring instructional material.

Kulik, Jaksa, and Kulik (1978) in Vahid (2003) conducted a study which demonstrated that the high student achievement was an outcome of personalized instruction. They noted that this instruction has at least four sources. The first important factor is PSI’s high mastery standard. The second factor is the large number of unit quizzes. The third is timing of feedback which influences student achievement in Personalized System of Instruction (PSI) courses. The final critical factor is the total amount of review built into PSI courses.

Semb (1980) referred to several studies that have compared Keller’s (1968) In Vahid 2003 personalized system of instruction to more traditional lecture methods. The result of these studies demonstrated that PSI has produced higher level of academic achievement and higher student ratings. According to Klishis, Hursh, and Klishis (1980) in Vahid PSI has repeatedly been shown to be more effective than the traditional lecture approach.

Atkisson (cited in Klishis, Hursh, and Klishis, (1980) in Odukoya 2006), students in a PSI spelling class. He found that these students completed their work early, giving time to work at building their vocabulary skills. Klishis, Hursh, and Klishis (1980) demonstrated in an experiment that PSI results is more effective in learning of spelling elementary classrooms. Results showed that students were more successful in mastering content and faster in completing the course than they were when taught by traditional methods.

Obanya (1979) in Olopade (2002) carried out a study on mastery learning in which he involved 101 experienced primary school teachers who registered for a certificate course in

education at the Institute of Education, University of Ibadan. Students who took a course titled curriculum studies performed poorly over years. But when he exposed the students to mastery learning approach instead of the traditional university lecture method, the result showed that:

3. The subjects made significant distribution rather than the approximate normal curve, as it was the case in the previous years in which the majority of students scored very high marks.
4. The students scores were grossly homogenous showing that they learnt like one another since majority of them scored high marks.

Another study was that of Ezewu (1981) in Obinegbo (2012) who involved 82 secondary school students studying the French Language. The experimental group was taught using the mastery learning strategy while the control group used the conventional method for a period of 2 weeks.

Once more, in an empirical study, Onasanya (1983) in Olopade (2002) found that the students taught with mastery learning strategy responded significantly higher than subjects treated with the conventional mode of instruction in Geography. He found that the average student on the mastery learning group was 1.10 Zigma above the average student in the control group (conventional method). The period of experimentation was one week.

Again, Chacko (1983) in Obinegbo (2012) in her study used 73 Form Three students and found that the mastery learning strategy procedure of obtaining feedback through formative testing and applying corrective measure through instruction is effective in promoting cognitive achievement in Mathematics.

Obanya(1979), carried out a study to assess the theory that nearly all students can learn well most of what they are taught in schools. During the 1978/79 academic session, the researcher exposed the University of Ibadan Associateship Certificate in Education (ACE) students to mastery learning strategy approach. He taught the students the General Principles of curriculum Development and Instruction. The students made significant gains. In addition, the distribution of the scores showed a negatively skewed curve indicating that majority of the students scored very high marks. His study had no control group and with this, it is difficult to know whether maturation or experimental manipulation of the treatment produced

the good performance of the student teachers when compared with previous 5 groups not treated under mastery learning strategy.

This study formed a frame work from which other studies took off. Ezewu (1981) investigated the effects of mastery learning strategy on achievement at secondary school level. He used only girls in his study and came out with the findings that mastery taught group performed significantly better than non-mastery taught students in French.

Since the results of Ezewu's study were generated from data collected from female students only, the findings may not be generalizable outside that gender. The period of the experiment was two weeks which was too short for introducing a new method of teaching in the classroom.

Ezewu (1981) carried out another study on mastery learning in French in some secondary schools. He trained some other teachers in the use of mastery learning approach to teach French. He pilot-tested the students/teachers and further investigated the effects of mastery learning strategy on achievement and attitude to French and French teachers. Although teachers were given practical training, there was no way of ensuring that all the teachers mastered the skills and applied these in the same way.

Onasanya (1983) carried out an investigation on how the quality of instruction affects the learning achievement of students. He compared three methods of instruction. This experiment was carried out in a week in each of the two schools in his study. His results revealed that the performance of students in mastery learning and enhanced mastery learning strategy groups were significantly higher than that of any average student in the conventional group. He attributed the students' higher performance in experimental groups to students' greater time on task. The student support system application was used as an additional technique to feedback/corrective approach.

Madukwe (2009) investigated the effects of enhanced mastery learning strategy on achievement on mole concept in Chemistry. He had two experimental groups and one control group. He came out with the results that the mastery learning strategy groups out-performed the control group.

Onasanya (1983) carried out a study on effects of mastery learning strategy on student achievement in Geography. He trained some student-teachers in the methods and philosophy of mastery learning. He found that the analysis of the pre-test scores showed

significant difference in their cognitive entry behaviour. He found that the average student in the mastery learning strategy group was 1.10sign above the average student in the control group. Soyemi,(2006) studied the cognitive and affective outcomes of three instructional strategies in secondary Mathematics, using mastery and near mastery methods for his two experimental groups and for the control; he used the conventional lecture, discussion, recitation method. Under the cognitive outcomes, he measured achievement, retention and transfer. His results revealed that mastery learning strategy resulted in greater and more homogenous achievement than either near mastery or conventional method. Mastery learning strategy also revealed a more positive attitude change toward Mathematics than the other two groups.

Olubodun (2006) studied the effects of mastery learning strategy on student cognitive and affective outcomes in Mathematics. His results showed that mastery learning strategy enabled students learn better and retain more what was learned than the non mastery technique and also produced significant improvement in attitude towards Mathematics and Mathematics teacher than non mastery students.

2.25 Self Management Strategies and Learning outcomes

Self management strategies is the type of interventions that focus on teaching students to systematically rate their own behaviour according to their teachers. Shapiro, Duthul and Bradley Klug (2008) conceptualize self-management strategy as existing on a conditioning on one hand as the teacher contains the strategy by providing feedback regarding whether the students behaviours have met the desired criteria and delivers appropriate consequences for the behaviours. On the other hand the student is able to self-evaluate his or her own behaviours against the criteria set for behaviour and performance. The student also self-administers consequences. The goal of self management interventions is to move the student towards the self management side of the continuum. Once students are able to accurately measure their behaviour against the standard set by their teachers, the frequency of teacher's feed back on student judgements is gradually lessened until students are accurately judging the quality of their behaviour without the help of eternal comparisons.

Self management strategies include method used by students to manage, monitor, record, and/or assess their behaviour or academic achievement (Mooney Reid, Trout, and Schartz 2005). Self management has also been called self monitoring, self evaluation, self

instruction, goal setting, strategy instruction self monitoring is a multi-stage process of observing and recording one's behaviour (Mooney et al, 2005). Self evaluation is a process where in a student compares his or her performance to a previously established criterion set by a student or a teacher and is awarded reinforcement based on achieving the criterion (Mooney et al, 2005). Self instruction: refers to techniques that involve the use of self-statement to direct behaviour (Mooney et al., 2005). Goal setting, generally refers to a process of a student self selecting behavioural targets, which serve to structure student effort, provide information on progress, and motivate performance (Mooney et al., 2005).

Self-management plans are used to teach students to independently complete tasks and take an active role in monitoring and reinforcing their own behaviours. An important goal in education is to foster self-reliance and independence. In fact, self-management strategies can be implemented before any problem behaviours occur. Research studies show that self-management strategies can be used to improve academic performance, productivity, time on-task, and to decrease problem behaviour. The ability to use self management strategies effectively is a skill that becomes very important for success as children grow into adulthood. The critical elements of self-management include setting goals, monitoring behaviour, and evaluating progress. Examples of self management include self-monitoring, self-evaluation, self-reinforcement, goal-setting, and self-instruction.

When a student engages in self-monitoring, she observes her own behaviour, records its occurrence on a data collection form, and graphs the data to evaluate progress. Self-evaluation strategies encourage students to set their own goals and compare their current performance as they work towards those goals. Both self-monitoring and self-evaluation are often used with self-reinforcement strategies. A student takes an active role in self-reinforcement strategies by determining how he will evaluate progress towards a goal and delivering to a reinforce himself when he achieves the goal. (Mooney et al, 2005).

Self-management strategies are intended to build a student's independence and ability to engage in self-monitoring self-evaluation, and self-reinforcement. The power of self management is its emphasis on building a feeling of control over one's own behaviour. Attempts to control a student's behaviour often decreases the power of a reinforce which makes the self management plan less efficient and problem behaviour more likely to occur.

Toney, Kellery, and Lanclos (2003) examined self-monitoring in isolation as opposed to part of a treatment packages, to determine its effectiveness as a homework intervention. Since self-monitoring behaviour is found to increase from early to late adolescence (Pledger, 1992), it is one type of homework intervention that has been found to be effective with middle school-aged children (Toney, Kellky, & Lanclos, 2003). Toney, Kelley, and Lanclos (2003) compared the effectiveness of student-versus parent-monitoring of homework in a sample of 37 middle school-aged students.

Self-management involves the application of behavioural principles to manage an individual behavioural related deficiency in an attempt to promote desirable changes. It demands an individual exerting a level of certain control over some aspects of his or her decision-making and selected behaviours. It is a treatment that features biological, psychological and social intervention techniques, with a goal of maximizing the functioning of regulating processes. This involves self-directed implementation of strategies in which antecedents and consequences of target behaviour are modified, making the latter more or less likely to occur in the future depending on the goals of the intervention (Milite-Berger, 2001). There are various self-management procedures (Nelson, Smith, Young, and Dodd, 1991; Evans and Sullivan, 1993). This is self-monitoring, self-reinforcement, study of an individual's behaviour. It is useful in the assessment of problem behaviours, in evaluating treatment effectiveness and in promoting behavioural change on personal ability or willingness to record its behaviour, on the choice of a recording method, and on the accuracy of recording (Evans and Sullivan, 1993).

The implication of this is that self-instruction, a system in which an individual is responsible for teaching himself/herself the designated intervention should be involved Nelson, Smith, Young & Dodd, 1991 opine that self-reinforcement has to do with evaluating whether one's behaviour reaches criteria for rewards and then rewarding oneself (Bornstein and Quevillon, 1976) is another factor. Beside this, comparing a behaviour to a set standard and identifying if the behaviour matches or exceeds that standard, then the person engages in self-rewards, this view is supported by (Evans and Sullivan, 1993). They describe it as self-evaluation. Findings have discovered that self-management strategies can foster independent growth and development of people's social skills (Fish and Mendola, 1986). It has further been identified to be effective in a variety of settings and with a variety of people.

For instance, in the home or in the classroom (Cole and Bambara 2001). It is effective to target academic and behavioural problems, even with behavioural disorder. In order to define and describe self-management, several items are used, sometimes interchangeably, depending on the situation surrounding the discussion. These include: Self management preparation/training; patient empowerment, and self care. Although, generally they are meant to describe the same entity, the terms imply varying specifications regarding attributes, roles and responsibility of both people with chronic health conditions and health care providers.

Self-management is said to take place when an individual takes part in treatment (Creer, 1976) or when the individual participates in a particular type of education, such as interdisciplinary group education based on principles of adult learning, individualized treatment and case management theory. (Alderson, Starr, Gow, and Moreland, 1999). Others have explained self-management as a treatment intended to bring out specific outcomes. A treatment that features the goal of maximal functioning of regulatory processes (Nalagawa-Kogan, Garber, Jarrett, Egan and Hendershot, 1988). Redman (2004) opines that self-management preparation refers to the training that people with chronic health conditions need to be able to deal with taking medicine and maintaining therapeutic regities, maintaining everyday life such as employment and family, and dealing with the future, including changing life plans and frustration, anger and depression. Lorig (1993) also asserts that self-management is learning and practising skills necessary to carry on an active and emotionally satisfied life in the face of a chronic condition. He emphasizes that self-management is not an alternative to medical care. Rather, self-management is “aimed at helping the participant become an active, not adversarial, partner with health care providers. Thus, self-management is a therapy that spans every aspect of human lives especially that which relates to psychological well-being.

Alternatively, self-management has been observed as practising a particular behaviour and having the ability to reduce the physical and emotional impact of illness, regardless of the degree to which the individual participates in the education/treatment or the type of education/treatment received: Grunian and Von Korff (1996) added that an individual joins in activities that protect and promote health, monitor and manage symptoms and signs of illness, manage the impacts of illness on functional, emotional and interpersonal relationships and adhered to treatment regimes. Or according to Glasgow, Wilson and

McCall (1985), self-management is used to describe the cluster of daily behaviour that people perform to manage their problems. In addition, self-management is set to take place when an individual engages in certain behaviours that control or reduce the impact of disease but in collaboration with healthcare providers. Self-management is" also known to be a day-to-day task an individual must undertake to control or reduce the impact of disease on physical health strains.. At home, management tasks and strategies are undertaken with the collaboration and guidance of the individual's physician and other health care providers (Clark, Becker, Janz, Lorig, Rakowski & Anderson, 1991). In another vein, self-management is referred to as individual abilities regardless of how they were acquired, Barlow, Wright, Sheasky, Turner, and Hainsworth, treatment, physical and psychosocial and life style changes inherent in living with a chronic condition. Efficacious self-management encompasses ability to monitor one's condition and to effect the cognitive, behavioural and emotional responses necessary to maintain a satisfactory quality of life. Thus, a dynamic and continuous process of self-regulations established (Barlow, Wright, Sheasby, Turner & Hainsworth, 2002)

Self-management strategies include a range of strategies such as students changing their behaviours. The goal of instruction in this area is to shift the responsibilities of instruction from the teacher to the student. These strategies can actually help in skill acquisition together with reduction in teacher's time required for instruction and monitoring of behaviour, promoting generalization and maintenance of behaviours, and reinforcing the cultural value of education in which learners leave school independent and competent (Agron, 1997).

Empirical Review of Academic Self-Concept

Overwhelmingly, the evidence suggests that academic self-concept and achievements are positively related. The causal ordering question, however, is very much in doubt, and strong evidence exists to suggest that academic self-concept cannot play a simple causal role in explaining academic achievement.

In a series of studies spanning nearly 10 years, Marsh and colleagues (Guay et al., 2003; Marsh & Yeung 1997a, 1997b, 1998; Marsh et al., 2005) consistently reported that academic self-concept causes subsequent changes in academic achievement. However, they also

reported that the reverse is true: achievement causes changes in academic self-concept. Therefore, they suggest support for the reciprocal effects model.

In a sample of Australian upper-middle and high school students, Marsh and Yeung (1997) provided early evidence supporting the reciprocal effects model. In the path models they estimated, they found that academic achievement (reading, science, and math) positively predicted subsequent academic self-concept. This predictive relationship was slightly stronger than the predictive relationship between academic self-concept and subsequent achievement; however, these data appear to support the idea that both academic self-concept and achievement can influence the other. Testing students at two points in time during the same school year, Marsh and colleagues (2005) again found reciprocal effects between math self-concept and achievement. In this longitudinal research, the strongest correlate of math self-concept in the middle of 7th grade was math self-concept at the beginning of 7th grade. Math self-concept at the beginning of 7th grade was also significantly related to math grades in the middle of 7th grade (effect size of .24) and math test scores in the middle of 7th grade (effect size of .09), even after controlling for the effects of other measures, including 6th grade achievement. In contrast to Marsh and Yeung's (1997b) study, in the Marsh and colleagues (2005) study, the effects of academic achievement on academic self-concept were smaller than the effects of self-concept on academic achievement, which partially supports the reciprocal effects model.

Guay and colleagues' (2003) findings also support a reciprocal effects-type link between prior academic self-concept and subsequent academic achievement at the early and middle elementary grades. In this study, students in grades 2, 3, and 4 were measured annually over 3 years, and there was stronger support for the self-enhancement model (academic self-concept predicts subsequent achievement) than for the skill-development model (academic achievement predicts subsequent academic self-concept) for all three age cohorts.

Chapman and colleagues (2000) presented evidence that academic self-concepts form in response to early learning experiences. The authors selected 60 5-year-olds (from an original sample of 152 5-year-olds) who started school in 1993 and completed the PASS self-concept instrument. The students were stratified in three tiers: the top 15 percent represented the study's positive academic self-concept group, the bottom 15 percent represented the negative academic self-concept

group, and the modal 15 percent represented the typical academic self-concept group. At the first measurement point (beginning of schooling), the authors attempted to predict academic self-concept group membership (top, bottom, or typical) using letter-name knowledge, phoneme deletion, and sound matching. Positive self-concept and negative self-concept group memberships were predicted 80 percent and 65 percent of the time, respectively. Typical group membership was predicted 40 percent of the time. Reading-related skills and performance seem to be predictive of positive and negative academic self-concept status, but less so of typical academic self-concept status. However, these data do suggest that early reading³ experiences are likely driving academic self-concept formation.

Chapman and colleagues went on to show how academic self-concept, particularly a negative self-concept, can remain intact throughout early schooling. At the completion of their first year of schooling and again during the middle of their third year of schooling, children with negative academic self-concept read lower-level books in class and performed at lower levels on several reading measures than did children with positive academic self-concept. Furthermore, differences emerged between children with negative and typical (modal) academic self-concept. At the end of their first year of schooling, children with negative academic self-concept had poorer reading skills than children with typical academic self-concept. And, by the middle of their third year, children with negative academic self-concepts had poorer reading word recognition and reading comprehension skills than children with typical academic self-concept.

Gonida and colleagues (2006) provided evidence that emphasizes the significance of school achievement in formulating subsequent responses. In a sample of 187 5th and 6th graders, students completed self-concept measurements twice, 1 year apart. Thus, 5th graders were retested when they were 6th graders, and 6th graders were retested when they were 7th graders and had moved from elementary to high school. The authors tested multiple causal models of self-concept and achievement, finding the strongest evidence for the model where school achievement influences academic self-concept.

For the simple relationships tested, Time 1 school achievement significantly predicted Time 2 academic self-concept.

Herbert and Stipek (2005), in a sample of 345 elementary school students, found that student achievement (measured with standardized test scores) was strongly predictive of

children's judgments of their literacy skills. In this longitudinal study of children from kindergarten or 1st through 5th grades, child competency ratings were gathered in kindergarten or 1st grade and again in 3rd grade and 5th grade. Using the child's self-competency ratings, the authors examined self-concept in literacy and in math and its relationship to achievement in literacy or math, parents' ratings of their child's competency in the relevant area, teachers' ratings of students' competency in the relevant area, and sex. In all grades (except 3rd- to 5th-grade math), achievement in the previous grade predicted children's ratings of their own academic ability. Interestingly, parent ratings in 3rd grade predicted children's ratings of literacy and math skills in 5th grade. In sum, academic skills were the most consistent predictors of children's judgments of their academic competence.

Although the studies referenced above hint at the importance of prior achievement in explaining academic self-concept, one recent and important study by Stringer and Heath (2008) provided very strong evidence that the predictive ability of self-concept becomes modest when measures of prior achievement are included in analyses. In a sample of 155 students (mean age of 10 years, 7 months), the authors found that, initially, self-perceptions of academic competence were moderately predictive of academic performance 1 year later, accounting for roughly 16 to 25 percent of academic achievement. But, when measures of prior achievement were included, the amount of the variance explained by self-concept dropped dramatically. The strongest contribution this study makes to the causality argument is the inclusion of measures of change in achievement. Stringer and Heath argued that if self-concept were causally related to academic performance and not simply related, we would expect that self-concept should not only predict achievement, but also predict changes in achievement.

Mediators of Academic Self-Concept and Achievement

A few studies reviewed here point to some potentially important mediating variables. Bouchey and Harter (2005) and Herbert and Stipek (2005) suggested that adult perceptions of competence and scholastic behavior may help explain the relationship between self-concept and achievement. Bouchey and Harter(2005) presented data indicating that students' perceptions of what adults think and do predict their own self-perceptions and their current performance, even when prior academic achievement is controlled. Herbert and Stipck(2005) found that parents' perceptions of their child's competence were a particularly strong predictor

of their child's judgment, of their skills in math. So adult perceptions appear important, but they are not often included in self-concept studies. Scholastic behavior may also help explain the self-concept-achievement relationship. In one model tested by Bouchey and Harter(2005), scholastic behavior (e.g., whether a student completed homework on time and how much energy was put into the school work) was significantly predicted by academic self-concept. *In* this model, scholastic behavior also predicted school grades. Although the data were not longitudinal, and only a small set of potential relationships between self-concept, scholastic behavior, adult perceptions of competence, and achievement were tested, this study points toward additional potential mediators not often included in studies of academic self-concept.

As noted in a prior section, Buhs (2015); suggested that classroom engagement could be an important factor in understanding the self-concept -achievement relationship. Although engagement did not fully mediate the relationship between self-concept and achievement in the Buhs study, the connection among self-concept, engagement, and achievement is well documented in this study. Buhs found relatively strong relationships between academic self-concept and classroom engagement. Buhs also found a strong relationship between classroom engagement and changes in academic achievement, something that has considerable support in the literature (e.g., Furrer & Skinner, 2003; Stipek, 2002), But Buhs found a much weaker direct relationship between academic self-concept and changes in academic achievement. So, classroom engagement could prove quite important in understanding how academic self-concept and achievement are linked.

Sex and Self-Concept

Sex differences in self-concept development are well documented and generally point to similar conclusions. The literature suggests that girls have a lower self-concept than boys (Young & Mroczek, 2003), but this may vary across different subjects. In math, several studies reviewed here found that boys had significantly higher math self-concepts (Ireson & Hallam, 2005; Marsh & Ayotte, 2003). Some researchers have identified a sex gap through grade 10 and a subsequent narrowing thereafter (De Fraine et al., 2007). Furthermore, girls often score higher on achievement tests than boys, although this does not translate into higher self-concepts in math or language (Hay et al., 1998; Herbert & Stipek, 2005; Marsh et al., 1985).

Linver and Davis-Kean (2005) showed how self-concept ability can help protect against grade declines, which are experienced by many students in high school. For high-ability girls, a higher self-concept of ability was associated with a less steep decline in grades over time.

Changes in Self-Concept over Time

Research has provided significant evidence about how self-concept changes over time. Many studies find that children (especially girls) have a declining academic self-concept through their adolescence (De Fraine et al., 2007; Eccles et al., 1993; Gonida et al., 2006; Stipek & MacIver, 1989; Zanobini & Usai, 2002). But, as children grow older, academic self-concept may also become more stable and reliable (Guay et al., 2003). On the question of the relationship between self-concept and achievement, specifically on the strength of the association over time, the results appear mixed. Guay and colleagues (2003) suggested that self-concept becomes more strongly associated with academic achievement outcomes over time, but this contrasts with De Fraine and colleagues (2007) who found that the association between academic self-concept and language achievement becomes weaker with age. In this study, the association between academic self-concept and achievement at the individual level is rather strong at the start of high school. By the end of high school, however, this relation is much weaker, especially for girls. These discrepant findings suggesting that academic self-concept changes over time are an area for future research.

2.26 Self-concept

Research by Tiedemann (2000) found that parents' and teachers' gender stereotypes about children's mathematical abilities influenced children's self-concepts about their mathematical ability prior to having extensive experience with Maths in school. Tiedemann's (2000) research findings also indicate that the correlation between adult's gendered stereotypes and children's beliefs about themselves increased as children aged throughout elementary school. Additional research by Bcnnn' and Mistry (2007) indicates that parent's initial expectations for their children, during early childhood, correlate with children's academic success. These findings highlight the influence of adult stereotypes and expectations on children's self-concept formation. Research by Maccoby (1990) found that boys and girls choose same-sex play partners by age 3 and maintain their preferences until late elementary school. Boys and girls become involved in different social interactions and relationships. Girls tend to prefer One-on-one dyadic interaction, while boys prefer group

activities. Girls tend to share secrets and form tight, intimate bonds with one another. Furthermore, girls are more likely to wait for their turn to speak, agree with others, and acknowledge the contributions of others. Boys, on the other hand, build larger group relationships based on shared activities. Boys are more likely to threaten, boast, and call names suggesting the importance of dominance and hierarchy in groups of male friends. Subsequently, the social characteristics of boys and girls tend to carry over later in life as they become men and researchers debate when self-concept development begins but agree on the importance of person's life. Tiedemann (2000) indicates that parent's gender stereotypes and expectations for their children impact children's understandings of themselves by approximately age 3. Others suggest that self-concept develops later around age 7 or 9, as children are developmentally prepared to begin interpreting their own feelings, abilities and interpretations of feedback they receive from parents, teachers, and peers about themselves despite differing opinions about the onset of self-concept development. Researchers agree on the importance of one's self-concept, which influences people's behaviours and cognitive and emotional outcomes including (but not limited to) academic achievement, levels of happiness, anxiety, social integration, self esteem, and life-satisfaction.

2.27 Conceptual Model for the Study

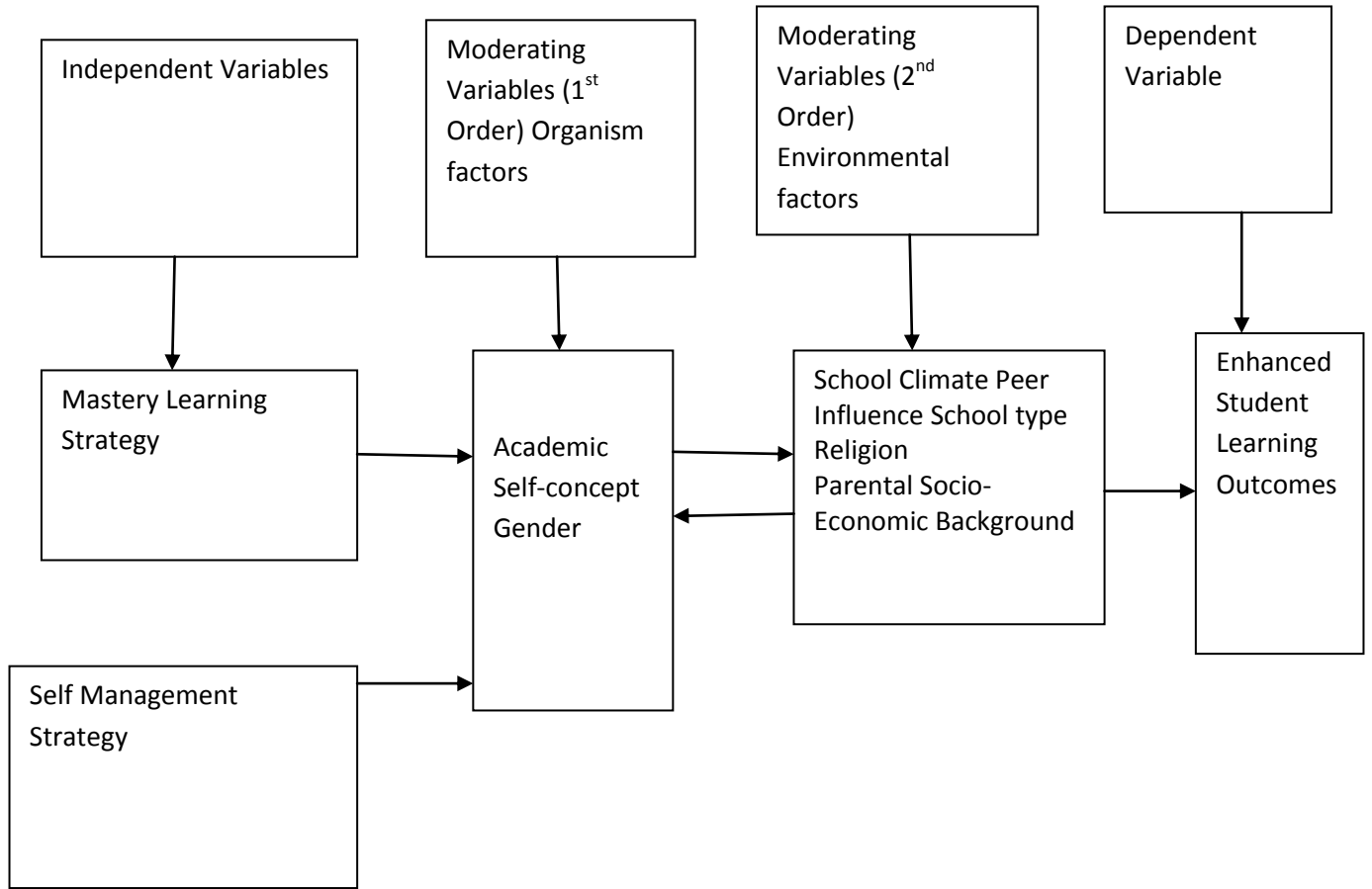
In this study, a conceptual framework is developed around the interventions with a view to enhancing the students learning outcomes in Civic Education from the model. Mastery learning and self management strategies are the two (2) treatment packages to be used in the study. The packages are referred to as independent variables to be manipulated by the researcher in order to determine their effects on the dependent variable (student learning outcomes). The intervening variables are of two kinds, the primary intervening variables are – organism or internal variables that are associated internally with the individual participants in the study, these include academic self concept and gender.

The secondary intervening variables are environmental or external variables that include peer influence, school type, religion and parental socio-economic background. These variables intervene between independent variables and dependent variables and are expected to make an impact on the dependent variable. Thus, the researcher manipulated the independent variables to ascertain their effectiveness on the dependent variable. The researcher would be able to determine the variable through the instrument to be used in the study.

- S - Stimulus (i.e. the independent variables)
- O - Organism (i.e. the intervening variables inherent in the organism)
- R - Response (i.e. the dependent variable that is the result and effects of the independent variable.



Conceptual Model of the Study



S (Stimulus) ————— O (Organism) ————— R(Response)

Figure 1: Conceptual Model of the study

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2.28 Hypotheses

In this study the following hypotheses were tested at 0.05 level of significance.

1. There is no significant main effect of treatment on academic achievement in civic education among the senior secondary school students.
2. There is no significant main effect of academic self concept on academic achievement in civic education among the senior secondary school students.
3. There is no significant main effect of gender on academic achievement in civic education among senior secondary schools students.
4. There is no significant interaction effect of treatment and gender on academic achievement in civic education among senior secondary school students.
5. There is no significant interaction effect of treatment and academic self concept on academic achievement in civic education among senior secondary school students.
6. There is no significant interaction effect of gender and academic self concept on academic achievement in civic education among the senior secondary school students.
7. There is no significant interaction effect of treatment, gender and academic self concept on academic achievement in civic education among senior secondary school students.
8. There is no significant main effect of treatment on attitude to Civic Education among SSS students.
9. There is no significant main effect of academic self concept on attitude to Civic Education among SSS students.
10. There is no significant main effect of gender on attitude to Civic Education among SSS students.
11. There is no significant interaction effect on treatment and academic self-concept on attitude to Civic Education among SSS students.
12. There is no significant interaction effect of treatment and gender on attitude to Civic Education among SSS students.
13. There is no significant interaction effect of gender and academic on attitude to Civic Education among SSS students.

14. There is no significant interaction effect of treatment academic self concept and gender on attitude to Civic Education among SSS students.

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CHAPTER THREE

METHODOLOGY

This chapter is on methodology of the study. It entails the research design, population, sample and sampling procedures, instrumentation, data collection procedure, data analysis and description of the instrument.

3.1 Research Design

This study employed a pretest, post-test and control group quasi experimental design using a 3 x 2 x 3 factorial matrix. The participants were divided into three, the first two will be treatment groups (A1, A2) while the third were the control group (A3) while genders made up two rows (B1, B2 (B1 – Male, B2-Female) participants of self concept were classified into high, moderate and low (C₁,C₂,C₃) Moreover, the two experimental groups were given pretest and subjected to treatments (Mastery Learning and Self Management Strategies) while the control group were given non-therapeutic talk.

Table 3:1 3 x 2 x 3 factorial matrix for students learning outcomes in senior secondary schools.

TREATMENT	GENDER						Total
	MALE(B1)			FEMALE(B2)			
	High academic self-concept(C1)	Moderate academic self concepts (C2)	Low academic self concepts(C3)	High academic self concept (C1)	Moderate academic self concept (C2)	Low academic self concept (C3)	
Mastery learning Strategy A1	A1+B1+C=0	A1+B1+C2=4	A1+B1+C3=1	A1+B2+C1=2	A1+B2+C2=11	A1+B2+C3=2	30
Self management strategy A2	A2+B1+C1=1	A2+B1+C2=5	A2+B1+C3=9	A2+B2+C1=1	A2+B2+C2=7	A2+B2+C3=7	30
Control group A1	A3+B1+C1=0	A3+B1+C2=5	A3+B1+C3=10	A3+B2+C1=0	A3+B2+C2=5	A3+B2+C3=10	30
Total	1	24	20	3	23	19	90

Key

- A1 = Mastery Learning Strategy
- A2 = Self management strategies
- A3 = Control group
- B1 = Male
- B2 = Female
- C1 = High academic self-concept
- C2 = Moderate academic self concept
- C3 = Low academic self-concept

3.2 Population

The population comprised all the SS2 students in senior secondary schools in Ibadan Oyo State. Ibadan has senior secondary schools in Ibadan city and Ibadan less city and the schools are divided into educational zones. The total number of public senior secondary schools in Ibadan city and Ibadan less city is two hundred and one (201).

3.3 Sample and sampling technique

The multi-stage sampling technique was used to select (90) ninety SS2 students.

1st Stage: Three (3) local governments were randomly selected from eleven (11) local government councils in Ibadan metropolis. They are; Ibadan North East, Ibadan South East in Ibadan city and Egbeda local government in Ibadan less city.

2nd Stage: Simple random sampling technique was used to select three (3) senior secondary schools from the three (3) selected local government areas respectively.

3rd Stage: In each selected school, students offering civic education were randomly selected. The participants consisted of SS2 students who had consistent records of low civic education achievement and scored low in the screening instrument.

4th Stage: A simple random sampling technique was used to select thirty (30) screened students in three (3) senior secondary schools in the three (3) selected local government areas in Ibadan. This consisted of forty five male and forty five female participants .The (90) participants

in SS2 were used for the study.

Inclusion and Exclusion Criteria

- * Participants must be senior secondary school students.
- * Participants must be 14 years and above.
- * The participants must be offering Civic Education as a subject.
- * Volunteerism; participants must be ready to actively participate without any persuasion.
- * The participants below 14 years must not be allowed to participate in the treatment sessions.
- * Participants that scored 41 marks and above were excluded.
- * Participants must have obtained parental consent.

3.4 Control of Extraneous Variables

In controlling extraneous variables that can possibly affect the equal number of participants were assigned to experimental and control groups. Null hypothesis were tested to guide against experimental biases. Appropriate data analysis were used as a statistical tool. The administration of test and treatment also took care of the extraneous variables.

3.5 Instrumentation

The instruments that were used for the collection of data in the study are:

- (i) Civic Education Achievement Test (CEAT)
- (ii) Students Attitude towards Civic Education Questionnaire (SATCEQ).
- (iii) Academic Self-concept Scale (ASCS) by Reynolds et al (1980)
- (iv) Learning Preference Assessment (LPA) by Guglielmino (2007)

3.6 Description of the Instrument

Civic Education Achievement Test (CEAT)

Civic Education Achievement Test (CEAT) is a self developed test to measure the student academic achievement in civic education.

It is a 50 item multiple choice question civic per item (A to D). Some of the items were constructed by the researcher with the assistance of an expert in the field while some were selected from the past (SSCE) questions based on the syllabus for SS 2 classes. All the test items were submitted to some other experts in the field of Test & Measurement for validation. After some revisions were made, the experts independently and unanimously recommended the use of the test.

To establish the highest degree of reliability, the test was pre-tested on a small sample of (no = 50) randomly selected SSS 2 students. The internal consistency reliability coefficient range for the subscale reported was 0.37 - .72. The test-retest reliability measure of the test with interval of three weeks was 0.72 - .79.

3.7 Students Attitude towards Civic Education Questionnaire (SATCEQ)

Student Attitude to Civic Education Questionnaire (SATCEQ) is a self-developed instrument constructed by the researcher with the assistance of an expert in the field. It was constructed to measure and assess the students learning outcomes in Civic Education. It consists of two sections; Section A deals with the personal data, which elicit response on the name of the school, class, local government area, age, sex and place of residence.

Section B is made up of statements representing the personal student learning attitude to Civic Education in Senior Secondary Schools. The Students Attitude to Civic Education Questionnaire (SATCEQ) is formulated based on Likert Scale which requires the subject to tick (X) any of the items based on 1,2,3,4 and 5 of the rating scale. It is written as follows:

- | | |
|---------------------------|---|
| 1. Undecided | 1 |
| 2. Strongly Disagree (SD) | 2 |
| 3. Disagree (D) | 3 |
| 4. Agree (A) | 4 |
| 5. Strongly Agree (SA) | 5 |

Internal consistency of the scale was established by this study and it returned a Cronbach coefficient alpha of 0.72.

To ensure understanding of the scales, test, questionnaire on students learning outcomes, Civic Education Achievement Test (CEAT) and student Attitude towards Civic Education Questionnaire (SATCEQ) and Academic self concept scale (ASCS) and to detect potential problems with the test, questionnaire and the scale, a pilot test were carried out to ensure that the scales were suitable to be used for students within the Nigerian context and to measure their reliability. The reliability of the test, questionnaire and scale were determined through the use of test retest procedure. Test re-test reliability procedure is a method of estimating the reliability of an instrument through the administration of the instrument twice to the same group of individuals.

Moreover, the test, questionnaire and scale were pre-tested in three selected senior secondary schools (Olubadan Senior High School Orita Aperin, Eyinni Grammar School, Adelagun Memorial Grammar School, Adelagun, Ibadan. The Civic Education Achievement test (CEAT) Students Attitude toward Civic Education Questionnaire (SATCEQ) and Academic Self concept scale (ASCS) were tested using split half method and they were

found to be reliable with the reliability co-efficient of CEAT 72, SATCEQ 79, 0.72, 76 and ASC 0.88, 0.89 respectively. The test, questionnaire and scale were reliable for the purpose of this study.

3.8 Academic self-concept Scale (ASCS) (Reynolds et al 1980).

The ASCS is a 40 item scale that measures the academic component of general self-concept of students instrument was developed by Reynold. The instrument uses a likert-type scale ranging from 1 (strongly disagree to 4 (strongly agree) and the global scores from this scale indicate academic self-concept. Reynolds et al (1980) utilized the ASCS to determine the self-concept of college students; however, this scale was adapted to evaluate African America junior high/middle school students in this study.

Factors analysis of ASCS yielded a seven factor solution that accounted for 52.6% of total variance (Reynolds 1988). The ASCS yield one global score and seven subscale SIWES. The items are keyed into a positive direction for academic self-concept. The seven factors have been tentatively described in the following way.

Factor 1: Grade and effort dimension

Factor 2: Study habit/organization self-perception, factor 3: Peer evaluation of academic ability, factor 4: self confidence in academic, factor 5: satisfaction with school, factor 6: self-doubt regarding ability, and factor 7: self-evaluation with external standards. Test-retest reliability for the ASCS is reported to be 0.88 with external consistency (Cronbach is alpha) of 0.91 (Reynolds, 1988).

However, the scale has been administered to ethnic minorities including African-Americans and students from various geographical regions and states since its development (Cokley 2000; Zorich and Reynolds, 1988).

Learning Preference Assessment (LPA)

The Learning Preference Assessment (LPA) is also known as Self Directed Learning Readiness Scale (SDLRS). The LPA/SDLRS is the most widely used assessment in the field of self-directed learning. It is a self-report instrument that was developed by Dr Lucy M Guglielmino to measure the complex of attitude, skills, beliefs, actions, abilities and characteristics that comprise an individual's current level of readiness to manage his or her own learning. This instrument was used to screen the participants used for the study.

The instrument comprises 58 items but 19 items were adopted. Even though the scale has been widely used, additional validation is needed. The study was designed to use a multi-trait, multi method procedure for deforming the validity of LPA/SDLRS. Thirty-seven specific hypotheses were tested. Findings, concerning selected hypotheses are discussed. Three general conclusions concerning the validity of LPA/SDLRS are as follows (1) The findings are supportive of the validity of the SDLRS (LPA (2) significant differences were noted composition and student scores on the SDLRS (3) Significant associations exist between the SDLRS (LPA scores and variables such as age, educational level and agreement, response set (ARS).

Internal consistency of the scale was established by this study and it returned a Cronbach coefficient alpha of 0.87.

3.9 Procedures for Data collection

The researcher took letters from the Department of Guidance and Counselling University of Ibadan to the Oyo State Ministry of Education and the principals of three (3) Senior Secondary Schools selected in the three (3) local government councils in Ibadan. Permission was obtained from the schools chosen to carry out the study. The treatment span was a period of eight (8) weeks for sixty (60) minutes in each session during which there were researcher – participants’ interactions. These were in five (5) stages – recruitment, pre-test, treatment, pest test treatment and evaluation. The participants were given a letter of parental consent for participation in the treatment sessions. Two research assistants were recruited for the therapeutic treatment. The participants were assigned into two experimental groups and a control group Participants were those who met up to the inclusion criteria. The participants were encouraged to co-operate during the training to enable the objectives of the researcher to be achieved. The participants and researcher negotiated for the suitable day of the week when the therapeutic sessions were held.

3.10 Method of Data Analysis

The data collected were analysed by using both descriptive and inferential statistics. The descriptive statistics included mean and standard deviation while the inferential statistics included analysis of covariance (ANCOVA), Duncan Post-hoc analysis was used appropriately where significance effect of treatment is noted.

SUMMARY OF TREATMENT PACKAGES

EXPERIMENTAL GROUP 1

MASTERY LEARNING STRATEGY OUTLINE COUNSELLING SESSION

- SESSION ONE:** Screening and recruitment, general orientation and administration of pre-experimental test instruments.
- SESSION TWO:** Mastery Learning Strategy and its components, learning outcomes and their categories, Academic self-concept.
- SESSION THREE:** Ten Hindrances of success in Examination
- SESSION FOUR:** Twenty counselling solutions to hindrances to success in examination
- SESSION FIVE:** The Basic requirements of success in life
- SESSION SIX:** Effects of video films, music, addicted browsing and social media networks on students Academic Performance
- SESSION SEVEN:** Steps in changing Bad Behaviour.
- SESSION EIGHT:** Evaluation, overall review, post-experimental administration and conclusion.

CIVIC EDUCATION TEACHING SESSION

- SESSION ONE:** Screening and recruitment, general orientation and administration of pre-experimental test instruments
- SESSION TWO:** Mastery Learning Strategy and its components learning outcome and their categories Academic self-concept.
- SESSION THREE:** Civic Education, meaning, scope, aims and objectives and importance of civic education
- SESSION FOUR:** Our values – importance, factors promoting good value system.
- SESSION FIVE:** Cultism – meaning, causes, effects and how to eradicate cultism.
- SESSION SIX:** Drug abuse – meaning, types, consequences and ways of discouraging drug abuse.
- SESSION SEVEN:** HIV/AIDS – Meaning, causes, signs, effects and preventive measures of HIV/AIDS.
- SESSION EIGHT:** Evaluation, overall review, administration of post-experimental test and conclusion.

EXPERIMENTAL GROUP 2

SELF MANAGEMENT STRATEGY OUTLINE

- SESSION ONE:** Screening and recruitment, general orientation and administration of pre-test instruments
- SESSION TWO:** Self management strategy and its components learning outcomes
Academic self-concept
- SESSION THREE:** Meaning of Goals, its acronyms
- SESSION FOUR:** Self Instruction
- SESSION FIVE:** Self Reinforcement
- SESSION SIX:** Self Monitoring
- SESSION SEVEN:** Self Evaluation
- SESSION EIGHT:** Evaluation, Overall review, post-experimental test, administration and conclusion.

GROUP 3 – CONTROL GROUP

- SESSION ONE:** Administration of the pre-test instruments.
- SESSION TWO:** Introduction of the Non-therapeutic talk
- SESSION THREE:** Meaning of poverty and examples.
- SESSION FOUR:** Causes of Poverty.
- SESSION FIVE:** The consequences of poverty on students academic performance.
- SESSION SIX:** Counselling tips on reducing the effects of poverty on students academic performance.
- SESSION SEVEN:** Ways of controlling poverty.
- SESSION EIGHT:** Administration of post test instruments.

CHAPTER FOUR

RESULTS

This chapter presents the demographic information of the participants and the empirical results from the seven null hypotheses earlier stated and tested in the study. The results of the findings of the study are displayed in table format.

Table 4.1 Demographic information for the 90 participants in the study

Variables	Gender		Academic Self Concept		
	Male	Female	Low	Medium	High
No	45	45	39	47	04
Percentage (%)	50.0	50.0	43.4	52.2	4.4

With respect to gender, 45 (50%) of the participants are males while 45 (50%) are females.

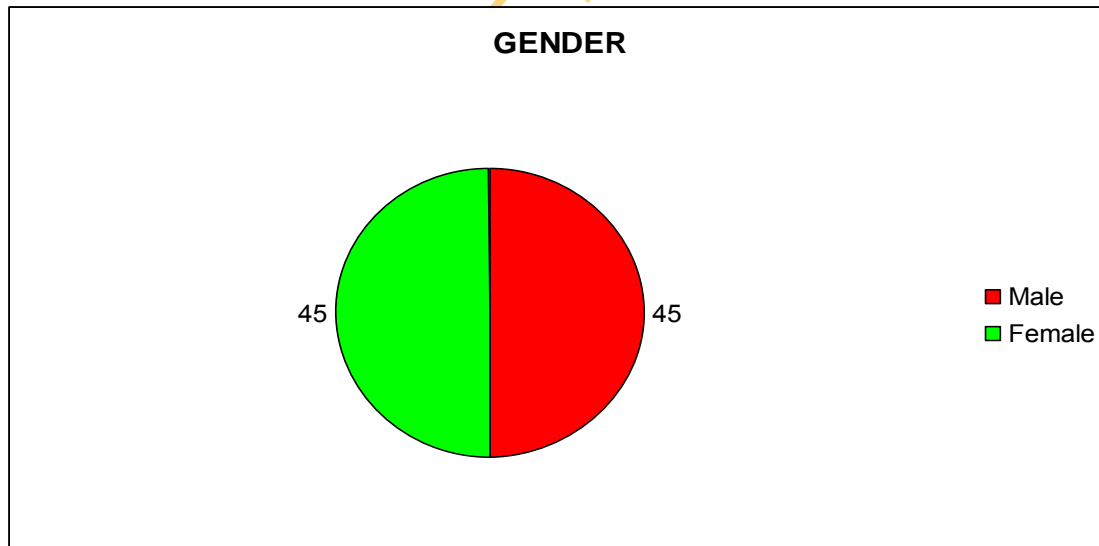


Fig. 4.1: A pie-chart showing gender distribution of the participants.

Also, the table reveals that 39 participants representing 43.4% have a low academic self concept; 47 (52.2%) falls into the medium academic self concept while the remaining 4 participants representing 4.4% belong to the high academic self concept.

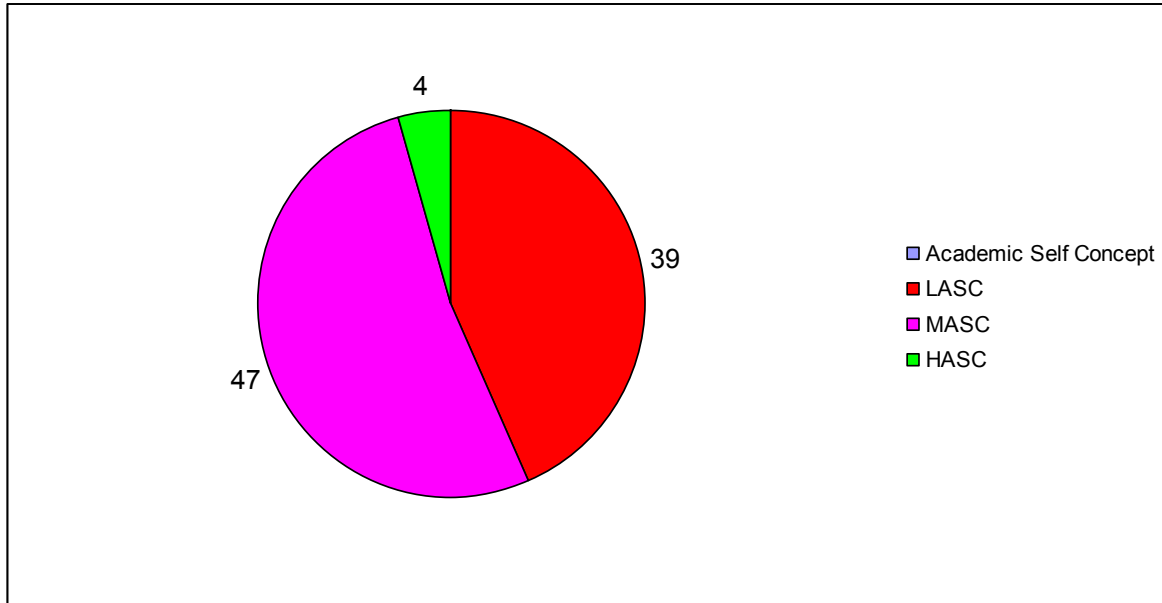


Fig. 4.2: A pie-chart showing academic self-concept distribution of the participants.

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1. **Hypothesis One:** There is no significant main effect of treatment on academic achievement in civic education among the senior secondary school students.

Table 4.2: Summary of Analysis of Covariance (ANCOVA) of Post Test Scores of academic Achievement.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared	Eta
Corrected Model	5773.511 ^a	15	384.901	25.527	.000	.838	
Intercept	347.413	1	347.413	23.041	.000	.237	
Pretest	3634.371	1	3634.371	241.037	.000	.765	
Trtgroup	110.039	2	55.020	3.649	.019	.430	
Sex	3.076	1	3.076	.204	.653	.003	
Asc	9.287	2	4.644	.308	.736	.008	
trtgroup * sex	1.239	2	.620	.041	.960	.001	
trtgroup * asc	5.086	3	1.695	.112	.953	.005	
sex * asc	8.415	2	4.208	.279	.757	.007	
trtgroup * sex * asc	8.748	2	4.374	.290	.749	.008	
Error	1115.778	74	15.078				
Total	321124.000	90					
Corrected Total	6889.289	89					

a. R Squared = .838 (Adjusted R Squared = .805)

The findings revealed that there was a significant main effect of treatment on academic achievement in civic education among the senior secondary school students ($F_{2,74} = 3.649$; $P < 0.05$, $\eta^2 = 0.430$). Therefore, the hypothesis that states there is no significant mean effect of

treatment on academic achievement in civic education among the senior secondary school students was rejected. This means that there is significant difference in the mean post test academic achievement in civic education among the senior secondary school students exposed to treatment: (mastery learning strategy, self management strategy) and the control group. This implies that the senior secondary school students in the experimental groups improved on their academic achievement in civic education as a result of the treatment. Hence hypothesis one was rejected statistically because there is a significant main effect of treatment on academic achievement in civic education among the senior secondary school students of the study. To find the degree of significance among the treatment groups.

Duncan Post-hoc analysis was carried out on the mean scores of the groups. This is presented in table 4.4

Table 4.3: Duncan Post-hoc Test on Academic Achievement based on Treatment

Trtgroup	N	Subset for alpha = 0.05		
		1	2	3
Control	30	53.7667		
self-management strategy	30		58.5333	
mastery learning strategy	30			64.9667
Sig.		1.000	1.000	1.000

Table 4.4 shows that the mean score of participants exposed to MLS (64.97) are significantly different from those in the SMS (56.53) and the control group (53.77). Also, the mean score of participants exposed to SMS is significantly different from those in the control group. This means that mastery learning strategy is more effective in enhancing academic achievement in Civic Education more than self-management strategy and the control group.

Table 4.4: Comprises of Experimental Groups control group on Academic Achievement

Variable + Category	N	Unadjusted variation	Eta	Adjusted for independent + covariates deviation	Beta
Grand Mean = 59.09					
Treatment group:					
1. Mastery learning strategy	30	64.97		5.88	
2. Self-Management intervention	30	58.53		-.56	
3. Control	30	53.77		-5.32	
			.525		.480
Gender:	45	58.36		-.73	
1. Male	45	59.82		.73	
2. Female					
			.084		.072
Academic Self-concept					
1. low					.127
2. moderate	39	55.92		-3.17	
3. high	47	61.11		2.02	
	4	66.25		7.16	
			.338		
Multiple R-squared					.296
Multiple R					.544

The MCA, as shown in Table 4.3, describes the academic achievement of all the groups. The participants exposed to mastery learning strategy had the highest mean score (64.97_(59.09 + 5.88)), followed by participants exposed to self-management intervention group (58.53_(59.09 - .56)) before those in the control group (53.77_(59.09 - 5.32)). This implies that mastery learning strategy is more effective than self-management strategy in fostering academic achievement of the participants.

Hypothesis Two: There is no significant main effect of gender on academic achievement in civic education among the senior secondary school students.

Table 4.3 shows that gender had no significant effect on academic achievement in civic education among the senior secondary school students ($F_{1,74} = 0.204$; $P > 0.05$, $\eta^2 = 0.003$).

This means that there is significant main effect of gender on academic achievement in civic education among the senior secondary school students. Hence hypothesis two was statistically not confirmed. It was therefore accepted.

Hypothesis Three: There is no significant main effect of academic self-concept on academic achievement in civic education among the senior secondary school students.

The results from table 4.3 showed that there was no significant main effect of academic self-concept on academic achievement in civic education among the senior secondary school students ($F_{2,74} = 0.308$; $P > 0.05$), $\eta^2 = 0.008$). Hence hypothesis three was accepted.

Hypothesis Four: There is no significant interaction effect of treatment and gender on academic achievement in civic education among the senior secondary school students.

Table 4.3 shows that there was no significant interaction effect of treatment and gender on academic achievement in civic education among the senior secondary school students ($F_{2,74} = 0.041$; $P > 0.050$, $\eta^2 = 0.001$). This means that there was no significant interaction effect of treatment and gender on academic achievement in civic education among the senior secondary school students. Hence hypothesis four was statistically confirmed.

Hypothesis Five: There is no significant interaction effect of treatment and academic self-concept on academic achievement in civic education among the senior secondary school students.

Table 4.3 shows that there was no significant interaction effect of treatment and academic self-concept on academic achievement in civic education among the senior secondary school students ($F_{3,74} = 0.112$; $P > 0.050$, $\eta^2 = 0.005$). This means that there was no significant interaction effect of treatment and academic self-concept on academic achievement in civic education among the senior secondary school students. Hence hypothesis five was confirmed.

Hypothesis Six: There is no significant interaction effect of gender and academic self-concept on academic achievement in civic education among the senior secondary school students.

Table 4.3 shows that there was no significant interaction effect of gender and academic self-concept on academic achievement in civic education among the senior secondary school students ($F_{2,74} = 0.279$; $P > 0.05$, $\eta^2 = 0.007$). This means that there was no significant interaction effect of gender and social self-efficacy on academic achievement in civic education among the senior secondary school students. Hence hypothesis six was confirmed.

Hypothesis Seven: There is no significant interaction effect of treatment, gender and academic self concept on academic achievement in civic education among the senior secondary school students.

Table 4.3 shows that there was no significant interaction effect of treatment, gender and academic self-concept on academic achievement in civic education among the senior secondary school students ($F_{2,74} = 0.290$; $P > 0.050$, $\eta^2 = 0.008$). This means that there was no significant interaction effect of treatment, gender and academic self-concept on learning achievement in civic education among the senior secondary school students. Hence, the null hypothesis seven was accepted.

Hypothesis Eight: There is no significant main effect of treatment on students' attitude to civic education among the senior secondary school students.

Table 4.5 Summary of Analysis of Covariance (ANCOVA) of Post Test Scores of Students' Attitude to Civic Education.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1289.815 ^a	15	85.988	5.046	.000	.505
Intercept	7781.032	1	7781.032	456.592	.000	.861
Preatt	736.127	1	736.127	43.196	.000	.369
Trtgroup	75.287	2	37.643	3.209	.017	.560
Sex	4.295	1	4.295	.252	.617	.003
Ase	14.062	2	7.031	.413	.663	.011
Tretgroup* sex	18.726	2	9.363	.549	.580	.015
Tretgroup * asc	44.082	3	14.694	.862	.465	.034
Sex * asc	4.626	2	2.313	.136	.873	.004
Tretgroup * sex*	13.124	2	6.562	.385	.682	.010
Asc						
Error	1261.074	74	17.042			
Total	918622.000	90				
Corrected Total	2550.889	89				

a.R Squared = .506 (Adjusted R Squared = .405)

The result of the findings revealed that there was a significant main effect of treatment on students attitude to civic education among the senior secondary school students ($F_{2,74} = 3.209$; $P < 0.05$, $\eta = 0.055$). Therefore, the hypothesis that states there is no significant mean effect of treatment on students' attitude to civic education among the senior secondary school students was rejected. This means that there is significant difference in the mean post test students' attitude to civic education among the senior secondary school students exposed to treatment: (mastery learning strategy, self management strategy) and the control group. This implies that the senior secondary school students in the experimental groups benefited from the treatment packages as they were able to perform significantly on students' attitude to civic education. Hence hypothesis one was rejected statistically because there is a significant main

effect of treatment on students attitude towards civic education among the senior secondary school students of the study. To find the degree of significance among the treatment groups table 4.6 is presented.

Duncan Post-hoc analysis was carried out on the mean scores of the groups. This is presented in table 4.6

Table 4.6: Duncan Post-hoc Test on Students' Attitude towards Civic Education based on Treatment

Trtgroup	N	Subset for alpha = 0.05		
		1	2	3
Control	30	87.7333		
self-management	30		100.3667	
Strategy mastery learning	30			102.5667
Strategy Sig.		1.000	1.000	1.000

Table 4.6 shows that the mean score of participants exposed to MLS are significantly different from those in the SMS and the control group. Also, the mean score of participants exposed to SMS is significantly different from those in the control group.

Hypothesis Nine: There is no significant main effect of gender on students' attitude towards civic education among the senior secondary school students.

Table 4.5 shows that gender had no significant effect on students' attitude towards civic education among the senior secondary school students ($F_{1,74} \sim 0.252$; $P > 0.05$, $\eta^2 = 0.003$).

This means that there is significant main effect of gender on students' attitude to civic education among the senior secondary school students. Hence hypothesis two was statistically confirmed. It was therefore accepted.

Hypothesis Ten: There is no significant main effect of academic self-concept on students' attitude to civic education among the senior secondary school students.

The results from table 4.5 showed that there was no significant main effect of academic self-concept on students' attitude to civic education among the senior secondary school students ($F_{2,74} = 0.413$; $P > 0.05$), $\eta^2 = 0.011$). Hence hypothesis ten was accepted.

Hypothesis Eleven: There is no significant interaction effect of treatment and gender on students' attitude to civic education among the senior secondary school students.

Table 4.5 shows that there was no significant interaction effect of treatment and gender on students' attitude towards civic education among the senior secondary school students ($F_{2,74} = 0.549$; $P > 0.050$, $\eta^2 = 0.015$). This means that there was no significant interaction effect of treatment and gender on students' attitude to civic education among the senior secondary school students Hence hypothesis eleven was statistically confirmed.

Hypothesis Twelve: There is no significant interaction effect of treatment and academic self-concept on students' attitude to civic education among the senior secondary school students.

Table 4.5 shows that there was no significant interaction effect of treatment and academic self-concept on students' attitude to civic education among the senior secondary school students ($F_{3,74} = 0.862$; $P > 0.050$, $\eta^2 = 0.034$). This means that there was no significant interaction effect of treatment and academic self-concept on students' attitude to civic education among the senior secondary school students. Hence hypothesis twelve was confirmed.

Hypothesis Thirteen: There is no significant interaction effect of gender and academic self-concept on students' attitude to civic education among the senior secondary school students.

Table 4.5 shows that there was no significant interaction effect of gender and academic self-concept on students' attitude to civic education among the senior secondary school students ($F_{2,74} = 0.136$; $P > 0.05$, ($\eta^2 = 0.004$). This means that there was no significant interaction effect of gender and academic self-efficacy on students' attitude to civic education among the senior secondary school students. Hence hypothesis thirteen was confirmed.

Hypothesis Fourteen: There is no significant interaction effect of treatment, gender and academic self concept on students' attitude to civic education among the senior secondary school students.

Table 4.5 shows that there was no significant interaction effect of treatment, gender and academic self-concept on students' attitude to civic education among the senior secondary school students ($F_{2,74} = 0.385$; $P > 0.050$, $\eta^2 = 0.010$). This means that there was no significant interaction effect of treatment, gender and academic self-concept on students' attitude to civic

education among the senior secondary school students. Hence, the null hypothesis fourteen was accepted.

4.2 Summary of findings

The purpose of the study is to determine the effectiveness of mastery learning and self management strategies in enhancing student academic achievement in senior secondary school civic education in Ibadan. The results of the findings are therefore summarized as follows:

1. The treatments were effective in enhancing students academic achievement in Senior Secondary School Civic Education in Ibadan. This implies that the senior secondary school students in the experimental groups benefitted from the treatment packages as they were able to get significantly on academic achievement in civic education.
2. There was no significant main effect of gender on academic achievement in Civic Education among the senior secondary school students.
3. There was no significant main effect of academic self-concept on academic achievement in Civic Education among the senior secondary school students.
4. There was no significant interaction effect of treatment and gender on academic achievement in Civic Education among the Senior Secondary School Students.
5. There was no significant interaction effect of treatment and academic self-concept on academic achievement in Civic Education among the senior secondary school students.
6. There was no significant interaction effect of gender and self concept on students academic achievement in Civic Education among the senior secondary schools.
7. There was no significant interaction effect of treatment, gender and self concept on students academic achievement in Civic Education among senior secondary schools.
8. There was significant main effect of treatment on attitude to Civic Education among Senior Secondary School Students.
9. There was no significant main effect of gender on attitude to Civic Education among Senior Secondary School Students.
10. There was no significant main effect of academic self concept on attitude to Civic Education among Senior Secondary School Students.
11. There was no significant interaction effect of treatment and academic self concept on attitude to Civic Education among Senior Secondary School Students.

12. There was no significant interaction effect of treatment and gender on attitude to Civic Education among Senior Secondary School Students.
13. There was no significant interaction effect of gender and academic self concept on attitude to Civic Education among Senior Secondary School Students.
14. There was no significant interaction effect of treatment, academic self-concept and gender on attitudes to Civic Education among Senior Secondary School Students.

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CHAPTER FIVE

DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

This chapter presents the discussion of the findings based on the seven hypotheses stated for the study, conclusion, implications of the findings, re-commendations and contributions to knowledge and suggestions for further studies.

5.1 Discussion of Findings

Hypothesis One

The result of the findings revealed that there was a significant main effect of treatment on academic achievement in civic education among the senior secondary school students. Therefore, the hypothesis that states there was no significant mean effect of treatment on academic achievement in civic education among the senior secondary school students was rejected. This means that there is significant difference in the mean post test academic achievement in civic education among the senior secondary school students exposed to the treatment. (Mastery learning strategy, self management strategy) and the control group. This implies that the senior secondary school students in the experimental groups benefitted from the treatment packages as they were able to get significantly on academic achievement in civic education. Hence, hypothesis one was rejected statistically because there is a significant main effect of treatment on academic achievement in civic education among the senior secondary school students of the study.

Guskey and Gates (1986) conducted a research synthesis of studies of group based mastery learning in secondary and elementary classroom. Twenty seven studies were selected for the synthesis. Guskey and Gates reported that without expectation the studies showed positive effects on a broad range of students' academic achievement, including student achievement, retention of learned material, involvement in revealed that the magnitude of the effects on student achievement varied widely across studies. Several studies investigated variables related to time. Although, Guskey and Gates contended that student learning rates are alterable to Bloom's model hypothesis sizes, then synthesis report does state that Artin 1984, Matained 2014 that learning rates are fairly stable and unstable characteristics.

Olubodun 2006 studied the effects of mastery learning strategy on students cognitive and affective outcomes in Mathematics. His results showed that mastery learning strategy

enhanced students learning ability and retain more what was learned than non mastery technique and also produced significant improvement in attitude towards Mathematics and Mathematics teacher than non mastery students.

Banlow, Wright, Sheasby, Turner and Hainsworth 2002, studies showed that efficacious self management encompasses ability to monitor one's condition and to effect the cognitive, behavioural and emotional responses necessary to maintain a satisfactory quality of life.

Hypothesis Two:

Gender had no significant effect on academic achievement in civic education among senior secondary school students. This also means that there was no significant main effect of gender on academic achievement in civic education, among the senior secondary school students.

Hence, hypothesis two was statistically not confirmed. It was therefore accepted.

A 2005 analysis of 46 meta-analyses that were conducted during the last two decades of the 20th century underscores that males and females are basically alike in terms of personality, cognitive ability and leadership. Hyde 2005 discovered that males and females from childhood to adulthood are more alike than different on most psychological variables resulting in what she calls a gender similarities hypothesis. In the same vein' Udous on (2011) results indicated that gender does not have any significant main effect on students learning outcomes in Chemistry. Both male and female students are equally encouraged to excel in their studies.

The present study was supported by the work of researcher who believed that gender stereotyping could be waning in Nigerian educational system (Fatade, Nneji, Awofaka & Awofala 2012). Akinbete et al (2001) finding supported that there existed no significant differences between male and female pupils in their academic achievement in the various school subjects. This however suggested that students should be given equal opportunities irrespective of their gender and they should be exposed to learning approaches that can eradicate or reduce the effect of gender on the academic achievement to the barest minimum.

Hypothesis Three:

There was no significant main effect of academic self-concept on academic achievement in civic- education among senior secondary school students. Here, hypothesis

three was accepted. Swann, Chang-Schnader and McClarty (2007) provided a review of the research on the relationship of a variety of self measures. They showed that the relationship of self-concept to the school academic achievement is very specific general self concept and non academic aspects of self-concept are not related to academic work, general academic achievement and outcomes measures are related moderately to academic success.

Hypothesis Four:

There was no significant interaction effect of treatment and gender on learning outcomes in civic education among the senior secondary school students. This means that there was no significant interaction effect of treatment and gender on learning outcomes in civic education among the senior secondary school students. Hence, hypothesis four was statistically confirmed. The reason for this could be that boys and girls used for the study were interested in improving and enhancing their academic achievement and attitude towards civic education, Moreover, this result is in line with Awofala et al (2013), Awofala & Nneji (2012) who found non-significant interaction effect of treatment and gender on students academic achievement. However, the non-significant interaction effect of gender and treatment recorded in the study showed that gender was not treatment sensitive. In achievement but the main effect of the treatment can be reckoned with only.

Hypothesis Five:

There was no significant interaction effect of treatment and academic self-concept on academic achievement in civic education among the senior secondary school students. This means that there was no significant interaction effect of treatment and academic self concept on academic achievement in civic education among the senior secondary school students.

Hence, hypothesis five was accepted. This result is in line with Yang, L. (2012) which pointed out that there is no significant interaction effect of treatment and academic self-concept on academic achievement among the participants in his study.

Hypothesis Six:

There was no significant interaction effect of gender and academic self-concept on academic achievement in civic education among the senior secondary school students. This means that there was no significant interaction effect of gender and self-concept on academic achievement in civic education among the senior secondary school students. Hence, hypothesis six was confirmed. Widaman et al (1992) study found no significant interaction

effect between males and females and academic self concept on learning outcomes for eight grade students.

Hypothesis Seven:

There was no significant interaction effect of treatment, gender and academic self-concept on academic achievement in civic education among the senior secondary school students. This means that there was no significant interaction effect of treatment, gender and academic self concept on academic achievement in civic education among the senior secondary school students. Hence, the null hypothesis seven was accepted. This indicates that gender and academic self-concept did not influence the treatment. Therefore, the null hypothesis is accepted.

Hypothesis Eight:

The result of the study showed that there was a significant main effect of treatment on attitude to Civic Education .This implies that Mastery learning and self-management strategies were effective in enhancing attitude to Civic Education among senior secondary school students in Ibadan, Nigeria. Although both interventions were effective, the result revealed the margin difference between the intervention, it was proven that it was more effective in enhancing the attitude to Civic Education among senior secondary school students than SMS. The result is also consistent with Ajogbeje (2012), Majid and Zahra (2010), Olufunmilayo (2010), Patricia and Johnson (2008), Kazu, Kazu and Ozedemi (2005), Adeyemi (2007), Wachinga and Gamba (2004), Abadam (2002), Olopade (2002) who found mastery learning strategy improves students attitude and achievement better than the conventional teachings methods. Mastery learning accounts for the high cognitive academic achievement of the participants in the mastery learning group.

Hypothesis Nine:

The hypothesis stated was accepted because there was no significant main effect of gender on attitude to civic education among senior secondary school students. The study buttressed various findings conducted by Patricia and Johnson (2008) on the effects of mastery learning approach and gender on students achievement and attitude in Physics, using two groups of students in co-educational schools. One group (experimental was taught with mastery learning approach and the other group (control) was taught with conventional teaching method. They also found that there was no significant effect of gender on the

attitude and achievement of the students. This implies that the strategies were effective in enhancing the learning outcomes of both male and female participants. Also, that finding opposed the findings of Fabunmi (2004) who in a study discovered that gender composition has a significant relationship with students attitude and academic performance and that gender composition has a significant influence on secondary school students attitude and academic performance. However, this implies that for a study to adequately measure the extent of difference that exists between male and female, there should be a determinant that encompasses the distinct level of learning outcomes of both male and female gender.

Hypothesis Ten

Hypothesis ten was accepted because there was no significant main effect of academic self concept on attitude to civic education among senior secondary school students. In a similar study, this study was not in support of the result which, revealed that academic self concept was a significant determinant in attitude and academic achievement. If students develop high level of academic self concept, they would exhibit high attitude and academic achievement (Fathia – Ashantiani et al 2007). Furthermore the finding is consistent with Walter (2003) who indicated that positive score of academic self concept is related to attitude and academic achievement.

Hypothesis Eleven

The hypothesis was accepted and this implies that there was no significant interactive effect of treatment and academic self concept on attitude to civic education among senior secondary school students. This is contrary to the study of Woon (2005) which result established a significant main effect according to grade, with secondary 3 students having significantly lower academic self concept than secondary 1 and 2 students. There was no significant interactive effect of treatment and academic self concept in enhancing attitude to civic education probably because there are different causes of low learning outcomes in which senior secondary school students may exhibit that can help to enhance learning outcomes and to increase it, this is also applicable to all other senior secondary school students.

Hypothesis Twelve

The hypothesis was accepted because there was no significant interactive effect of treatment and gender on attitude to civic education among senior secondary schools students.

This simply means that gender did not significantly moderate the effect of the treatment and gender in enhancing learning outcomes among senior secondary school students. These findings confirmed that females tend to be more academically sound than males, several other researchers have proven the same. This study however discovered no significant effect of gender in moderating the effect of the treatment in enhanced learning outcomes in civic education among senior secondary schools students.

Hypothesis Thirteen

The result showed that there was no significant interactive effect of gender and academic self-concept on attitude to civic education among senior secondary school students. This contradicts the findings of Rodsen (2012) that female gender has been stereotyped of low academic self-concept thus resulting in low learning outcomes. In the same vein, Congeraud long (2010) research suggested that girls generally have better behaviour in the classroom and differential in teacher expectations lead to their higher grades.

Hypothesis Fourteen

The hypothesis was accepted because there was no significant interactive effect of gender and academic self concept in enhancing leaning outcomes in civic education among the participants. Thus, table 4.3 clearly showed that gender and academic self concept did not moderate the effect of treatment on attitude to civic education (Ajogbeje 2012, Majid and Zahra 2010, Olufunmilayo 2010) and gender and academic self-concept on attitude to civic education (Rodsen 2012, Cunger and Lang 2010). It could be explained that senior secondary school student are faced with a lot of challenges which needs a serious effect and hark work in their studies. This situation may account for the insignificance of enhancing attitude to civic education selected thus allowing just the main effect of treatment in enhancing the learning outcomes in civic education.

5.2 Implications of the Study

This study has several implications; this study showed that mastery learning and self management strategies are effective intervention techniques in enhancing students learning outcomes in senior secondary school civic education.

The study has an implication on students' ability to learn better, reach higher levels of achievements and develop greater confidence in their ability to learn and in themselves as learners. It enables the educationists to increase their attention to exploring the potential of

formative assessments as one approach to increasing students learning outcomes. It also showed evidence of academic gains and improved students learning attributes such as improved confidence and attitude towards learning.

The findings of this study have an implication for the work of the teachers and counsellors in senior secondary schools by giving them the resources to fully understand the strategies. It will help to increase knowledge and motivation and students in the classroom.

The study has revealed the effectiveness of counselling services in schools in order to enhance student learning outcomes in civic education thus there is need for the government and schools to make a room for functional counselling services and recruitment of more counsellors to improve the cognitive ability of the students with low learning outcomes.

5.3 Limitations to the Study

The study is focused on the effectiveness of Mastery Learning and self management strategies in enhancing learning outcomes in Civic Education among Senior Secondary School Students.

The present study focused on Senior Secondary Civic Education and this would limit the generalization of the study results. The study could be replicated by using the Junior Secondary school students and students in tertiary institutions respectively in order to ascertain the extent to which the findings of this study can be generalized across different levels of education. Due to the experimental nature of the study, only SS II students who were selected and screened were used for the study.

Furthermore, a population of ninety (90) participants were used for the study. Also, only three (3) local government areas and three (3) senior secondary schools were used, this could reduce the generalization of the results.

5.4 Conclusion

The main objectives of this study was to examine the effects of mastery learning and self management strategies on learning outcomes in Civic Education among Senior Secondary School Students in Ibadan Nigeria. Academic self concept and gender were used as the moderating variables. Intervention programmes were applied, relevant data were collected and analyzed using appropriate statistical methods based on the finding of this study the following conclusions were made.

1. Mastery learning and self management strategies were effective in enhancing learning outcomes in Civic Education among Senior Secondary School Students. Mastery learning was more patent in enhancing learning outcomes in civic education than self management strategy but gender did not influence the learning outcomes in civic education of the participants.
2. Academic self concept did not significantly moderate the learning outcomes in civic education of the participants.
3. Moreover, Mastery learning, self management strategy and gender did not interact to produce effect on the leaning outcomes in Civic Education of the participants.
4. Lastly, mastery learning, self-management strategy and academic self concept did not influence the learning outcomes (academic achievement and attitude) of the participants.

Mastery learning and self-management strategies were effective constructs in enhancing learning outcomes in Civic Education. However mastery leaning strategy has proven to be more effective in the study.

5.5 Recommendations

In view of the findings of this study, the researcher would like to make some recommendations towards the enhancement of students learning outcomes in senior secondary schools.

The findings of this study could be made of interest to the students by stressing the importance of being motivated for their studies. The educators, policy makers and counsellors should devote their time to education by using appropriate study methods which could motivate and improve students learning outcomes.

It is imperative for the senior secondary schools to orientate and integrate fully the SS1 students successfully into the school in order to enable them to realize their academic potential. This would enable them to adjust and face challenges in their new environment.

The teachers and parents should be clearly orientated of the implication of the poor students learning outcomes and how best to support them in improving their learning outcomes in civic education, master and improve on their reading culture. The government should establish functional counselling services in schools, recruit more counsellors and allot a period on the time table in order to help them to attend to the developmental needs.

In the same vein, government and parents also need to increase their financial support for schools through the (PTF) Parent Teachers Fora and enhance the quality of teachers in public secondary schools.

5.6 Suggestions for Further Studies

Based on the findings of this study, these are the suggestions for further studies. Experimental studies on this research topic should be considered for further studies. This study has given an insight for further research work in the Senior Secondary school Civic Education in Ibadan. It is suggested that the study should cover a wider scope than what this research has covered in the study.

The research work was carried out in the senior secondary schools. It is hereby suggested that it would add more to knowledge if the study is replicated in Junior secondary schools and tertiary institutions.

This study made use of ninety (90) Senior Secondary School students drawn from three (3) local government areas in Ibadan, Oyo State. Further studies should use a larger sample drawn from the state and other states in Nigeria.

The researcher looked into two (2) independent variables (Mastery Learning and Self Management Strategies) and two (2) moderating variables (gender and self concept). Further researchers could add one (1) to the independent variables to make it three (3) and use other or more moderating variables in enhancing students learning outcomes.

5.7 Contributions to Knowledge

This study showed that mastery learning and self-management strategies could be used effectively to enhance learning outcomes among secondary school students in Civic education. The two strategies were effective constructs in enhancing students learning outcomes in Civic education,. However, mastery learning strategy has proven to be more effective in the study.

- This study has expanded the scope of literature on learning outcomes in Civic education and also filled the existing gaps in the literature.
- The outcomes of the study gives as a clear understanding of the (aftermath) and consequence of the students with poor learning outcomes.
- The instruments adopted by the researcher to measure the academic achievement and students attitude towards Civic Education are Civic Education Achievement Test

(CEAT) and Students Attitude toward Civic Education Questionnaire (SATCEQ) especially. These instruments are valid and comprehensive in measuring students learning outcomes in Civic Education.

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APPENDIX 1

TREATMENT PACKAGES EXPERIMENTAL GROUP 1

MASTERY LEARNING STRATEGY (MLS)

COUNSELLING SESSION & CIVIC EDUCATION TEACHING

SESSION ONE: Recruitment and Introduction, general orientation and administration of instruments to obtain pre-treatment measures.

Topic: Pre-test administration

The purpose of the session was to determine the participants' academic achievement and interest in Civic Education through the administration of the Civic Education Achievement Test (CEAT) as well as the Students Attitude towards Civic Education Questionnaire (SATCEQ)

Activity:

- 1) The researcher warmly welcomed the participants into the programme. Participants had 8 sessions of 2 hour each spanning eight weeks and the training of the trainer.
- 2) The researcher explained the reason for the programme and what the participants stand to benefit at the end of the programme.
- 3) The researcher explained the rules guiding the conduct of the programme and what is expected of the participants
- 4) The researcher explained the rules guiding the conduct of the programme and what is expected of the participants.
- 5) The researcher administered the pre-test instrument to the participants.

Participants were given take-home assignment after closing remarks.

- 6) Participants were commended for their time and encouraged to do their home work.
- 7) Participants were reminded of the time and venue of the next session.
- 8) The two research assistants were introduced to the participants. One handled the teaching aspect civic education the other saw to the co-ordination and marking of the formative test.

Session Two

Topic: Mastery Learning Strategy and its Components

Objectives: At the end of the session, the participants should be able to:

- define mastery learning strategy

- explain its components
- mention the model for learning strategy
- define learning outcomes and list categories
- define academic self-concept

Activity

- Participants were welcomed warmly
- The researcher reviewed the assignment with the participants
- The researcher explained mastery learning strategy, its components and model for teaching mastery learning strategy
- The researcher define learning outcomes, categories and also define academic self-concept.

Mastery Learning Strategy

Mastery learning strategy is the idea that teaching and learning should be organized through ordered steps and breaking down of subject matter and learning content into units with clear specific objectives which are pursued until they are achieved. In order to move to the next step, participants have to master the prerequisite step.

Components of Mastery Learning Strategy

- It emphasizes mastery of all objectives in each series of learning units.
- It was frequent diagnostic process test (formative test to identify specific learning problem of each learner)
- It uses systematic feedback – corrective procedures and alternative learning resources to help the students overcome the learning difficulties.
- It provides additional learning time for these learners who need it for remedial purpose.

Teaching Model for Mastery Learning Strategy

- Identify a task
- Determine performance level
- Teach the task
- Test the task
- Performance Assessment

- Proceed to the next task.

Assignment

The participants were asked to write out what they understand by the term Mastery Learning Strategy.

Closing Remarks

- The researcher commended the participants for their time and efforts.
- The participants were reminded of their assignments.
- The participants were enlightened that from the (3rd third session, the researcher handled the counselling session and the two research assistants handled the teaching session of Civic education with the researcher.
- Participants were reminded of the time – 1st hour for counselling session and 2nd hour for teaching session and the ventile of the next session.

Session Three

Topic: Ten Hindrances of success in Examination

Objectives: At the end of the session, participants are expected to:

- Mention the hindrances of success in examination
- Explain the hindrances of success in examination

Ten Hindrances of success in Examination

- Prayerlessness
- Irrational thinking
- Laziness
- Procrastination
- Imitation
- Wrong attitude
- Poor planning
- Poor equipment
- Poor environment
- Lack of support

Activities

Participants were welcomed to the day's session. The researcher counselled the participants on ten hindrances to success in examination. They were allowed to ask questions on the topics.

Assignment

The participants were asked to write five (5) more hindrances to success in examination.

Closing Remarks

- Participants efforts were commended
- The participants were reminded to do their assignment.

Session four

Topic; Twenty counselling solutions to the hindrances to success in examination.

Objectives: At the end of the session, the participants are expected to:

- Mention the counseling solutions to the hindrances of success in examination
- Explain the solutions to the hindrances to success in examination.

Twenty counselling solutions to Hindrances to success in Examination

- Punctuality in class
- Purchase all the writing materials – pen, textbooks, notebooks etc
- Cover syllabus, scheme of work
- Study everyday with the study time table
- Practise and revise regularly all the subjects taught
- Use good study technique – reading, writing
- Avoid noise and distractions – study in a conducive environment
- Keep and read class notes and summarise reading
- Do assignments and submit on time
- Participate in group discussion
- Attend extra coaching on difficult subjects
- Use exam time table to prepare
- Remove recent past questions eg.. Exam series
- Follow instructions during examination
- Use good writing materials

- Write neatly and legibly

Assignment

Participants were asked to write three (3) counseling solutions to the hindrances of success in examination.

Closing Remarks

- The researcher commended them for their effort and time.
- Participants were reminded of their assignment.

Session five

Topic; The Basic Requirement of success in life.

Objectives: At the end of the session, participants are expected to:

- mention the basic requirements of success in life.
- explain the basic requirements of success in life.

Topic: The Basic Requirements of success in life.

- Determination
- Positive self concept
- Positive thinking
- Hardwork
- Diligence
- Creativity and innovations
- Boldness and self-confidence
- Honesty
- Effective time management
- Right connections

Activities

The researcher welcomed the participants and introduced the topic for the counseling session. They were counseled on the basic requirements of success in life. Participants were allowed to ask questions.

Assignment

Participants were asked to discuss determination and creativity and innovations as the basic requirements of success in life.

Closing remarks

- Participants' effective commitment during sessions were reinforced through commendation and sharing of gifts with refreshment.
- Participants were reminded of their assignment and time for the next session.

Session Six

Topic: Effects of Video films, Music, Addicted Browsing and Social Media networks on Students Academic Performance.

Objectives: At the end of the session, participants are expected to:

- Mention and explain the effects of video films, music, addicted browsing and social media networks on students academic performance.

Effect of video films music, Addicted Browsing and Social Media Networks on Students Academic Performance.

- Poor study habit
- Poor reading culture
- Lack of concentration during teaching learning process
- Poor performance
- Impaired hearing
- Truancy
- Irrational behaviour and bad habit.
- Poor vision
- Underage marriage: "To go" couple, "Face book" husband/wife.
- Loss of life.

Activities

The researcher warmly welcomed the participants and checked their assignment. They were counseled on the topic and allowed to ask various questions. The participants were reinforced as they contribute or answer questions during session.

Assignment

Participants were asked to write two solutions to the counseled topic.

Closing Remarks

- Participants were commended for their contributions and sense of commitment.
- Participants were reminded of their assignments and time for the next session.

Session Seven

Topic: Steps in changing Bad Behaviour

Objectives: At the end of the session, participants are expected to:

- Define behaviour
- Mentioned and explain steps in changing bad behaviour

Steps in Changing Bad Behaviour

Behaviour is the way in which one acts or conducts oneself, especially towards others.

- Pre-contemplation: In this stage, we have either literally never thought about needing to change a particular behaviour. Often we receive ideas about the change of behaviour from counselor, family, friends etc.
- Contemplation: Here we have began to actively think about the need to change ones behaviour, to fully wrap our minds around the idea.
- Determination: In this stage, we begin to prepare ourselves mentally and physically for action to change the behaviour.
- Action: To move and act on the bad behaviour and change.
- Maintenance: This is the continual abstinence from the bad behaviour.

Civic Education Teaching Topics

Session Three – Civic Education – Meaning, scope, aims and objectives and importance of Civic Education.

Session four: Our values – important factors promoting good values system and types of values.

Session five: Cultism – meaning, causes, effects and how to eradicate cultism.

Session Six: Drug Abuse – Meaning, types, consequences and ways of discouraging drug abuse

Session Seven - HIV/AIDS – Meaning, causes, signs, effects and preventive measures of HIV/AIDS.

In the teaching session, research assistant I handled the teaching of the participants. The researcher and research assistant II assisted in marking the formative test at the end of every session. Ten participants were allotted to each of us.

The research assistants I & II were from the Civic Education Department of the college. The research assistant I wrote the lesson note for each topic from the above session.

Ten multiple choice questions were used for formative test after each session. The participants that performed well were allowed to move to the next level and to participate in the overall assessment and evaluation test while other participants that have low learning outcome were given more time to master the learning unit or task before moving to the next level.

Session Eight:

Topic: Evaluation, overall review, post-experimental test, administration and conclusion.

Objectives: At the end of the session, participants are expected to:

- Summarise their experience based on what they have been counselled, learnt and mastered during the course of the programme.
- Administer the post-test instruments.

Activities

- Participants were warmly welcomed.
- The activities of the previous sessions were role-played by the participants to ascertain the effects of the therapeutic programme and their positive experience.
- The post-test instruments were administered to the participants
- The researcher thanks the participants for their co-operation while gifts were given to each participant in appreciation of their participation at the training programme.

Closing Remarks

- The researchers commended the participants for their effort and time.
- The participants were admonished to effectively utilize the skills they have acquired during the intervention programme.

EXPERIMENTAL GROUP 2

SELF MANAGEMENT STRATEGY (SMS)

Session 1

Topic: Self Management Strategy (SMS)

- (i) Familiarizing with the participants and assuring them of confidentiality.
- (ii) Introduction of training programmes
- (iii) Administration of pretest questions

Objectives

At the end of this session, participants are expected to understand that the programme is purposely on research.

Administration of pre-test Instruments

Step 1: Familiarizing with the participants and assuring them of confidentiality.

The participants were welcomed by the researcher and introduction was done to familiarize the participants and trainer. The participants were assured of confidentiality.

Step 2: Introduction of training programmes. The researcher told the participants that the programme would be held for two (2) months and the contents of the subject matter were discussed. The participants were given the writing materials for the training session. The importance of punctuality in the training session was emphasized.

Step 3: Administration of Pretest questions

The trainer gave the participants Pre-test and guide them to fill it accurately. The participants were given assignments on the meaning of self-management.

Session 2

Topic: The components of self-management strategy.

This session involves description of self management strategy and its components. The researcher reviewed the assignment with the participants. This session was divided into two (2) steps.

Step 1: Definition of self management strategy.

The researcher defined self management strategy to the participants. It is a strategy that applies psychological principles to one's personality in an attempt to promote behavioural change (the researcher would show the participants how the strategy enhanced students learning outcomes in Civic Education).

Step II:

The researcher explained the components of self management strategy to the participants and the relevance of each component in enhancing the students learning outcomes in Civic Education. The researcher also define learning outcomes and academic self-concept.

- (i) Goal setting
- (ii) Self-Instruction
- (iii) Self-Reinforcement
- (iv) Self-Monitoring
- (v) Self-Evaluation

Meaning of Learning, learning outcomes and test the categories of Learning outcomes.

Learning is a process of active engagement with experience. In other words learning is an active process in which the learner uses sensory input and constructs meaning out of it. It may involve increase in skills, knowledge, understanding, values, feelings, attitudes and capacity to reflect.

Learning outcomes can be defined as specific measurable achievements. The learning outcomes are student centred measurable, achievable and assessable. Learning outcomes are generally developed in relation to specific programmes of study or scheme of work in formal education. It is a determinant of students moving to the next level of education.

Categories of learning outcomes

- Intellectual skills – knowing “how” and having procedure knowledge.
- Verbal information – being able to state ideas, “knowing that” or having declarative knowledge.
- Cognitive strategies – having certain techniques of thinking, ways of analyzing problems and having approaches to solving problems.
- Motor skills (executing movements in a number of organized meter acts such as playing sports or driving a car.
- Attitudes – mental states that influence the choices of personal actions.
- In a nutshell, it good for a student to have good if not excellent learning outcomes in all the subject taught in the school at any level of education.

The researcher enlightened the participants that each of the components would be taught in relation to how it applies to students learning outcomes. The participants were expected to define and explain self-management strategy.

Session 3

Topic: Meaning of Goal setting

(a) Goal setting is a desired result a person or a system envisions, plans and commits to achieve in some sort of assumed development.

(b) The forms of Goal setting were written using these acronyms of goals.

G - Growth

O - Observable

A - Attainable

L - Long or short term

S - Specific

(d) The benefits are motivation monitoring of progress and positive academic self concept.

The researcher discussed the benefits of goal setting with the participants.

Step 2: The participants to set their goals.

(a) The participants set their specific goals

(b) The difficult goals led to higher rates of problem-solving and achievements.

(c) Participants learning outcomes would improve, if their goals are specific and followed by feedback and rewards.

(d) The participants were asked to set their specific goals that would improve their learning outcomes in civic education.

(e) The researcher stated the goals they have written and guided them where necessary.

Assignment

(1) List the components of self-management

(2) Highlight the three characteristics of goals

Session 4:

Topic: Self Instruction

The researcher welcomed the participants and checked their assignments.

Step 1: Researcher defined and explained self instruction.

Self-instruction is a cognitive coping approach of giving adaptive self-instruction to one self at a crucial place of the coping process.

- (c) Self-instruction is a way of involving a person in talking to himself-herself through the completion of a task (self-talked).

Step 2: Researcher involved the participants with different methods of handling self-instruction.

- (a) The participants are the major agents to achieve their desired behaviour.
- (b) The researcher explained the four main steps of self-instruction to the participants.

Identify the problem of the student learning outcomes in Civic Education (List out the problems solution and attainable goals).

- State the solutions to the problems
- Reinforce one-self verbally
- Encourage the participants to engage in self-talk on their problems.

Step 3:

- (a) Write out more challenges on the learning outcomes in Civic-Education.
- (b) The researcher asked the participants to do more self-talk on the challenges they have written.

Session 5

Topic: Self Reinforcement

The researcher welcomed the participants and went through their assignments.

Step 1: The researcher explained self-reinforcement

- (a) Self-reinforcement

Step 2: The different types of reinforcement

- (a) Re-inforcement can be self generated verbal statement (yes, I got it, good job, Excellent).
- (b) The use of immediate reinforcement such as cash, caps and bags etc.
- (c) The participant can also reinforce themselves by appreciating God.

Step 3: Procedure for Reinforcement

- (a) Choose a suitable reinforcement
- (b) Reinforcement immediately for effectiveness without wasting time.
- (c) The researcher played role with the participants.

Step 4:

The researcher allowed the participants to ask various questions and advance them to employ self-reinforcement at home.

Session 6

Topic: Self monitoring

The researcher welcomed the participants and went through their assignments.

Step 1: Definition of Self-monitoring

Self-monitoring is a personality characteristics that make an individual pay closer attention to a social situation so that he can change his behaviour to suit that situation.

Step 2:

- (a) Reducing a particular behavioural target can be gradually reduced.
- (b) Deciding a particular goal and an effect to be met before self-reward.
- (c) Keep in mind that you monitor the behaviour to achieve particular set behaviour is rehearsed and scores recorded or out-scores in keys.
- (d) There would be performance standard on happening when an excellent behaviour
- (e) Do not focus on undesirable behaviour previously experienced.

Step 3:

The researcher explained the comparison between observed behaviour and set standard.

- (a) The researcher explained the importance of keeping records with the clients.
- (b) The participants should use frequency counts for behaviour that occurs continuously.
- (c) It is advisable that if expected targets are not met, re-start the procedures again.
- (d) Rehearse and role play the whole activity recorded afresh with participants.

The researcher allowed the participants to ask various questions.

SESSION 7: Self Evaluation

The researcher welcomed the participants and checked their assignments.

Self-Evaluation.

Step 1:

- (a) Assess their self-concept to know the standard of their competence in their learning outcomes in Civic Education.
- (b) Ensure that the expected set standard exceeds the observed behaviour to ascertain there is satisfaction.

- (c) Make sure that their self-monitoring approaches lead to the enhancement of student learning outcomes.
- (d) Consistently evaluate the whole therapeutic processes of self-management strategies as it positively affects their learning outcomes.

SESSION 8:

Topic: Summary of discussions and administration of post-test instrument.

Step 1:

The researcher welcomed the participants and gave an overview of the components of self-management. Participants were allowed to ask questions to evaluate what they have learnt. Some of the sessions were role played and rehearsed.

The researcher encouraged the participants to make use of everything they have learnt in every session so as to yield positive result in their lives.

Step 2

The researcher administered the post-test questionnaires to the participants.

Step 3:

The researcher expressed an appreciation to all the participants and wished them success in their future endeavours.

EXPERIMENTAL GROUP 3

CONTROL GROUP

Session 1

Topic: Administrative of pre-test instrument

Objectives: To administer pretest instruments on the participants.

Activity: The researcher familiarized herself with them, the participants were assured of confidentiality. She explained to the participants that the programme is for research purpose only. She solicited for their support and cooperation. The pre-test instruments were administered to the participants.

Closing Remark

- The participants were appreciated for the effort and time.
- The importance of punctuality during the sessions was emphasized.
- The participants were reminded of time and venue of the next session.

Session 2 – 7

Topic: Poverty and its consequences on Students Academic Performances.

Objectives: At the end of the session, the participants should be able to:

- define poverty
- mention the causes of poverty
- list the consequences of poverty on students academic performance
- counseling tips o reducing the effect of poverty
- mention ways of controlling poverty on students academic performance.

Activity

- Step 1: The participants were warmly welcomed.
- Step 2: The researcher de fines poverty

Poverty is the state of being poor. This is the inability to provide for ones basic needs of life such as food, shelter, clothing and education. (Odanye, 2008).

Step 3: The researcher mentioned the causes of poverty.

- Huge large family size and extended family system
- Inadequate resources in the society.
- Careless and extravagant spending habit.
- Laziness.
- Low level of education and high level of illiteracy.

Step 4: The researcher listed the consequences of poverty on student academic performance.

- Low learning outcomes.
- Poor quality of life.
- In accessibility to education.
- Early marriage.
- Unwanted pregnancy.
- Vulnerability of students: to criminal activities such as armed robbery, stealing, prostitution, drug addiction etc.
- Violent activities by students e.g. terrorism, rapping, assassination, kidnapping etc.
- Emotional problems such as anger, worries, high blood pressure and other health problems.

Step V: The researcher mentioned the ways of controlling poverty.

- Provision of basic and qualitative education that is highly subsidized if not totally free by the government.
- Development and acquisition of skills.
- Provision of basic amenities.
- Provision of bursary awards and soft loans for educational purposes.

Assignment

- The participants were asked to mention three more ways of controlling poverty.

Closing remark:

- The researcher appreciated the participants for their cooperation.
- The participants were reminded of their assignment.
- They were reminded of the time and venue of the next session.

Session 8

Topic: Administration of the post-test instrument

Objectives: To administer the post-test instruments to the participants.

Activity: The post-test instruments were administered after participants have been subjected to a non-therapeutic talk on “poverty and its consequences on students’ academic performance”. They were encouraged to give a call to the researcher whenever they need assistance. The researcher gave the participants pens, pencils, rulers, bucket. They were also served drinks and biscuits for refreshment. The researcher thanked and appreciated the participants for their co-operation.

Closing Remark

The researcher commended the participants for their co-operation and support during the sessions.



APPENDIX II
Parent's Consent Letter

Dear Parents,

The undersigned who is a researcher of the Department of Counselling and Human Development Studies, University of Ibadan with Matric No 140958 wishes to seek your consent to select your child/ward to participate in a research activity.

The research exercise will take place in their school during the school hours. It will run for eight (8) weeks, one (1) hour in a week.

Please tick YES/NO to indicate your approval or rejection.

YES ()

NO ()

OLOKO SAUDAT OLUWAKEMI
08001850003/08059883295.

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APPENDIX 1II

UNIVERSITY OF IBADAN DEPARTMENT OF GUIDANCE AND COUNSELLING CIVIC EDUCATION ACHIEVEMENT TEST (CEAT)

This test is designed to measure the achievement of students in Civic Education in Senior Secondary Schools in Ibadan. Your honest response will be highly appreciated.

SECTION A: PERSONAL DATA

Date:

Name of the School:

Class:

Local Government Area:

Age:

Sex:

Place of Residence:

SECTION B

Instruction: Each question is followed by four option lettered A to D. Find out the correct option for each question and tick your answer by putting (-). Give only one answer to each question.

Now answer the following questions.

1. Youth empowerment is best described as the
 - A. Training given to individuals for acquiring means of livelihood
 - B. Practice of engaging in prospective career
 - C. Provision of subsidized meals to the citizens by government
 - D. Mobilization of citizens for political rally.
2. A situation where most citizens fail to vote in elections could be described as political
 - A. Socialization
 - B. Culture
 - C. Apathy
 - D. Legitimacy

3. Conflicts are better resolved in the society through. A. tribunal B. litigation C. dialogue D. the court
4. Democratic governance is usually characterized by
- A. Free, fair and credible elections
 - B. Buoyant and competitive economy
 - C. Accessible employment opportunities
 - D. Youth participation in governance
5. Political apathy often leads to
- A. Low level of participation B. good governance C. political stability D. low literacy level.
6. The implication of positive communal relationship is that it
- A. Promotes solidarity and love
 - B. Ensures obedience to constituted authority
 - C. Encourages ethnic diversity
 - D. Promotes rural-urban drift
7. One major factor that attracts some Nigerians into trafficking is
- A. Over-population related issues B. influx of foreigners into the country C. insatiable quest for quick wealth D. influence of Western and social media
8. Leaders can best protect the interests of their followers by
- A. Embarking on periodic constitutional review
 - B. Creating socio-economic opportunities for foreigners
 - C. Creating conducive atmosphere for participation
 - D. Rewarding supporters with contracts
9. The most popular means through which citizens of a country can participate in politics is by
- A. Being members of political parties
 - B. Engaging in constructive criticisms
 - C. Engaging in political debates
 - D. Voting in elections

10. A major benefit of youth empowerment is
A. Dependence on foreign aid. B. discouragement of patriotism C. reduction in crime rate D. negation to national prosperity.
11. The use of drug without the advice of a doctor or pharmaceutical is _____
(A) Drug abuse (B) abuse (C) water
12. Which of the following is not a drug that can be abused (A) prescription drugs (B) Marijuana (C) Nicotine
13. Symbols of national identifying Nigeria include the following except (A) Airport (B) National Flag (C) Nigeria currency
14. Stigmatization of people living with HIV/AIDS will make them (A) happy (B) unhappy (C) serious
15. The desire to work and labour for the freedom of ones community or country is (A) Tribalism (B) Nationalism (C) National struggle.
16. A _____ is a legal member of the state (A) an alien (B) citizen (C) leader
17. Preventive measures of HIV/AIDS infection _____ (A) Hard working (B) Respect (C) Total abstinence
18. One of these could be classified as a political rights (A) right to vote and be voted for (B) right to education (C) freedom to own property
19. It could be inferred from the statements above that cultism in schools could lead to
A. Sudden prosperity B. uninterrupted academic calendar © popularity on campus D. untimely death
20. Victims of human trafficking are usually compelled to engage in
A. Lucrative employment B. visiting tourist sites C. part-time studies D. forced labour
21. Which of the following is not a duty of citizens to their communities (A) promotion of hostility (B) security (C) environmental sanitation.
22. The arms of government consist of (A) the executive, Judiciary and Armed forces (B) the Legislature Judiciary and executive (C) the executive, trade union civil society
23. The following are the types of youth empowerment skills except (A) calculating skill (B) Artistic skill (C) Life coping skill
24. Public corporation are set up (A) an act of parliament (B) a minister (C) a director

25. The tier of government which is commonly referred to as the grassroots government is (A) Federal Government (B) State (C) Local government
26. The Nigerian National flag was designed by (A) Pa Micheal Taiwo Akinkunmi (B) Chief Olusegun Obasanjo (C) Lamidi Fakeye
27. In Nigeria, public servants are expected to be (A) non-partisan (B) political (C) ambitious (D) a political
28. Cultism can be described to be (A) amiable (B) attractive (C) dangerous (D) harmless
29. Interpersonal relationship exists when (A) citizen pay their taxes regularly to inland revenue service (B) citizens are politically conscious and participate in voting (C) there is interaction between persons in a social setting (D) groups share social interest and communal aspiration
30. Human rights are basic natural rights which people enjoy primarily because they are: (A) members of a political party (B) international citizens (C) members of a community (D) human beings
31. Citizenship status is acquired through (A) birth, indigenization, colonization and referendum (B) association, convention, naturalization and incorporation (C) birth, naturalization, honorary and registration (D) registration, inter-relationship, integration and declaration.
32. Who among the following could be described as the founding father of Nigerian nationalism? (A) Nnamdi Azikiwe (B) Herbert Macauley (C) Ahmadu Bello (D) Obafemi Awolowo
33. Rule of Law means (A) supremacy of the law (B) absence of legal immunity (C) peace, order and stability (D) obedience to any authority
34. A major characteristics of civil society is (A) the desire to win election (B) corporate responsibility (C) social responsibility (D) political gerry mandering
35. To prevent the spread of HIV/AIDS, people should be encouraged to (A) avoid casual sexual activities (B) marry very early in life (C) engage in gainful employment (D) pursue higher education
36. Which of the following is not necessary for public servants to perform effectively? (A) In-service training (B) appointment based on nepotism (C) value re-orientation for public servants (D) incentives for meeting set goals.

37. One of the conditions which can limit the enjoyment of Human Rights in Nigeria is the (A) acceptance of foreign aids by the government (B) improvement in literacy level of the citizen (C) declaration of state of emergency by government (D) periodic review of the constitution by government.
38. Civic societies are vital for the promotion of popular participation because they are (A) profit-oriented organizations (B) engaged in developmental programmes (C) involved in political education (D) formidable oppositions to government.
39. One of the major barriers to national development is the (A) low poverty level (B) existence of multi-party system (C) prevalence of corrupt practices (D) persistent rural-urban migration.
40. The quotation above shows that the speaker is concerned about (A) nationalism (B) revolution (C) tourism (D) welfarism
41. Citizenship by _____ is generally said to be automatic and absolute (A) birth (B) naturalization (C) registration
42. A non citizen is regard as _____ (A) an alien (B) militant (C) justice
43. Rule of law implies (A) periodic election (B) supremacy of law (C) due process
44. Symbols of national identity in Nigerian include the following expect (A) Airport (B) National flag (C) Nigeria currency
45. Every citizen in any democratic society has the right to _____ during election (A) vote (B) laugh (C) sit down
46. Nigeria got her independence on _____ (A) 1960 (B) 1093 (C) 1965
47. Stigmation of people living with HIV/AIDS will make them (A) unhappy (B) happy (C) serious
48. There are _____ Geo political zone in Nigeria (A) Six (B) Seven (C) Five
49. A situation whereby there is only one legislature house in a country is called (A) single legislature (B) double legislature (C) Dual legislature
50. These are symptoms of AIDS expect (A) Night sweats (B) Stomach ache (C) Loss of weight.

APPENDIX IV

MASTERY LEARNING STRATEGY CIVIC EDUCATION TEACHING

LIST OF TOPICS

- **Civic Education**, Meaning, scope, aims and objectives and importance of Civic Education.
- **Our Values** – Importance, factors promoting value system
- **Cultism** – meaning, causes, effects and how to eradicate cultism.
- **Drug abuse** – meaning types, consequences and ways of discouraging drug abuse
- **HIV/AIDS** – Meaning, causes, signs, effects and preventive measures of HIV/AIDS
- **Human Trafficking** – Meaning, causes and how to eradicate human trafficking.
- **Citizenship** – Meaning, types, how to be a good citizen.
- **Interpersonal relationships** - Meaning, ways and advantages of interpersonal relationship.

APPENDIX V
UNIVERSITY OF IBADAN
DEPARTMENT OF GUIDANCE AND COUNSELLING
STUDENTS ATTITUDE TOWARDS CIVIC EDUCATION QUESTIONNAIRE
(SATCEQ)

This questionnaire is designed to find out the students attitude towards Civic Education in Senior Secondary Schools in Ibadan. Your honest response would be highly appreciated.

SECTION A: PERSONAL DATA

Date:

Name of the school:

Class:

Local Government Area:

Age:

Sex:

Place of Residence:

SECTION B

Instruction: Please complete the following by putting (X)

Key:

1. U - Undecided
2. S - Strongly Disagree
3. D - Disagree
4. A - Agree
5. SA - Strongly Agree

S/N	ITEMS	U	SD	D	A	SA
1.	Civic education is an interesting subject					
2.	Civic education is easy to pass in an examination					
3.	It is relevant to the course I want to study in the university					
4.	It is a difficult subject					
5.	I like Civic Education					
6.	The subject syllabus is too wide					
7.	Civic education is not relevant to my future career					
8.	Civic education helps to develop a student to be a responsible citizen of a country					
9.	I hate Civic Education					
10.	Civic education is my best subject					
11.	I easily understand the topics in Civic Education					
12.	I study Civic education when I m asked to do so					
13.	I m still in Civic Education class due to my teachers advice					
14.	Nothing interests me in Civic Education					
15.	I feel like going out whenever my civic education teacher comes to my class.					
16.	Civic education is easy to learn because it deals with the happening in our society.					
17.	The subject can develop me to be a future leader.					
18.	I always have problems in doing well in Civic Education examinations.					
19.	I cannot buy civic education textbook because I don't like the subject.					
20.	I only do it because it is a compulsory subject.					
21.	Civic education teaches morals.					
22.	My heart palpitates anytime I have the subject.					
23.	I feel like abandoning the subject.					
24.	I can cope with Civic Education.					
25.	My friends discouraged me from attending the class.					
26.	I am always confident of passing Civic Education examination.					
27.	I love asking questions during Civic Education period.					
28.	I go through Civic Education not after each class.					
29.	I read the subject a lot but I don't always understand.					
30.	I always associate with students that love Civic Education.					

APPENDIX VI
LEARNING PREFERENCE ASSESSMENT (LPA)

This is a questionnaire designed together data on learning preferences and attitudes towards learning.

SECTION A: PERSONAL DATA

Date:

Name of the school:

Class:

Local Government Area:

Age:

Sex:

Place of Resident:

Section B – Instruction

Please read each choice carefully and choose the response which best expresses your feelings.

Please complete the following by putting (x)

1. Almost never true of me, I hardly never feel this way.
2. Not often true of me, I never feel this was less than half the time.
3. Sometimes, true or me, I feel this way about half the time.
4. Usually true of me, I feel this way more than half the time.
5. Almost always, true of me, there are very few times when I don't feel this way.

S/N	ITEMS	1	2	3	4	5
1.	I'm looking forward to learning as long as I'm living.					
2.	I know what I want to learn.					
3.	When I see something that I don't understand, I stay away from it.					
4.	If there is something I want to learn I can figure out a way to learn it.					
5.	I love to learn.					
6.	It takes me a while to get started on new projects.					
7.	In a classroom situation, I expect the instructor to tell all class members exactly what to do at all times.					
8.	I believe that thinking about who you are, where you are and where you are going should be a major part of every persons education.					

9.	I don't work very well on my own.					
10.	I discovered a need for information that I don't have, I know where to go to get it.					
11.	I can't learn things on my own better than most people.					
12.	Even if I have a great idea, I can't seem to develop a plan for making it work.					
13.	In a learning experience, I prefer to take part in deciding what will be learned and how.					
14.	Difficult study doesn't better me if I'm interested in something.					
15.	Not one but me is truly responsible for what I learn.					
16.	I can tell whether I'm learning something well or not.					
17.	There are so many things I want to learn, that I wish there were more hours in a day.					
18.	If there is something, I can find time for it, no matter how busy I am.					
19.	Understanding what I read is a problem for me.					

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APPENDIX VII

Academic Self Concept Scale

Listed below are a number of statements concerning school-related attitudes. Rate each item as it pertains to you personality. Base your ratings on how you feel most of the time. Use the following scale to rate each statement:

- A - Strongly Disagree
- B - Disagree
- C - Agree
- D - Strongly Agree

S/N	ITEMS	SD	D	A	SA
1.	Being a student is a very rewarding experience.				
2.	If it try hard enough, I will be able to get good grades.				
3.	Most of the time my effort in school are rewarded.				
4.	No matter how hard I try I don't do well in school.				
5.	I often expect to do poorly on exams.				
6.	All in all, I feel I am a capable student.				
7.	I do well in my subjects given the amount of time I dedicate to my studying.				
8.	My parents are not satisfied with my grades in college.				
9.	Others view me as intelligent.				
10.	Most subject are very ease for me.				
11.	I sometimes feel like dropping out of school.				
12.	Most of my classmates do better in school than I do.				
13.	Most of my instructors think that I am a good student.				
14.	At times I feel college is too difficult for me.				
15.	All in all, I am proud of my grades in college.				
16.	Most of the time while taking a test I feel confident.				
17.	I feel capable of helping others with their class work.				
18.	I feel teachers' standards are too high for me.				
19.	It's hard for me to keep up with my class work.				
20.	I am satisfied with the class assignments that I turn in.				
21.	At times I feel like a failure.				
22.	I feel I don't study enough before a test.				
23.	Most exams are easy for me.				
24.	I have doubts that I will do well in my major.				
25.	For me, studying hard pays off.				
26.	I have a hard time getting through school.				
27.	I am good at scheduling my study time.				
28.	I have a fairly clear sense of my academic goals.				
29.	I'd like to be a much better student than I am now.				

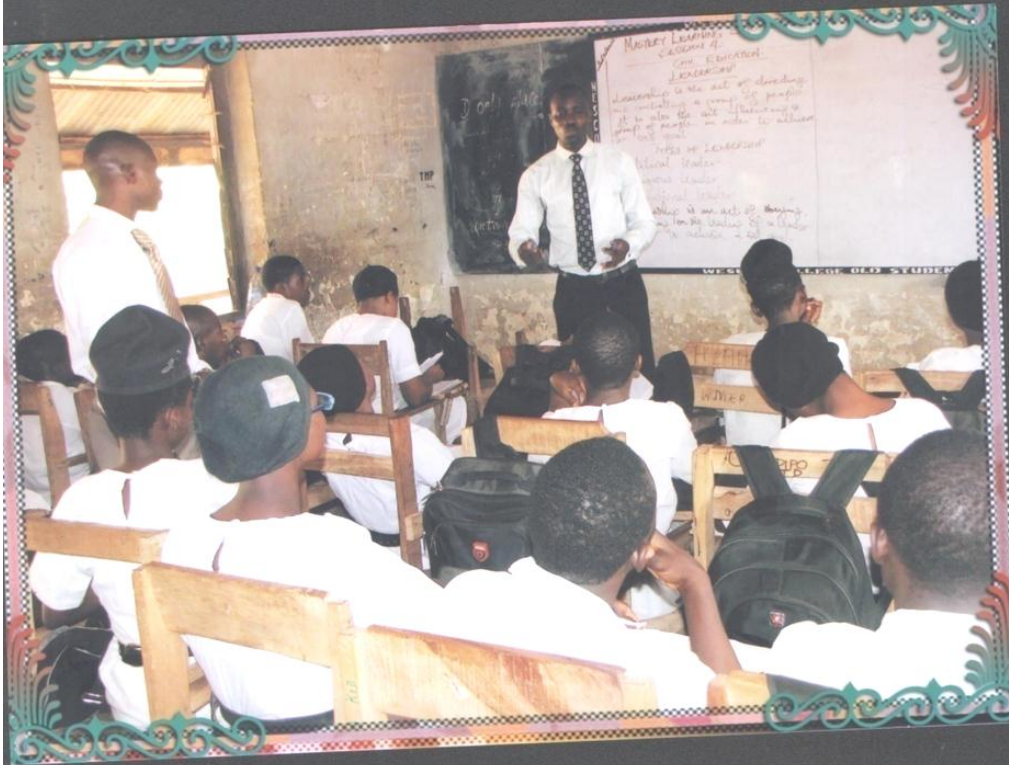
30.	I often get discouraged about school.				
31.	I enjoy doing my school work.				
32.	I consider myself a very good student.				
33.	I usually get the grades I deserves in my courses.				
34.	I do not study as much as I should.				
35.	I usually feel on top of my work by finals week.				
36.	Others consider me a good student.				
37.	I feel that I am better than the average college student.				
38.	In most of the courses, I feel that my classmates are better prepared than I am.				
39.	I feel that I don't have the necessary abilities for certain courses in my major.				
40.	I have poor study habits.				

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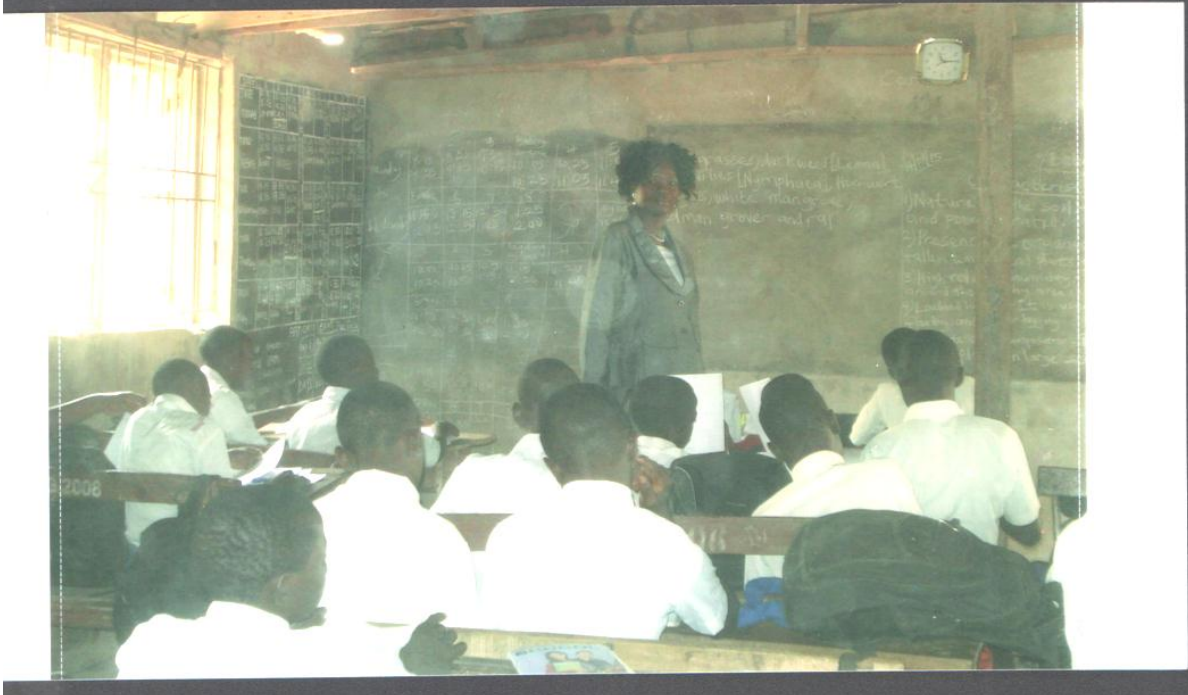
PHOTO PIX

- (1) The researcher with the participants from Ratibi College, Oke-Offa, Oluyoro when administering the screening instruments for the self-management strategy group.
- (2) At Wesley College, Elekuro, at one of the counselling session for the Mastery Learning Strategy session.
- (3) At one of the session of SMS at Ratibi College.
- (4) The two research asistants during the teaching session of civic education for the Mastery Learning strategy group.
- (5) The resercher with the control group at Urbanday Grammar School, Olaogun, Old Ife Road, Ibadan.
- (6) At Wesley College, the two research assistants, the researcher and the participants for the Mastery learning group.
- (7) Question-time for the participants of self-management strategy group at Ratibi College.
- (8) The control group with the researcher at Urbanday Grammar School.
- (9) The Mastery Learning participants during the counselling session.
- (10) The researcher and the self-management strategy gorup at the completion of the programme.













The researcher with experimental group 1 – The Mastery Strategy Group

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The participants and the researcher during one of the session

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The participants listening to the researcher.

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