

**EFFECT OF SENIOR SCHOOL CERTIFICATE EXAMINATIONS,
UNIVERSITY MATRICULATION EXAMINATION AND
PSYCHO-DEMOGRAPHIC FACTORS ON ACADEMIC
PERFORMANCE OF UNIVERSITY FRESHMEN IN
SOUTH WEST,
NIGERIA**

BY

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MATRIC NO. 78104

**A POST FIELD PAPER PRESENTED IN THE DEPARTMENT OF
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DEDICATION

This work is dedicated to Almighty God for His goodness, favours and compassion and to my late father- Elder Fehintola, Emmanuel Ayinde, who until his death encouraged me to embark on this work.

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ABSTRACT

The number of candidates seeking admission into universities is increasing at geometrical rate without a corresponding increase in the number of available space. After passing the School Certificate Examinations (SSCE) conducted by either West African Examinations Council (WAEC) or National Examinations Council (NECO) and the University Matriculation Examination (UME), the candidates are admitted into various academic programmes. However, at the end of every session, the Grade Point Average (GPA) is used to assess the overall performance of the freshmen. More often, some students fail to meet the required number of units. This leads to withdrawal from such academic programmes. This, to a great extent, has cast aspersions on the integrity of the examination bodies. Studies have concentrated on school transition and adjustment of freshmen but little attention has been paid to the correlation between entry qualifications and university academic performance of the freshmen. This study, therefore, examined the predictive values of SSCE, UME scores, and Psycho-demographic factors (age, gender and academic self-efficacy) in respect of academic performance of university freshmen in South-West, Nigeria.

The study adopted a descriptive survey design of *ex-post-facto* type. All the five federal universities in the southwest were selected for the study. Simple random sampling technique was used to select 2,518 university freshmen (1,423 males and 1,095 females). The average age of the participants was 20.63 with standard deviation of 2.96 years. Secondary data were collected from the selected universities' Records and Admissions Offices. The Academic Self-confidence Scale ($\alpha=0.86$) was used as a measure of academic self-efficacy. Seven research questions were raised and answered. Correlation and Multiple Regression were used for data analysis.

There was significant correlation between the independent variables (gender: $r = 0.15$, $p < 0.05$); UME score ($r = 0.15$, $p < 0.05$); age ($r = 0.17$, $p < 0.05$); academic self-efficacy ($r = 0.17$, $p < 0.05$); NECOSSC ($r = 0.16$, $p < 0.05$); WASSC ($r = 0.18$, $p < 0.05$) and grade point average (GPA) of the participants. These variables (i.e. WASSC, NECOSSC, UME scores, gender, age and academic self-efficacy) when combined, accounted for 54.6% of the total variance in the students' academic performance. There was also significant contribution of the independent variables to academic performance of the participants [$F_{(5, 2512)} = 26.13$, $p < 0.05$]. Also, WASSC made the most significant relative contribution to the prediction of academic performance ($\beta = 0.39$; $t = 8.13$; $p < 0.05$); followed by NECOSSC ($\beta = 0.33$, $t = 6.13$, $p < 0.05$); academic self-efficacy ($\beta = 0.15$, $t = 3.81$, $p < 0.05$) and age ($\beta = 0.13$, $t = 2.76$, $p < 0.05$). There was also significant difference in the academic performance of university freshmen with WASSC ($\bar{X} = 2.60$) and NECOSSC ($\bar{X} = 2.28$) results ($t = 6.08$, $df = 1869$, $p < 0.05$).

The six independent variables were potent factors in predicting academic performance of university freshmen. The study indicates that, WASSC and NECOSSC could be regarded as adequate entry qualifications into the university. Counselling interventions aimed at enhancing academic self-efficacy of freshmen should be adopted during orientation programmes in the universities.

Key words: Academic performance, Freshmen, Senior School Certificate Examinations, Psycho-demographic factors, University Matriculation Examination.

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CERTIFICATION

I certify that this research work was carried out by Fehintola, Joseph Olusola in the Department of Guidance and Counselling, Faculty of Education under my supervision.

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CHAPTER ONE

INTRODUCTION

Background to the Study

Admission into the university creates a lot of excitement for university freshmen. This is particularly so when the competitive nature of admission into the university is considered (Adeyemo 2010). The joy associated with gaining admission into a tertiary institution is not limited to the students alone, as their parents and relatives are part of the celebration. As fresh students gain admission into the university, they often find that there is a huge gap between their initial expectation and the situation on ground.

Adjustment to university life is a transitional experience with different effects for the people involved because the number of candidates seeking admission is enormous. In the 2009/2010 session, the total number of students who picked University of Ibadan as their first and second choice with university matriculation examination (UME) scores of 200 and above was 38,669 while those invited for interview after due processing of university Matriculation examination (UME) scores/WASSC/NECOSSC was 5383. The total number interviewed was 4929 and those recommended for JAMB admission was 3925, this number was accepted by JAMB for admission. Out of this 3925, only 3810 candidates (47% female and 53% male) were cleared for matriculation of students in their studies. Bamiro (2010), states that there is danger posed by unseriousness of students in their studies. This is because the university has a prescribed minimum level of performance for any student to be allowed to continue his or her programme. At the end of every session, the Cumulative Grade Point Average (CGPA) is used to assess the overall performance. Failure to pass the minimum number of units at any level will lead to either withdrawal from the programme of study or withdrawals from the university depending on the faculty decision. The average number of withdrawals from the university in the past five sessions (i.e from 2003/2004 to 2008/2009) is two hundred and twenty seven. The statistics of withdrawal from the university of Ibadan at the end of 100 level in the past five sessions are as follows

Table 1.1: Enrolment and Withdrawal at 100 Level from 2003/2004-2008/2009 Sessions

SESSION	TOTAL ENROLMENT	TOTAL WITHDRAWAL	% WITHDRAWAL
	100 LEVEL	FROM THE UNIVERSITY	
2003/2004	2,696	330	12.2
2004/2005	2,617	317	12.1
2005/2006	2,470	261	10.6
2007/2008	2,224	158	7.1
2008/2009	2,643	69	2.6

Source: Admission Office University of Ibadan 2009/2010 Session

The table above is a representation of happenstance at various degree awarding universities in Nigeria. This assertion holds water since there is paucity of data regarding enrolment and withdrawal at 100level for the periodic scope of this study.

As a person is leaving home for the university, he or she is faced with the challenges of coping with tertiary environmental demands, being away from the parents for a long period, very different daily experiences, different academic structure and the need to adjust to new social relationships. The transition to university life often necessitates the need for a student to repackage his/her personality so as to meet the emerging demands and realities which can indeed impact significantly on his/her physical and mental health (Tao, Dong, Pratt, Hunsberger and Pancer, 2000). Universities all over the world recognise this fact as it is evidenced in the various orientation programmes put in place for fresh students so that they can cope successfully their transition from high school to the university. Apparently, transition into the university is compounded by the fact that majority of these freshmen are at the same time making a transition into adulthood. The additional stressors of university life further accentuate this developmental transition. These stressors range from environmental adjustment to psychological and psycho-social adaptation. In line with this view, Gall, Evans, and Bellerose (2000) identify novel living arrangement, establishing social network and meeting the expectation of academic demands as examples of a few of the challenges to which students must adapt.

Education transition is a process of change that students experience from one level of education to another. As defined by Wesley (2001), transition implies change from one style, state, or place to another. It involves changes in relationships, teaching style,

environment, space, time, context for learning and learning itself, all of which combine at the time of transition to make intense and accelerated demands on the lives of students (Fabian & Dunlop, 2005) and this often have significant impact on academic performance of individuals. When students make transitions, they are exposed to a number of experiences. These experiences are conceptualised by Fabian and Dunlop (2005) as: (i) circumstance of moving from high school seniors to fresh undergraduates in the university ;(ii) these positions are from being the oldest, biggest and most powerful to youngest, smallest and least powerful.

The examination of existing perspectives on transition will further heighten our understanding of transition. As conceived by Bronfenbrenner (1979), transition is an interlocking set of systems of home, nursery and school through which children travel in their years of education. This perspective, as beautiful as it is, fails to take into account the transition from high school to university. Other theoreticians have viewed transition as a “ritual of passage” (Van Gennep, 1960), as border crossing (Campbell, 2000), and as means of institution (Webb, Schirato, & Danaher, 2002). Yet another perspective situated transition within the context of life course theory, which places children and families within the context of social structure, culture, and population which affect them over time and place (Elder, 2001). Transition is a mixed-blessing in the sense that it brings along with it a great level of excitement, a sense of worth and pride, freedom and achievement for children and their parents. For example, when children move to university, there may be concern about missing friends, parents, siblings, teachers and the home environment. The “honeymoon”, which initially characterised transition from home to school later, gives way to thinking about the uncertainties in the new environment. Some students experience academic, social and emotional challenges as they navigate transitions. Failure to cope effectively with such challenges could produce in the students life-shaping consequences and affect their academic performance (Centre for Mental Health in School at UCLA, 2008). For students to transit successfully, they need to be equipped with psychological skills or resources that help them adjust effectively to people, situations, academic and events. This is because they need such skills to relate with peers, lecturers and other personnel in the school system and also to understand themselves and use such understanding to relate with others.

Having reviewed studies on school transition, Schwitzer, Griffin, Ancis and Thomas (1999) summarise that fresh university students face four demands as they navigate the transition from high school and home environment to college life. These are academic adjustment to college level educational requirement; institutional adjustment to college pursuit, academic goals and eventual career direction; personal emotional adjustment to independently manage one's own emotional and physical well-being; and social adjustment to roommate, peers, faculty and other interpersonal relationships. In a study conducted by Lisa, Lisa, and Rosina (2004), academic issues, students' stress, social integration issues, homesickness, alcohol intake are parts of the transitional challenges encountered by first year university students.

The view that fresh university students encounter certain difficulties is an established fact. Various strategies for dealing with the problems have been suggested. Schwitzer et al. (1999), for instance, advocate a three-branched approach to helping students in transition, prevention, developmental intervention and consultation. In the university setting, preventive intervention strategies are usually used when there is probable susceptibility to a particular problem in order to prevent the onset of adjustment difficulties (Drum and Lawler, 1988). An important variable of interest in this study is academic self-efficacy. Bandura (1984, 1986, and 1991) explains that self-efficacy is the confidence one brings to a specific task, mediates the effect of other variables on performance and is a potent predictor of behaviour related to that task. Based on this, it is expected that students transiting from high school to university would be influenced by their beliefs in their capability to execute relevant academic tasks in the university. It was anticipated that academic self-efficacy would significantly predict academic performance of university freshmen.

The aforementioned expectations are not borne out of the depressed. For example, Lent, Brown, and Larkin (1984) find that efficacy beliefs of students participating in a science and engineering career-planning course were related to their grade in the subsequent year. Students with higher efficacy beliefs received higher grades and persisted longer in related majors. Other studies (Bonffard- Bonchard, 1989; Pajares, 1996; Schunk, 1991) have further affirmed the relevance of academic self-efficacy. Students with high sense of academic self-efficacy are characterised by the ability to: undertake more challenging tasks; put in greater effort; show increased persistence in the face of obstacles; demonstrate lower

anxiety levels; display flexibility in the use of learning strategies; self-regulate better than other students; demonstrate accurate self-evaluation of their academic performance; display greater intrinsic interest in scholastic matters and attain higher intellectual achievement.

Individuals with high self-efficacy tend to be more academically successful than those with low self-efficacy (Fontana, 1986). This is just like children whose parents are more involved in their education, they achieve more than others whose parents are not (Abel and Gecas, 1996). Similarly, children from academically stimulating home environment were found to do better in school than their peers who were not so fortunate (Walberg, 1998), this is because every decision and step taken by an individual is determined by the confidence he/she has in him/herself to successfully perform such a task (Akanbi, 2005). It therefore follows that, despite all the potentials an individual might claim to possess, such as skills, aptitudes, sound cognitive ability, support and financial capacity, such individual may not successfully perform the task before him or her, if lacking in self-efficacy. This view is supported by Pajares (2002), who expresses the view that, unless people believe their action can produce the outcomes they desire, they would have little incentive to act or persevere in the event of difficulties. Hence, self-efficacy is determined by knowledge and skill acquired in the first instance. The contention that self-efficacy is a critical ingredient in human functioning, is consistent with the view of theorists and philosophers who argued that the potent, affective, evaluative and episodic nature of beliefs make them a filter through which new phenomena are interpreted (Salami, 2004; Brackeny & Karabenick, 1995).

According to Johnes (1990), the age of a student on entry to the university can have two different and opposite effects, if a student leaves a job to continue his/her studies; such maturity and dedication may positively influence the academic performance of the student. On the contrary, it could be argued that, older students might have forgotten the academic life and they may be in a difficult position to adjust. Studies conducted by Jansen (1996), and Vander Hulst and Jansen (2002) show that younger students have better study or cognitive progress than older students, thus indicating that, higher age is an indicator of lower cognitive ability. Other studies have shown that younger students drop out less often than older ones (McInnes 2000; Murthaugh, Burns & Schuster, 1999). However, Trueman and Hartley (1996) find older students to perform equally well or sometimes better than younger students due to maturity. According to Trueman and Hartley (1996), this fact could

be mediated by time-management skills that older mature students were better in time management. Further, according to McInnes, James and MacNaught (1995), mature students have clearer career orientation and lower integration needs. Therefore, they would likely achieve better results. Though some studies found that female students showed better progress than male students did (Jansen 1996, Shah & Burke, 1999, Vander Hulst & Jansen, 2002), others like Johnes (1990) observes that an examination of attrition amongst males and females separately identified striking differences between the two groups in the characteristics associated with non-completion of their education. However, Johnes (1990), notes that the effect of gender on the probability of non-graduation is uncertain. In a study it was reported that higher rates of attrition were found among female than male students.

Emeneri (1999) correlated performance at WASC with global measures of achievement at the university level. The basic method of analysis was correlation technique and attention was paid to the findings of Kapur (1972). Richards and Wilson (1961), in Kapur's study mean 'O'-level grades were able to discriminate between an outstanding student and an average student but could not between an average student and a "poor" student. In the study by Richards and Wilson (1999) they note that with mean 'O'-level grades below 55%, the probability of passing was constant at about 40%. The implication of these for correlational technique is that, low correlations might be obtained while in actual fact; performance in school leaving examination is significantly related to performance at the university.

As earlier stated academic performance and related issues have been well-researched that there is still need to carry out further investigations. To buttress this claim, Aremu, Salami and Salam, (2005) urge researchers to embrace this challenge by studying more variables that have the tendency of determining a better level of teaching-learning outcomes. Therefore, the present study takes a look at the predictive value of senior school certificate and university matriculation examination result as well as psycho-demographic factors (age, sex and academic self-efficacy) on academic performance among university freshmen in southwest Nigeria.

Statement of the Problem

The number of candidates seeking admission is enormous. In the 2009/2010 session, the total number of students who picked university of Ibadan as their first and second choice with UME scores of 200 and above was 38,669. Only 3810 candidates (47% female and 53% male) were admitted and allowed to matriculate. Bamiro (2010), states that, there is danger posed by unseriousness of students in their studies. This is because the university has a prescribed minimum level of performance for any student to be allowed to continue his or her programme. At the end of every session, the Cumulative Grade Point Average (CGPA) is used to assess the overall performance. Failure to make the minimum number of units at any level will lead to either withdrawal from the programme of study or withdrawal from the university depending on the faculty decision (see Table 1.1). The average number of withdrawals from the university in the past five sessions (i.e from 2003/2004 to 2008/2009) is 227.

If a student manages to pass through these hurdles and is eventually advised to withdraw as a result of poor academic performance after the first year, such a student may commit suicide or become a vagabond or end up not being psychologically balanced for the rest of his or her life. This may lead to dodging his/her colleagues whenever he/she comes across them because of shame. Also, it will be a shame on the part of the parents that their child or ward was withdrawn from university for poor academic performance and all the money they spent in paying tuition fees, accommodation, feeding and buying textbooks is wasted. Also, the facilities that are put in place by the university administration to create an environment conducive for learning may not be adequately utilised. The money earmarked by the government for education on annual budget may also be a waste.

Also, if the poor academic performance among university freshmen is not checked, and the withdrawal rate is on the high side, it means the country may not have adequate manpower to service the economy. And this means the country will be in danger of miscreants. The university freshmen are generally confronted with fear of not knowing whether they will be able to cope with university education or not. Thus, there is the need to examine the academic self-efficacy of university freshmen to ascertain its impact on their academic performance.

Finally, many researches have been done on entry qualifications and university academic performance, on issues of transition and adjustment of university freshmen but non combined the cognitive and non-cognitive factors together as done in this study most especiall the academic self-efficacy factor.

Purpose of the Study

The main purpose of this study is to affirm the efficacy or potency of the predictive values of senior school certificate and university matriculation examination scores as well as psycho-demographic factors on academic performance of university freshmen in southwest Nigeria. The specific purposes are to:

- (i) highlight the relative contribution of each of these variables to academic performance of the respondents in question;
- (ii) highlight the composite contribution of these variables to academic performance of the respondents in question;
- (iii) ascertain whether there will be significant difference in the academic performance of high and low self-efficacy on one hand and on the other, if there is significant difference on the basis of sex differential, that is, along gender line (male and female).

Significance of the Study

The excepted findings of this study would be of great significance to parents who sponsor and expend much or invest on the children and expect them to perform well in their academics, it will be beneficial to students especially those that are easily defeated when they encounter some academic tasks or have some problems militating against their academic success.

Psychologists will also find the study useful in the sense that it will help them to finding out what ever is disturbing academics. The findings will also be useful to teachers who interpret the curriculum and build the students knowledge and character. Teachers expect good performance after teaching learning process. The outcome will reveal the effect of the independent variables under study on the academic performance of university freshmen. The study will also provide a basis for developing a more effective theory for teaching and learning.

The study will serve as a good data for government, policy makers, examination bodies and all other stakeholders of education on issues relating to self confidence, the need to provide adequate learning material and enabling environment for the teaching and learning process to pave way for academic self-efficacy and bright academic performance. The anticipated findings will contribute in no small way towards helping students improve on their non-cognitive factors (sex, age and academic self-efficacy) which may affect their interest in their various subjects. It will reveal the importance of using both cognitive and non-cognitive variables in the assessment of students' academic performance. If the expected research findings and discourse should ascertain the independent and collective impact of SSC examination results, UME scores and psycho-demographic factors on academic performance of university freshmen, this will arguably challenge respective stakeholders to appropriately maximize the use of these variables to promote students' academic performance in learning.

If the study succeeds in determining appropriate SSCE results, UME scores and psycho-demographic factors, their correct use should undoubtedly enhance academic performance of university freshmen. Thus, teachers and students will be better equipped to ensure improved results and their children/wards in having to repeat examinations will stop and government's primary objective to produce future patriots who are educationally and technologically sound will easily be realised. The anticipated findings from the study should shed light on the percentage of people who would be withdrawn annually on the basis of academic incompetency and thus, inform preventive measures to be used in curbing the wastage. Further, pertinent information will be unearthed on which of WASSC and NECOSSC will be a better predictive value of academic performance of university freshmen and on whether the level of academic self-efficacy and sex are significant in academic performance or not. Finally, the expected findings of the study will contribute to knowledge and bridge certain gaps in literature in this study area.

Delimitation of the Study

The study covers only university freshmen from the five Federal Universities in South-West of Nigeria, namely: University of Ibadan, Ibadan; Obafemi Awolowo University, Ile-Ife; University of Lagos, Lagos; Federal University of Technology, Akure and Federal University of Agriculture, Abeokuta. The freshmen were the students who

enrolled at these universities in 2009/2010 session. The study is meant to determine the extent to which SSCE results, UME scores, age, gender and academic self-efficacy could predict future academic performance of university freshmen.

Operational Definition of Terms

Gaining a working knowledge of terms used in this study is important. The terms are typical to this research. A variety of terms that are used in this research are as presented below

Academic self-efficacy: This refers to a student's inner conviction that he or she possesses what it takes to effect change in his or her academics.

Academic performance: This refers to school-learning outcome as measured by tests and examinations conducted in the school.

University freshmen: These are fresh university intakes for a first degree programme, admitted premised on SSCE results and UME scores and are in the university first semester session.

Predictive values: These refer to potentiality of each of the independent variables to be able to determine the academic performance of university freshmen.

Psycho-demographic: In this study this refers to age, sex and academic self-efficacy.

UME: This is the acronym for University Matriculation Examination that is the entry examination which must be taken and passed before gaining admission into university in Nigeria.

CHAPTER TWO

REVIEW OF LITERATURE

Distinct literatures that inform the present study are those associated with SSCE result, UME scores and psycho-demographic factors of university freshmen on academic performance. These literatures are explored and categorised as theoretical and empirical review:

1. Origin of West African Examinations Council and National Examinations Council;
2. Theories of School Transition,
3. Achievement Motivation Theories,
4. Vygotsky Theory of Learning,
5. Self-Efficacy Theory,
6. Factors affecting Academic Performance,
7. Attitude in Relation to Academic Achievement and Teaching;
8. Senior Secondary School Examinations Result and Future Academic Performance;
9. University Matriculation Examination Scores and Future Academic Performance;
10. Academic Self-Efficacy and Academic Performance;
11. Gender and Academic performance;
12. Age and Academic Performance.

Theoretical Review

Origin of West African Examinations and National Examinations Councils

Before the establishment of the West African Examinations Council (WAEC), the post primary institutions had been established in the Gambia, Sierra Leone, Ghana (Gold Coast) and Nigeria had been taking the examinations of the external British accrediting bodies. Prominent among them are; the University of Cambridge local Examination Syndicate, the city and guild London Institute and others. By the end of 1940s it had become clear to the colonial administration that, the time had come to consider the possibility of establishing in West Africa a body which would carry out its own examination in a manner that would best suit the needs and problems of the British territories. The then Director of

University of London, Institute of Education, Jeffery was invited in 1949 by the British Secretary of state for the colonies to visit West Africa. This is for him to study and advise on a proposal to establish a West African School Examinations Council after touring the Anglophone Countries: Ghana, Nigeria, Sierra Leone and Gambia between December 1949 and March 1950. The report termed the Jeffery Report was submitted in 1950 supporting the proposal for the establishment of West African Examinations Council. Detailed recommendations for the compositions and duties of the council were spelt out. The Government of Ghana, Nigeria, Sierra Leone and Gambia adopted the report.

An ordinance establishing the council as a corporate body was drafted by the West African Inter-territorial secretariat in consultations with the governments of the West African countries colonised by the British Government in December 1951. The Headquarters of the council was located in Accra, Ghana while its first Registrar was Humphreys Kenneth. The ordinance establishing the council charged her with the responsibility of determining the examinations required in the public interest in West Africa and empowered it to conduct such examinations and to award certificates providing certificates of examining authorities in the United Kingdom.

The Objectives of WAEC at its inception include:

1. To conduct various categories of examinations in National examination, International examination and other Examinations conducted in collaboration with other examining bodies.
2. To conduct examinations and award certificates, equivalent to certificate of examining authorities in the United Kingdom.
3. To produce people who would be working in the civil service
4. To produce candidates for tertiary institutions.

WAEC, which started its full operation in Nigeria in 1953, has been confronted with series of problems, which include: Mass leakage of examination papers which at times is traceable to the officials of the council, unnecessary delay in releasing of results, uncontrollable population explosion of candidates and overloading of works. The landmark leakage of West Africa School Certificate (WASC) examination question in 1977 tends to strike most Nigerians as the genesis of the malady that has now haunted operators in public examinations for years. The military Government, under Gen. Olusegun Obasanjo in

response to this was forced to set up a Commission of Inquiry headed by Chief Sogbetun that was the first time massive leakage of WASC examination questions was experienced in the country.

There had been widespread leakage in 1970 but reports of investigation by the West African Examinations Council (WAEC) detected that, the leakages were localised in the whole of East central state of Nigeria (Enugu, Abia, Imo and Anambra States) and some parts of Rivers, Edo and Delta states. Consequently, results of all candidates within those areas were cancelled. Curiously too, these were all Igbo speaking parts of the country. Coming from a war that raged mainly within these parts, it was easy to impute political motives to the findings of the investigations. Soon Commissioners of Education in the three States found a common ground on this issue and stood on that ground. Political tension began to rise until the Federal Military Government ordered WAEC to conduct another examination for the affected candidates at the expense of Federal Government. When that had been done the sleeping dog was allowed to lie. And perhaps, an opportunity was lost for identifying the cause of the problem that might have prevented future occurrences of such evil practices.

Although an inquiry was commissioned in 1969 to examine the malaise afflicting the conduct of WASC examinations, no specific action was known to have resulted from the inquiry. In addition, no serious analysis was known to have followed the massive leakage of WASC questions in 1970. The Sogbetun Commission of Inquiry of 1977 found that WAEC workload had become overbearing for it. Consequently, lapses that did not exist before were developing. The Commission stressed the need for relief of the situation by the creation of other examination boards to take over some of the responsibilities of the Council. There appears to be some merit in this observation.

The British Colonial Government established WAEC in 1952, to conduct examinations required in the public interest in West Africa and to award certificates equivalent in standard to those of similar examination boards in the United Kingdom (Ojerinde & Okonkwo, 2002; Falayajo, 1999). The examinations themselves had also become quite a number. They included the West African School Certificate Examination (WASCE), the General Certificate of Education, Ordinary and Advanced Levels (GCE O/L and A/L) examinations, Teachers' Grade II Certificate (TC II) examinations in Mathematics,

English Language and Education, National Common Entrance Examination (NCEE) for admission into Federal Unity Colleges, Technical and Business Trades Examinations, which it conducted for itself and on behalf of the Royal Society of Arts (RSA) of London and the City and Guilds of London Institute.

The return in 1970 of candidates of Southeastern Nigeria origin, comprising two cohorts (that would have taken the WASSCE in 1967 and 1968, but for the civil war) from East-Central State, must have constituted a sudden increase in number of candidates. The population might have become overwhelming; giving rise to the lapses that resulted in the leakages experienced that year which perhaps, no one could have noticed. But the focus was however turned elsewhere. Recognising this situation, the Sogbetun Commission recommended creation of a National Examination body to share responsibility for the conduct of these examinations with West African Examinations Certificate (WAEC), but the recommendation was not implemented.

In October 1982, during an interview with the House of Representatives' Committee on Education, WAEC admitted there was the need for the establishment of other examination bodies to relieve it of some of its workload. Meanwhile, the Nigerian public continued to call for the implementation of the Sogbetun Commission recommendations. In response, the Federal Government set up the Angulu Panel in 1982, which recommended the creation of four examination Boards thus:

1. Three regional examination bodies to conduct equivalent of school based Senior School Certificate Examination. Nigeria was divided into three vertical regions such that there would be:
 - (a) West Regional Examination Body for SSCE (from Sokoto State to Lagos State).
 - (b) Central Regional Examination Body for SSCE (from Kano State to Rivers State)
 - (c) East Regional Examination Body for SSCE (from Borno State to Cross River State)
2. One body to conduct Nov/Dec SSCE for external candidates.
3. A body to be responsible for Teacher Education Programme to cater for Teachers' Grade II Certificate and related examinations.

4. A body responsible for technical examinations such as City and Guild, RSA etc.

This recommendation was not implemented until the ouster of the government that set up the panel. Another panel, headed by Okoro, was constituted in 1989 because of the persistence of the problems WAEC was experiencing in conducting hitch-free examinations. The recommendations of the panel were not different from those of its predecessors, yet, they were not implemented. It was not until 1991 that a task force, under the chairmanship of Professor Osiyale, was constituted by the Minister of Education to study the reports of the Sogbetun and Angulu Committees and made appropriate recommendation to the Federal Government. It was the report of this task force that led to the creation, in 1992, of the National Board for Educational Measurement (NBEM) and the National Business and Technical Examination Board (NABTEB). The former took over the conduct of the National Common Entrance Examination and the Junior School Certificate Examination for the Federal Schools and allied institutions, while the latter took charge of technical and business trades examinations conducted by WAEC; RSA and City & Guilds of London Institute.

In 1998, Oni was appointed by the Military Administration of General Abdusalami Abubakar. Oni pulled the examination bodies in the country together to advise him on the possibility of breaking the monopoly of WAEC to create a more conducive environment for the teeming population of Senior School Certificate Examination candidates in Nigeria. Subsequently, Olaiya Oni presented a spirited argument to the Federal Executive Council and his position corroborated that of vision 2010. Vision 2010 was set up to chart a path of development for the country up to 2010. A harmonised report on the recommendations of committees, published in 1998, recommended the establishment of a national examination body of the same standard as WAEC. This report gave rise to the creation of NECO in April, 1999 which was to take over from WAEC, the conduct of the school-based Senior School Certificate Examinations (SSCE) while WAEC was to continue with the conduct of the private candidates' version of the same examination. NECO was to conduct its maiden SSCE in May/June of 2000. Most Nigerians misunderstood the import of that development. The decision divided the people with some, hailing it as a means of breaking WAEC monopoly of the conduct of the examinations and others opposing it on the grounds that a new examination body would be ill prepared to conduct a credible SSCE within 13 months

of its creation. Both arguments were flawed. The issue had never been the monopoly of the conduct of any examination but the workload of WAEC.

The approach of Government had been systematic reduction of WASC workload, which began in 1982, with WAEC ceding the Teachers' college II examinations in English Language, Mathematics and Education to the National Teachers' Institute (NTI), established in 1976. This was followed by the takeover of the NCE by NBEM and the technical and business trades examinations by NABTEB in 1992. It was the failure of these reductions in WAEC's workload to plug the lapses in its conduct of its examinations that informed a further reduction through the decree for it to cede school-based SSCE to NECO.

The argument of the opposition to NECO's takeover of this examination was also flawed as NECO was really not a green examination body, as they thought. It was only an enlargement of a pre-existing body, NBEM, which has been in the business of public examination since 1992. This part was unknown to most of the critics of the Government decision. In the end, it was the argument of breaking WAEC monopoly and giving candidates a choice that carried the day. The National Examination Council (NECO) (Establishment) Act 2002 modified the 'original' mandate of NECO by providing for both WAEC and NECO conducting SSCE for both school-based and private candidates. This decision has not been without its own problems. For instance, it is proving stressful to some students who now register for all four examinations in one year. At some point in time, examination fatigue steps in and they abandon a substantial number of the examinations while performing below expectation than typically in some others. Such abandonment tends to affect the NECO version of the examinations, which are consistently conducted after the WAEC. This affects planning, especially of the marking exercise, as any reliable estimate of number of examiners to be required must wait until after the examinations have been completed.

The advent of NECO, however, has changed the landscape of public examination in Nigeria, owing to continuing increase in number of SSCE candidates since the 1980s, processing of results had also required progressively more time and so publication of such results suffered a lot of delay. By 1999, SSCE results were hardly published within four months of the completion of the examinations, atimes it took much longer to release them when results of NECO's maiden SSCE which involved 890,753 candidates were released

within three months of completion of the examinations, Nigerians could hardly believe the development. Over the next two years, the figure exceeded the one million mark, at 1,033,826, in 2002 (Ojerinde, 2004) . The results were still released within three months. WAEC has since adjusted to releasing its results within three months.

In 2001, NECO launched the posting of its results on the Internet, an innovation that was also unprecedented in the history of public examination in the country. Now, most national public examination bodies post results on the Internet. The quest for improved quality of service delivery to their clientele is the preoccupation of each of them. NECO has concentrated on massive monitoring of its examination centres in order to ensure good conduct of such examinations. WAEC has launched a project whereby candidates' photographs are embossed on certificates as a way of checking impersonation in its examinations, yet, examination malpractices continue unabated. Ojikutu's (1987) lamentation that university students got more sophisticated in their attempts at circumventing plans to curb examination malpractice in universities is not one for the university alone. That vice remains a nightmare to public examination bodies. Its ravaging menace seems to suggest that the operators are yet to get something right within the system.

NECO's conduct of SSCE for private candidates in 2002 and 2003 was far less stressful than it was for school-based candidates. The population of candidates in the private candidate examinations has been about a third of that for their school-based versions. Controls were much tighter and monitors were able to reach a larger proportion of centres than had been possible with the school-based examinations. Consequently, a higher proportion of perpetrators of malpractice had been detected and punished. The 'feat' had not been equaled in school-based examinations. One wonders, then, whether population of candidates might not be a major factor in the issues of examination malpractice, can a drastic reduction in the number of candidates an examination body has to handle help in reducing the incidence of this malady and enhance the restoration of confidence in our public examination system? Has the controversy over the creation of NECO robbed us of the opportunity for enhanced insight into the malady of examination malpractice in Nigeria and, possibly, how to deal with it?

Theories of school transition

Several theories have evolved to help explain the difficulties that school transition can create. While scholars debate the strengths of one theory over another, researchers of school violence prevention view them as variations on a theme, each helping to explain a piece of the overall picture.

The timing and discontinuity theory

This pioneering research focuses on negative adjustment outcomes as indicators of transition stress. Several of these studies show that junior high school students experience decline in self-esteem, grades point average and participation in school and other activities compared to their experience in the elementary grades (Carlton-Ford & Blyth, 2001). Feelings of victimisation and anonymity increase for seventh grade junior high school students compared to peers at K-8 schools. Other studies of the transition from junior to senior high school likewise indicate a decrease in grade point average, attendance and participation in extra-curricular activities (Aguirre-Deandreis & Trickett, 1991). These studies suggest two hypotheses that researchers continue to grapple with. The first suggests that adolescents experience stress when they are required to cope with multiple changes concurrently. The timing of school change with other life events may exacerbate the development of stress, adjustment difficulties and problematic behaviours. The second hypothesis suggests that the abrupt change from the child-focused elementary to the performance-focused secondary school is a powerful stressor during early adolescence.

The concept of timing, or the “synchronicity of life transition”, emphasise that the gradual adjustment to one change before confronting another benefits the coping process. It may also help explain why girls report a significant increase in psychological turmoil compared to boys during the transition to secondary school (Hirsch and Rapkin, 1987). Multiple school changes also appear to produce significant decrease in academic achievement and attendance for some students (Felner, Ginter & Primavera, 1981). Based upon several studies, Crockett, Petersen, Graber, Schunlenberg, and Ebata (1989) conclude that timing and discontinuity of two schools transition during adolescence is much more difficult to adjust to than one. This suggests that inner city and low-income youth may be more vulnerable to developing behaviour problems associated with school change because they have a higher rate of residential mobility than their more stable sub-urban peers.

When youth are faced with the stressors induced by transition changes, their ability to successfully cope with multiple problems becomes critical. However, coping may become difficult if at the same time, adolescents are uncomfortable with their bodies; with their families because of a move, divorce, or unemployment; with their peers because of new gender roles and with school because of the more complex secondary school environment. Coping, is easier if youth have reasonable level of comfort in their life. The premise is that if some aspects of their lives are stable and comfortable, then adolescents will more successfully manage the stressful aspects of their lives.

Transitional life events theory

Building upon the timing, discontinuity and environmental researcher, Felner and Adan (1988) offer a theoretical approach that also takes into account personal characteristics and attributes of the school setting. Their transitional life event approach assumes that all changes in life require adjustments and that the range of difficulties associated with making adjustment reflects the environmental setting and one's personal history and coping abilities. Felner and Adan (1988) refer to the "threshold of vulnerability" as a benchmark from which to hypothesise expected difficulties negotiating school changes. For youth behaving above their threshold, negotiating school change tends to be easier because they have solid coping skills, are achieving academically and socially and have few risk factors in their lives. For youth behaving below their threshold, school change may be associated with negative consequences because of concurrent risk factors such as living in poverty, entering puberty or other stressors that tax their coping resources.

Consistent with the notion of discontinuity, the transitional life events approach recognises that the complexity of the new school environment and the capacity to respond to students' needs affects the way adolescents adapt to school. The organisation of schools, the rigorous academics demands and the social pressure to interact with students of varying ages from multiple feeder schools may cause stress for the adolescent in transition. They add that adaptation can be further threatened by the limited capacity of teachers and administrators in larger schools to be responsible to individual needs.

The role strain theory

Life changes are viewed as a process of gaining and surrendering to new roles. For students entering the middle grades, role changes are reflected in the new expectations from

parents, teachers and peers. When these expectations are conflicting, confusing or demanding, adolescents may develop role strain and manifest problematic behaviour and stress. The difference in these theories may be as important as their similarities. Common to the research across these perspectives are the findings that peers help adolescents mediate stress during the transition from elementary to high school and that peers influence alcohol and other drug use (Barone, 1991; Steinberg, 1996). Berndt's (1987) study of friendship patterns following school change indicates that social adjustment can be stressful because youth need to re-establish their social world. He estimates that it takes adolescents nearly a full school year to form new friends. For adolescents who enter secondary school with close friends or a stable cohort of peers, adjustment appears to be considerably less stressful compared to their more socially isolated peers.

In addition to adolescents lacking strong peer support, young adolescents influenced by older peers to engage in risky behaviour appear particularly vulnerable to developing psychosocial and behaviour adjustment problems (Reid, Martison and Weaver, 1986). During adolescence, peer groups assume an important role in establishing norms and standards of behaviour. Since drug-using crowds are formed during the early adolescent years and there is considerable peer pressure to join them in higher school, it is important to counter this pressure by encouraging positive peer pressure.

Transition to high school

The emergence of junior high school in the 1920's and 1930's was justified on the basis of physical, cognitive and social changes that characterise early adolescence, as well as the need for more schools in response to the growing students' population. Old high schools became junior high schools, and new regional high schools were built. In most systems, the ninth grade remained part of the high school in content, although physically separated from it in a 6-3-3-4 system (a system whereby students are grouped as follows: first through sixth grade, seventh through ninth grade and tenth through twelfth grade). Gradually, the ninth grade has been restored into the high school, as many school systems have developed middle schools that include the seventh and eighth grades, or sixth, seventh and eighth grade. The creation of middle schools has been influenced by the earlier onset of puberty in recent decades.

The term middle level schools include all middle grade and junior secondary school configurations. Students make many transitions during their years of schooling: from home to school, elementary to middle school, middle to high school and so on. These transitions are usually major events in the lives of students, the parents and the school. Transition from one school to another can be stressful especially at the junior high school since it coincides with many other developmental changes in the adolescent (Eccles & Wigfield, 2000). Students are beginning puberty and have increased concerns about their body image and the hormonal changes of puberty stimulate increased interest in sexual matters. They are becoming more independent of their parents and want to spend more time with peers. Learning is change from a small, more personalized classroom to learning in larger group, more impersonal school and academic achievement becomes more serious business while getting good grades become more competitive. The school environment increases in scope and complexity (Anfara, 2001) and the social field is now the whole school rather than the classroom. Adolescents interact with teachers and peers from a broader range of cultural backgrounds on a broader range of interests. Their social behaviour becomes weighted more strongly towards peers, extracurricular activities, clubs and the community. Secondary school students are more aware of the school as a social system and might be motivated to conform to it or challenge it.

At this stage, the students experience the “top-dog phenomenon”. This refers to moving from the top position (in elementary schools, to being the oldest, biggest and the most powerful students in the school) to the lowest position (in middle or junior high school, being the youngest, smallest and the least powerful students in the school). Schools that provide more support, less anonymity, more stability and less complexity improve student adjustment during this transition. Students’ comments and behaviour give insight into their concerns as they move to a new school. In a study conducted by Schumacher (2008), students cited personal safety (aggressive and violent behaviour of other students) as a prominent concern in a new school.

Teachers have also listed specific challenges to students transiting from a primary to junior secondary school. These are: changing classes, reduced parent involvement, more teachers, new grading standards and procedures, more peer pressure, developmental differences between boys and girls, cliquishness, fear of new, larger more impersonal

school, accepting more responsibility for their own actions, dealing with older children, merging with students from other schools, unrealistic parental expectations, lack of experience in dealing with extracurricular activities, unfamiliarity with students' lockers, following the school schedule, longer-range assignments, coping with adolescent physical development, social immaturity and lack of basic skills.

Transitions, stress and coping

Transitions are defined as the movement from “one state of certainty to another with a period of uncertainty in between”(Schilling, Snow & Schinke, 1998). Because life transitions affect individuals differently, what some view as “stressful life events” or “normal life crises”, other simply views as events that occur during the course of life (Fenzel, 1989; Garmezy & Rutter, 1993; Espelage & Swearer, 2004).

For more than two decades, researchers have studied how the social environment contributes to the development of psychosocial, psychiatric, or physical disorders. In particular, Bronfenbrenner (1979) and Garmezy and Rutter (1993) examine the relationship between changes in one's role or environment with developmental problems. Their work links life changes and the resulting demands for re-adjustment to stress. Scholars continue to disagree whether life change is inherently stressful or if confusing or adverse event, such as a school change, is the cause of stress responses such as anxiety or depression.

While the definition of stress and our understanding of how an adolescent copes and adapts to it is still developing, educational stakeholders recognise its impact on the lives of adolescents today. Stress is an important concept because it brings several diverse problem areas together. Problems such as school failure, school age pregnancy, drug and alcohol use; and environment stressful events as different as divorce, a death in the family, or the upset caused by a chronic physical disease (Finekelhor et al 2009). The powerful stressors of loss and separation are associated with the emergence of childhood psychopathologies and other related problem behaviours. Researchers have since enriched their understanding of the development of problem behaviours by focusing on children's resilience or the successful adaptation to stress and adversity.

Garmezy and Rutter (1993) emphasise that learning to cope with stress is elemental to children's healthy development. Effective coping is a resilient response to stress, functioning both to solve problems and manage emotional trauma. A goal of prevention is to

overcome stressful life events and turn them into learning experiences, rather than have them trigger crisis. The transition from elementary to secondary school presents for many students, a stressful move from the nest of a protective, familiar environment with considerable individual attention into an often impersonal, intimidating atmosphere. School size is significantly larger, academic standards are more rigorous, social circles and peer pressures change more profoundly than at any other time in life, discipline is more abruptly delivered and students often believe their performance is assessed publicly and has lifelong implications.

Numerous studies according to Baumanis (2008) identify school transition as a likely source of stress which subject children and youth to adaptation challenges that tap their coping skills. These coping skills typically include: redefining roles and expected behaviours; shifting membership in and position within social networks; reorganising social support resources; restructuring ways of cognitive appraisal and managing the stress associated with uncertain expectations and one's abilities to effectively use the above mentioned skills (Baumanis, 2008). Most adolescents successfully cope with the transition from elementary to secondary school and tertiary institutions following a brief (less than three months) period of stress and disorganisation (Safyer, 1994). Brown (1996) explains that coping with difficulties are attributable to a lot of stress such as adjustment to a new school. The simultaneous experience of multiple life stressors or the earlier elementary patterns of absenteeism, academic deficiencies, or behaviours related to poverty increase the likelihood of serious adjustment problems. Other studies conclude that adjustment difficulties are likely due to the mismatched teaching, learning, and organisational environment of the school. The developmental needs of early adolescents and the demanding transitions that occur during this stage of life can also contribute to adjustment difficulties.

McClelland Achievement Motivation Theory

The theory by David McClelland envisages that a person has need for three things - the need for achievement, power and social factors (McClelland, 1985; Murraray, 1938, 1943). In the area of achievement motivation, there are; three distinct types of goals as they relate to individual persons and people differ in the way these goals influence their behaviours. The mastery goals, (also called learning goals) which focus on gaining

competence or mastering a new set of knowledge or skills; ;achievement goals (also known as ego-involvement goals) which focus on achieving normative based standard, doing better than others, or doing well without much effort and social goals which focus on relationships among people (Armes, 1992; Dweck, 1986; Urban and Maehr, 1995). In the context of school learning within which this study will be preoccupied, students with mastery goals out perform those with either achievement or social goals.

Another aspect of the theory is that individuals are motivated to avoid failure (more often associated with achievement goals) or achieve success (more often associated with mastery goals). In the two instances, individuals are likely to select easy or difficult tasks thereby either achieving success or having good excuses for failing further in mastery goals, individuals may select moderately difficult tasks which will provide an interesting challenge, but still keep a high expectation for success. Achievement motivation refers to the structure of a person's desire to succeed or achieve in academics. Students' achievement motivation is an important predictor of the type of course work they select, the effort they put into their work and their overall levels of educational attainment, and therefore an important predictor of success in later life (Grolnick, Ryan & Deci, 1991; Harter et al, 1992' Valler, Blais & Pelletier, 1989; Whitehead, 1984).

A number of different components of students' beliefs about success in school have been emphasised in the literature on achievement motivation. The attribution theory primarily emphasises individual beliefs about the reason for their successes or failure in school, such as whether they believe their successes or failures are due to luck or effort and ability and how these beliefs influence later efforts in school (Weiner, 1985). According to this theory, those who blame their failures on lack of ability but do not attribute their success to their ability are less likely to succeed in school (Weiner, 1985). A second perspective stresses the importance of whether a student pursues academic tasks with the goal of achieving personal improvement and understanding (referred to as a mastery goal) or the goal of doing well in school (referred to as achievement goals) Ames, (1992). This theory suggests that individuals who hold achievement goals are concerned primarily with documenting their ability in a given area and hence are more likely to get discouraged when confronted with a challenging work. As a result, holding achievement goals are less likely to pursue challenges or persist in the face of failure. Those who hold learning goals, however,

are more apt to see challenges as mechanisms for increasing their learning and therefore more apt to enter into situations that will test their abilities (Ames, 1992). Also, there has been a distinction between intrinsic and extrinsic form of motivation. Intrinsically motivated learners persist more on tasks and succeed than extrinsically motivated learners who attribute their failure to external factors (Ryan & Deci, 2000; Deci & Ryan, 1985).

Social-Cognitive Theory of Motivation

The social-cognitive theory stemmed out of work in the area of social-learning theory proposed by Miller and Dollard in 1941 which posits that if humans were motivated to learn a particular behaviour, that behaviour would be learnt through clear observations. By initiating these observed actions, the individual observer would solidify that learnt action and would be rewarded with positive reinforcement. In subsequent years, the proposition of social-learning was expanded upon and theorised by Albert Bandura (1962 to present). The theory revolves around the process of knowledge acquisition or learning directly correlated to the observation of models. In doing this, the observer can be affected in two separate ways, this Miller, (2005) calls inhibitory and disinhibitory effects. The inhibitory effect is when an observer sees the action of another involved in a social situation being punished for that action and the disinhibitory effect is when an individual is praised for an action and the observer learns from and initiates that action (Miller, 2005). Vicarious reinforcement explains that the observer does not expect the actual rewards or punishments of the models but anticipate similar outcome of his/her initiated behaviours. Further work on the social cognitive theory posits that, learning will most likely occur if there is a close identification between the observer, the model and the observer's self-efficacy. Self-efficacy beliefs function as an important set of proximal, cognitive, and affective intervening process (Bandura, 1989; Boerke, 2006).

The Solo taxonomy of Biggs (1991), and Collins, (1982) which describes level of increasing complexity in a student's understanding of a subject, through a five-stage structural analysis of the pre-structural stage, (here students acquire bits of unconnected information); the nonstructural stage, (where simple and obvious connections are made but their significance not grasped); the multistructural stage, (where a number of connections are made but the meta-connections between them are missing, as is their significance for the whole); the relational stage, (where student is able to appreciate the significance of the parts

in relation to the whole); extended abstract level stage (where students can make connection within a given subject area and beyond and are still able to generalize and transfer the principles and ideas underlying a specific instance). The name Solo which means Structure of Observed Learning Outcomes. Shared most of the views on learning in the Piaget's stages of cognitive development. It is a crucial aspect in test development in teaching-learning and the levels have assisted learners in the day-to-day preparation for examination.

These eight stages are insightful description of how personality develops, though difficult to be accomplished. Researches in the field of child development took on the task of helping parents and teachers make these young ones grow and be successful as complied with the Child Development Institute, 2007. Crucial to the present study are these eight stages; it is a reflection of what is observed in many adolescents in researches. Adolescents that grow poorly will definitely exhibit deficit behaviour in virtually all aspects of life; from schoolwork, to career choice, to being successful in life. The social learning (or observational) theory suggests that modeling (imitating others) and vicarious learning (watching others have consequences applied to their behaviour) are important motivators of behaviour (Miller and Dollard, 1941; Bandura and Walter, 1963; Bandura, 1963). Bandura also viewed human functioning as an interplay of personal behaviour and environmental influences.

In the school setting and for the purpose of this research work, teachers have the challenge of improving the students in their care. Using the social cognitive theory as a framework, teachers can work to improve their students' emotional states to correct their faulty self-beliefs and habits of thinking (personal factors), improve their academic skills and self-regulatory practices (behaviour), alter the school and classroom structure that may work to undermine student success (environmental factors). In Bandura's social cognitive perspective, individuals are able to display certain capabilities necessary in determining their own destiny. Such capabilities include symbolising, self-regulating, forethought, self-reflection, to learn through vicarious experiences. Of all the thoughts that affect human behaviours and actions, self-efficacy beliefs stand out. It is the people's judgement of their capabilities to organise and execute courses of action required to attain designated types of achievement. Self-efficacy beliefs provide the foundation for human motivation, wellbeing and personal accomplishment. This is because, unless people believe that their actions can

produce the outcome they desire, they have little incentive to act or persevere in the face of difficulties.

The Roman Poet Virgil observes that, “they are able who think they are able”. The French novelist Alexander Duma writes that, when people doubt themselves, they make their own failure certain being the first to be convinced of it. Since Bandura first introduced the construct of self-efficacy in 1977, researchers have successfully demonstrated that individuals’ self-efficacy beliefs powerfully influence their attainment in diverse fields (see Stajkovic and Luthans, 1988, for meta-analysis research on the relationship between self-efficacy beliefs and achievement outcomes).

The Expectancy Theory

The expectancy theory or instrumentality of Tolman (1932) and Lewin (1935) modify by Vroom (1964) postulates individual preference for various outcomes as the determining factor for the level of effort to be put in. According to him, effort will lead to desired achievement or performance (EP) and achievement or performance will lead to a particular outcome (PO).

Reinforcement Theory of Motivation

The reinforcement theory developed by Skinner and reviewed by Laird, 1985; Burns, 1995 believes behaviour is a function of its consequences. The learner will repeat the behaviour if a pleasant consequence follows (a positive reinforcement). On the other hand, a negative reinforcement, it refers to a situation when negative condition is introduced after behaviour so as to discourage such behaviour or avoid as a consequence of the behaviour, (Burns 1995). The most influential historic approach to learning is the classical conditioning of Ivan Pavlov (1972). It is the process whereby an organism learns to respond in a particular way to stimuli, which previously did not produce the response. It assumes that, the learner is passive and notices a connection between two stimuli. The first stimulus called the unconditioned stimulus has the capacity to elicit a particular response through its own power. The second is called the conditioned stimulus. It assumes power from its association with the unconditioned stimulus. Most educational studies utilise the principle of the Pavlovian theory in addressing the way and patterns by which individual organisms responds to stimuli. The application and effectiveness of reinforcement principles in practice terms is obvious when learners are encouraged for doing well. The yearly awards in schools

at the end of the term or session to reward performing students create room for better improvement in learning.

Attribution Theory

Another theory of motivation that is relevant to the present study is the attribution theory. Attribution theory is probably the most influential contemporary theory with implications for academic motivation (Weiner, 1980, 1992). It incorporates behaviour modification in the sense that it emphasises the idea that learners are strongly motivated by the pleasant outcome of being able to feel good about themselves and it also incorporates cognitive and self-efficacy theory in the sense that it emphasises that learners' current self-perceptions will interpret success or failure of their current efforts and hence their future tendency to perform these same behaviours.

The theory explains that, people tend to explain their success or failure under three sets of characteristics thus: that the cause of the success or failure may be internal or external; stable or unstable; controllable or uncontrollable (Weiner, 1992). An important assumption of attribution theory is that, people will interpret their environment in such a way as to maintain a positive self-image. To complement this assertion, when adolescents in our society succeed at an academic task, they are likely to attribute this success to their own effort or abilities but when they fail, they will want to attribute their failure to factors over which they have no control, such as bad teaching or bad luck.

In motivation, attribution theory works in that, a person's own perceptions or attributions for success or failure determines the amount of effort the person will expend on that activity in the future. Educationally, four factors related to attribution theory that influence motivation to learn are: ability, task difficulty, effort and luck (Weiner, 1992). The theory was originally propounded by Heider (1944, 1958) and first proposed to be applied to educational setting by Frasher and Frasher (1980).

Goal-Setting Theory of Motivation

Goal-setting theory is based on the notion that individuals sometimes have a drive to reach a clearly defined end state (Locke and Latham, 2002). Often, this end state is a reward in itself. Goal efficiency is affected by three features; proximity, difficulty and specificity. An ideal goal should present a situation where the time between the initiation of behaviour and the end stage is close in time. Also, a goal should be moderate not too

difficult or too easy to complete, must be objectively defined and intelligible for the individual. Motivation is of particular interest to educational psychologists because of the crucial role it plays in student-learning situations. It can have several effects on how students learn and their behaviour towards the subject matter. It can direct behaviour toward particular goals. This can be seen when students put up all necessary measures to make them pass, invariably, this will lead to increased effort and energy (Ormrod, 2003). Motivation can enhance cognitive processing and it increases initiation of and persistence in activities. By so doing it determines what consequence is reinforced and the expected behaviour change, improved achievement will be achieved. This is when we can say learning has taken place. In other words, motivation allows learning to take place. To Gestalt theorists, they advocated for a wholistic approach to learning where the many elements of an individual like the intellect, emotions, body impulse, imagination must be activated for effective learning to take place (Laird, 1985); Atherton, 2005). They emphasised the importance of experience, meaning, problem solving and development of insight as paramount to learning (Kohler, 1925 as reviewed by Atherton, 2005). To this effect, the work of David on meaningful verbal learning as a phenomenon for consciousness in learning complemented the work of Mc Gilly (1996) who found students not learning to their full potential due to the use of rote memory procedure to be able to read and pass assessment examination.

Distinctions were however made between deep and surface learning (Saljo, 1976; Ransed, 1992; Biggs, 1987; 1996; Entwistle, 1981). They found that majority of students read to produce what had been taught for fear of failure (Ramsden, Basick & Bowden, 1986). McGilly (1996) adds that students need to be more prepared for higher learning and the job market with skills that evolve from cognitive theory. These skills include, study, social, problem-solving; organizational and goals-setting skills to be well above board in the pursuit of their educational goals.

Goal-Setting Theory

Goal-setting theory is one of the most popular theories in organisation psychology. Edwin A. Locke began to examine this idea in the mid-1960s and continued researching on goal setting for about 30 years. Locke derived the idea of goal setting from of Aristotle's theory of final causality. According to Aristotle, action is caused by a purpose; thus Locke began researching the impact goals have on individual achievement. For goals to increase

achievement, it is imperative that they are difficult goals. A vague goal is not likely to enhance achievement. A specific goal can be given through quantification or enumeration, which is using a certain number or a list, such as increasing productivity by 20% or by giving certain tasks that need to be completed (Locke, 1996). Goals can affect achievement in three ways. First, goals narrow attention and direct efforts to goal relevant activities and keep away from undesirable and goal irrelevant actions. Second, goals can lead to more efforts. Third, goals influence persistence. You are more prone to work through setbacks or work harder, if you're pursuing a goal (Locke, 2002).

The goal-achievement relationship is subject to various moderators. Goal commitment is the most influential moderator. Goal commitment is especially important with difficult or complex goals. If people are not committed to their goals, they will not be motivated to reach them. For someone to be committed to a goal, he/she must believe it is important or significant. Individuals must also believe the goal is attainable or partially reachable. If they think there is no chance to reach it, they may not even try. Self-efficacy is a second moderator in goal-setting theory. The higher someone's self-efficacy regarding a certain task is, the more likely he/she will be able to set a higher goal and the more persistent he/she will be in achieving it (Locke, 2001). In order for goals to enhance achievement, there needs to be feedback, it is difficult for a goal to be effective if an individual cannot check where achievement is in relation to his/her goal. It is important that people know where they stand in achieving their goal, so they can determine if they need to work harder or change their methods. As a result of advancements in technology, feedback can be given more effectively. There are computer programmes available that are designed to track goals for numerous members of an organization. The computer system maintains every employee's goal, as well as his/her deadline to reach it. The employee's programme is checked on a weekly basis, and those that are slack are asked to explain themselves, and how they intend to remedy the situation.

There are limitations to goal-setting theory. In an organisation, the goal of the manager may not be consistent with the goals of the organisation as a whole. In this case, the goals of the individual would be in direct conflict with that of the organisation that employed him or her. It is essential that goals between the organisation and the individual are aligned or achievement could be undermined. Moreover, for complex tasks, goal-setting

may actually impair achievement. In these situations, an individual may become preoccupied with meeting the goal, rather than performing the task, goals of learning are thought to be a key factor influencing the level of a student's intrinsic motivation. Research in goal theory has identified the following dichotomies:

Mastery/Achievement (Ames, 1992) Mastery orientation is described as a student's wish to become proficient in a topic to the best of his/her ability. External achievement indicators such as grades do not influence the student's sense of satisfaction with the work. Mastery orientation is associated with deeper engagement in the task and greater perseverance in the face of setbacks. Mastery orientation is thought to increase a student's intrinsic motivation.

Achievement orientation is described as a student's wish to achieve highly on external indicators of success, such as grade. The student's sense of satisfaction is highly influenced by his/her grades and so it is associated with discouragement in the face of low marks. Achievement orientation is also associated with higher states of anxiety. In addition, the desire for high marks increases the temptation to cheat or engage in shallow rote learning instead of deep understanding. Achievement orientation is thought to increase a student's intrinsic motivation if he/she performs well and decreases motivation when he/she performs badly.

Task/Ego Involvement (Nicholls, 1990)

A student is described as task-involved when he/she is interested in a task for its own qualities. This is associated with higher intrinsic motivation. Task-involved students are less threatened by failure because their own ego is not tied up in the success of the task. A student who is ego-involved will be seeking to perform the task to boost his/her own ego for the praise that completing the task might attract or because completing the task confirms their own self-concept (e.g. clever, strong, funny etc) Ego-involved students can become very anxious or discouraged in the face of failure because such failure challenges their self-concept.

Approach/Avoidance Goals (Elliot, 1997)

Not all goals are directed towards approaching a desirable outcome (good grades). Goals can also be directed towards avoiding an undesirable outcome (being grounded for failure). It is thought that approach goals contribute positively to intrinsic motivation whereas avoidance goals do not. Other researchers have adopted a more complex

perspective on goals, arguing that there are many different kinds of goals individuals can have in achievement settings. For instance, Ford and Nicholls (1987) extend this point of view into within-person goals and person-environment goals, which lays equal significance on learners per se and learning environment.

Vygotsky Theory of Learning and How He Relates Persons' Histories to Cognitive Structures

Vygotsky concerns himself the way ontogeny (individual developmental history) and political social relations intersect. His overriding concern was with the importance of history in terms of both individuals and social systems being involved in the study of human development. For him, work meanings are dynamic, not static, formulations. They change as a child accomplishes each stage in the development of the word's meaning, and they reflect a unique relationship between thought and speech. As one's thoughts become more differentiated, one is less likely to express thoughts with single words, however, one is more likely to express oneself with composite words.

“It is when vygotsky comes to the discussion of the development of conceptual grouping in children... that one recognises his power and ingenuity as an empiricist.” (An empiricist is one who thinks that people learn through cognitive experience as contrasted with their exercising reason). Though Vygotsky's principal theme was the relation of thought and language, his work also was a presentation of a highly original empiricistic theory of intellectual development or learning within which children, and adults too, are taken to learn through cognitive experiences.

Vygotsky considers the capacity to impose super ordinate *structures* of reality in the interest of seeing things both more simply and more deeply as one of the powerful tools of human intelligence. Accordingly, he wrote, “The new higher concepts in turn transform, the meanings of the lower.” For example, the adolescent who has mastered algebraic concepts has gained a vantage point from which one sees arithmetical concepts in a broader perspective. Throughout Vygosky's writing, there is repeated emphasis upon humankind's capacity to create higher order structures that, in effect, replace and give new power to the conceptual structures that one overcomes en-route to higher order mastery. It is an image of humankind that places people's efforts to learn and to master knowledge into the centre of the stage as an instrument that a degree tends to free people of earlier efforts and results. In

this, as in other instances of a child's passing from one level of meaning to the next, the child does not need to restructure separately all of one's earlier concepts.

Accordingly, vygotsky wrote that, once a new structure has been incorporated into one's thinking, "it gradually spreads to the older concepts as they are drawn into the intellectual operations of the higher types." Here, Vygotsky is stating a programme of inquiry, rather than a tested conclusion, yet he is putting the issues in a form that carries with it a vigorous, intelligent level. We found an analogous relationship between old and new formations in the development of arithmetical and algebraic concepts." Vygotsky thought that, within human development, the two main lines; individual and cultural developments intersect. Thus, the two aspects of phylogenetic development are centred in language and thinking. The two intersect in a child's life around the age of 3, culture improves one's psychological functions. The transformational quality of the developmental process influences the degree to which social organisation can be used as an instrument in human development. Vygotsky considers an analysis of the development of thinking as symmetrical with an analysis of the development of history. By focusing upon language, he tied together species evolution, societal evolution and evolution of individual organisms. He thought it was imperative that the development of thinking be considered a transformation of knowledge structures. Accordingly, he considered the notion of transformation rather than that of replacement to be critical in explaining cognitive development.

Thought and Language elaborates the sense in which Vygotsky thought that in our mastering nature we master ourselves. It is the internalisation of overt action that makes thought and it is the internalisation of external dialogue that brings the powerful tool of language to bear upon our streams of thought. In this process, neither the mind thinking nor the hand-language for writing alone-can prevail. The tools and aids that do prevail are the developing streams of internalised language and conceptual thought that are sometimes parallel and merge.

Vygotsky, Nature of Human Learning:

Vygotsky proposed a genetically based invariant ontology as contrasted with phylogeny for the development of thinking in individuals as one of the lines of human development and learning. (Ontology is the study of the nature and relations of being.) phylogeny, the other line of human development, is cultural improvement of psychological

functions. Vygotsky thought that it was imperative to differentiate the psychological functions common from lower animals to the higher psychological functions common only to human beings. He observed that, from the point of view of psychology, every word is a generalisation or a concept. Since generalisations and concepts are acts of thought, we may regard meaning as a phenomenon of thinking. “The connection between *work and meaning*, is a matter of structure as contrasted with that of simple association.” A concept is formed, not through interplay of associations, but through an intellectual operation within which all of the elementary functions participate in a specific combination. For example, a child cognitively unites diverse objects into groups under a common name.

Vygotsky way of dealing with Children’s Development and Learning

Vygotsky first stated that, practical experience shows that direct teaching of concepts is impossible and fruitless. In this connection, he summarises Tolstoy’s statement on attempts to relate concepts from teachers to pupils as follows. One cannot teach children literary language by artificial explanations, compulsive memorising and repetition. What a child needs is a chance to acquire new concepts and words to form the general linguistic concept. So the most promising approach to the problem would be people’s study of *scientific* concepts that are real concepts, yet they are formed under our eyes almost in the fashion of *artificial* concepts. We need a yardstick for comparing the two constructs such a measuring device, we must know the typical characteristic of everyday concepts that are held by children at the school ages and the direction of those children’s development.

Vygotsky has observed that the meaning of every work is a generalisation or concept. So, the connection between work and its meaning is a matter of ideological cognitive structure as contrasted with one of simple association. The first step toward cognitive abstraction is made when a child groups together maximally similar objects, small and round or red and flat. Then, during the next stage, their grouping objects on the basis of a single attribute, for example, only round or only flat objects defeat children’s grouping objects on the basis of maximum similarity. But, even in very young children, objects or situations that have some features in common evoke like responses. At the earliest pre-verbal stage, children clearly expect similar situations to lead to identical outcomes. Once a child has associated a word with an object, that child readily applies the name of the object with that of another object that impresses one as being similar.

Potential concepts may be formed either in perceptual or practical action-bound thinking. Even abstract concepts often translated into the language of concrete action. Only the mastery of abstraction, combined with advanced complex thinking enables the child to progress to the formation of genuine concepts.

How is Learning a Developmental Process Assisted by Parents and Teachers?

Vygotsky wrote “to devise successful methods of instructing school children in acquiring systematic knowledge, it is necessary for us to understand the development of scientific concepts, as contrasted with learning spontaneous concepts, in children’s minds” Here we see Vygotsky equating the teaching of systematic knowledge with the teaching of “scientific” concepts. So, he interpreted the meaning of “scientific” concepts very broadly to include all generalised systematic knowledge. “Since scientific and spontaneous concepts differ (from one another) in their relation to the child experience, and in child attitude towards their objects, they (children) may be expected to follow different developmental paths from their inception to their final forms”.

Learning occurs when children acquire both scientific and spontaneous everyday concepts. Vygotsky wrote “to study the relationship between the development of scientific and that of everyday concepts, we need a yardstick for comparing them.” So, the most promising approach to the problem would seem to be the study of scientific concepts, which are real concepts yet are formed under our eyes almost in the fashion of artificial concepts. Here, we appear to need a definition of learning as its meaning is involved in acquiring the meanings of both kinds of concepts. Accordingly, we need Vygotsky’s definition of learning for which he seems to have affinity. This appears to be in Koffka’s Gestalt psychology, which was forerunner of Lewin’s field psychology. This theory introduces a unique conception of the educational process as the formation of new cognitive structures and perfecting old ones. Thus, instruction is accorded a meaningful structural role. These statements open the way into “field psychology” as developed by Kurt Lewin and “cognitive-field interactionist as psychology”.

Vygotsky chose to focus on children’s cognitive processes that are still growing-the processes of today or tomorrow rather than those of yesterday that are already mastered. Teachers and parents were advised to keep task within children *zone of proximal development* (ZPDs)-slightly above their levels of independent functioning. By so doing,

adults can rouse to life the cognitive processes that are just emerging in rudimentary form. With proper input, a child can be expected to perform much more capably than the child's current level indicates. Vygotsky thought that, in most setting, adults and children should work together to bring each child up from his/her initial level of mastery gradually to the most advanced level of activity that he/she can achieve. This process begins with the concerned adult doing most of the cognitive work. But this phase is followed by one within which the child and the adult share responsibility. Finally, the child becomes able to think and perform independently.

For Vygotsky, the role of education is to provide children with experiences that are within their respective ZPDs-Zones of Proximal Development-activities that challenge children but which, with sensitive adult guidance, can be accomplished by the children. The teacher's task is to keep each child's learning tasks either centred on or focused slightly above each respective child's ZPD zone.

Psychological Scaffolding

Educational leaders who were trying to determine the most important components of a child's tutoring programme introduced the term scaffolding. It has become an extremely popular and useful concept in the field of psychology, especially as it applies to early childhood education. Within scaffolding, a child is viewed as one who is actively constructing oneself and one's environment. The social environment is the necessary scaffolding and framing that permits a child to move forward and continue to build new competencies. This pictured interactional style has repeatedly fostered cognitive growth and has increased children's performances on a wide variety of tasks.

A first component of scaffolding is the engagement of children in interesting, culturally meaningful collaborative problem-solving activities. Participants may consist of either adult-child or child-child groupings. It is important that children interact with someone while the two, that are involved-in adult-child or child-child relations are jointly trying to reach a goal. Here, *Intersubjectivity* is a quality of good scaffolding. This term means that, two or more participants begin a task with different understanding but arrive at a constructive shared one. There are several ancillary goals of psychological scaffolding. These include promoting intersubjectivity in the sense of creating a common ground for communicating each partner to adjust to the perspective of the other, and of promoting

warmth and responsiveness. For example, during scaffolding, an intricate dance is developed between a teacher and a pupil, with the child leading and the teacher following.

Theory of Self-Efficacy

In *Social Foundations of Thought and Action*, Albert Bandura (1986) wrote that individuals possess a self-system that enables them exercise a measure of control over their thoughts, feelings, and actions. This self system houses one's cognitive and affective structures and includes the abilities to symbolise, learn from others, plan alternative strategies, regulate one's own behaviour and engage in self-reflection. It also plays a prominent role in providing reference mechanisms and a set of sub-functions for perceiving, regulating, and evaluating behaviour, which results from the interplay between the self system and external environmental sources of influence. As such, the self system serves a self regulatory function by providing individuals with the capability to alter their environments and influence their own actions. In all, Bandura painted a portrait of human behaviour and motivation which he believes that people have about them are key elements in exercise of control and personal agency.

According to Bandura (1986) social cognitive theory, self-referent, thought mediates between knowledge and action and through self reflection individuals evaluate their own experiences and thought, processes, knowledge, skill, prior attainments are often poor predictors of subsequent attainments because the beliefs are the ones individuals hold about their abilities and about the outcome of their efforts which powerfully influence the way in which they will behave. This view is consistent with that of theorists who have argued that the potent nature of beliefs makes them a filter through which new phenomenon are interpreted and subsequent behaviour mediated (Nisbett & Ross, 1980; Pajares, 1992; Posner, Strike, Hewson, & Gertzog, 1982).

However individuals interpret the results of their performance attainments informs and alters their environment and their self-beliefs, which in turn informs and alter their subsequent performances. This is the foundation of Bandura's (1978b, 1986) conception of reciprocal determinism, the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behaviour, and (c) environmental influences create interactions that result in a triadic reciprocal. Because personal agency is socially rooted and operates

within socio-cultural influences, individuals are viewed both as products and as producers of their own environments and of their social systems.

Bandura (1986) considers self-reflection the most unique human capability for through this form of self-referent thought people evaluate and alter their own thinking and behaviour. These self-evaluations include perceptions of self-efficacy, that is, “belief in one’s capabilities to organise and execute the courses of action required to manage prospective situations” (Bandura, 1986). These beliefs of personal competence affect behaviour in several ways. They influence the choices individuals’ make and the courses of action they pursue. People engage in tasks in which they feel competent and confident and avoid those in which they do not. If, according to James (1892/1985) experience is essentially what individuals choose to attend to, then self-beliefs that influence those choices are instrumental in defining one’s experience and providing an avenue through which individuals exercise control over the events that affect their lives. Efficacy beliefs help determine how much effort people will expend on an activity, how long they will persevere when confronting obstacles, and how resilient they will prove in the face of adverse situations-the higher the sense of efficacy, the greater the effort, persistence, and resilience. Efficacy beliefs also influence individuals’ thought patterns and emotional reactions. People with low self-efficacy may believe that things are tougher than they really are, their beliefs foster stress, depression and a narrow vision of how best to solve a problem. High self-efficacy, on the other hand, helps create feelings of serenity in approaching difficult tasks and activities. As a result of these influences, self-efficacy beliefs are strong determinants and predictors of the level of accomplishment that individuals finally attain. For this reason, Bandura argues that beliefs of personal efficacy constitute the key factor of human agency.

The construct of self-efficacy has a relatively brief history that began with Bandura’s (1977) publication of “Self-Efficacy: Toward a unifying Theory of Behavioural Change.” The tenets of self-efficacy have since been tested in varied disciplines and settings and have received support from a growing body of findings from diverse fields (Bandura, 1986; Maddux & Stanley, 1986; Multon, Brown, & Lent, 1991). For example, self-efficacy has been the focus of studies on camera, problems such as phobias (Bandura, 1983), depression (Davis & Yates, 1982), social skills (Moe & Zeiss, 1982), and assertiveness (Lee, 1983, 1984); on smoking behaviour. (Garcia, Schmitz, & Doerfler, 1990); on pain control

(Manning & Wright, 1983); on health (O'leary, 1982); and on athletic performance (Barling & Sososoos 1983; Lee, 1982). In the past decade, self-efficacy beliefs have received more attention in educational research, primarily in the area of academic motivation (Pintrich & Schunk, 1995).

The role self-belief plays in motivating individuals is the primary focus of theoretical perspectives other than those of social cognitive theory. These include theories about self-concept, attributions of success and failure, expectancy value, goals, self-schemas and possible selves (Pajares, 1996). Self-belief is specific to one's perceived competence, or expectancy beliefs, are also prominent in the area of academic motivation. To better understand the role that self-beliefs play in academic settings researchers have investigated the relationship between this belief and various academic performances, as well as the relationships among the beliefs themselves. Results generally support the contentions of social cognitive theory as regards the role of self-efficacy (Multon et al., 1991), but they have not been successful in clarifying the nature of the relationship between self efficacy beliefs and other expectancy constructs, nor have they been successful in sifting out and demonstrating either the practical or the empirical difference between them (Pajares, 1996). Moreover, because beliefs about one's perceived capability are subsumed into the conceptual and operational definitions of most motivation constructs, results often produce confounded relationships and ambiguous findings that obfuscate the potential contribution of any expectancy belief to the understanding of academic motivation.

Empirical Literature Review

Self-Efficacy and Academic Performance

There is ample empirical evidence that self-efficacy and self-concept beliefs are each related with and influence academic performance. Moreover, they also mediate the influence of other variables that predict academic performance, which is to say they act as a filter between variables such as previous performance and mental ability on academic performance. Researchers have been successful in demonstrating that self-efficacy beliefs are positively related to and influence academic performance and that these beliefs mediate the effect of skills, previous experience, mental ability, or other self-beliefs on subsequent performance. A meta-analysis of studies published between 1977 and 1988 revealed that, efficacy beliefs were positively related to academic performance (Multon, Brown, & Lent,

1991). Self-efficacy beliefs were related to academic outcomes ($r_u = .38$) and accounted for approximately 14% of the variance. Effects were stronger for high school ($d = .41$) and college students ($d = .35$) than for elementary students ($d = .21$). How the constructs were operationalised also influenced findings. The strongest effects were obtained when performance indexes were assessed with basic skills measures ($d = .52$) or classroom-based indices such as grades ($d = .36$) than with standardised achievement tests ($d = .13$), a finding that supports the context-specific nature of self-efficacy beliefs. When self-efficacy beliefs correspond to the academic outcome with which they are compared, prediction is enhanced and the relationship between self-efficacy and academic performance is positive and strong (Pajares & Miller, 1994, 1995).

Correlations between self-efficacy and academic performance in investigations in which self-efficacy is analysed at the item-or task-specific level and closely corresponds to the criteria task have ranged from .49 to .70; direct effects in path analytic studies have ranged from $B = .349$ to .545. Results tend to be higher in studies of mathematics than other academic areas such as reading or writing (Pajares & Johnson, 1996; Pajares & Valiante, 1997). Zimmerman and his associates have been instrumental in tracing the relationships among self-efficacy perceptions, academic self-regulatory processes, and academic achievement. This line of inquiry has demonstrated that self-efficacy beliefs influence self-regulatory processes such as goal setting, self-monitoring, self-evaluation, and strategy use (Zimmerman, 1989, 1990, 1994; Zimmerman & Bandura, 1994; Zimmerman & Martinez-Pons, 1990). Self-efficacious students embrace more challenging goals (Zimmerman, Bandura and Martinez, 1992). Students with high self-efficacy also engage in more effective self-regulatory strategies at differing levels of ability and self-efficacy enhances students' memory performance by enhancing persistence (Bouffard-Bouchard, Parent, & Larivee, 1991). In studies of college students who pursue science and engineering courses, high self-efficacy has been demonstrated to influence the academic persistence necessary to maintain high academic achievement (Lent, Brown, Larkin, 1984, 1986).

Self-efficacy is also related to self-regulated learning variables and use of learning strategies (Feather, 1988; Fincham & Cain, 1986; Paris & Oka, 1986; Pokay Blumenfeld; 1990; Schunk, 1985; Zimmerman & Martinez-Pons, 1990). Students who believe they are capable of performing tasks use more cognitive and metacognitive strategies and persist

longer than those who do not. Academic self-efficacy influences cognitive strategy use and self-regulation through use of metacognitive strategies, and it is correlated within class work and homework, exams and quizzes, essays and reports. Pintrich and DeGroot (1990) suggest that self-efficacy plays a facilitative role in the process of cognitive engagement, that raising self-efficacy beliefs might lead to increased use of cognitive strategies and, thereby, higher achievement, and that students need to have both the will and the skill to be successful in classrooms.

Students with similar previous achievement and cognitive skills may differ in subsequent achievement as a result of differing self-efficacy perceptions because these perceptions mediate between prior attainments and academic achievement. As a consequence, such performance is generally better predicted by self-efficacy than by the prior attainments. Collins (1982) identifies children of low, middle, and high mathematics ability who had, within each ability level, either high or low mathematics self-efficacy. After instruction, the children were given new problems to solve and an opportunity to rework those they missed. Collins reported that ability was related to performance but that, regardless of ability level, children with high self-efficacy completed more problems correctly and reworked more of the ones they missed. When researchers tested the joint contribution to mathematics performance of maths self-efficacy and general mental ability (the variable typically acknowledged as the most powerful predictor of academic performances), they found that, despite the influence of mental ability, self-efficacy beliefs made a powerful and independent contribution to the prediction of performance (Pajares & Kranzler, 1995). Clearly, it is not simply a matter of how capable one is, but how capable one believes oneself to be. Schunk (1989, 1991) has suggested that variables such as perceived control, outcome expectations and perceived value of outcomes, attributions, goals, and self-concept may provide a type of cue used by individuals to assess their efficacy beliefs.

Studies tracing the relationship between confidence and goal setting have demonstrated that self-efficacy and skill development are stronger in students who set proximal goals than in students who set distant goals, in part because proximal attainment provide students with evidence of growing expertise (Bandura & Schunk, 1981). In addition, students who have been verbally encouraged to set their own goals experience increases in

confidence, competence, and commitment to attain those goals (Schunk, 1985). Self-efficacy is also increased when students are provided with frequent and immediate feedback while working on academic tasks (Schunk, 1983b) and when students are taught to attribute this feedback to their own effort, they work harder, experience stronger motivation, and report greater efficacy for further learning (Schunk, 1987). Taking into account students' self-efficacy beliefs is critical to the success of academic strategies and instructional interventions (Berry, 1987; Schunk, 1981). Self-efficacy explains approximately a quarter of the variance in the prediction of academic outcomes beyond that of instructional influences. Students' self-efficacy beliefs are responsive to changes in instructional experience and play a causal role in students' development and use of academic competencies.

Several studies have demonstrated that individuals with strong self-efficacy beliefs in specific content areas perform better in those areas. With particular relevance to counseling psychology, there are specific areas in which higher levels of self-efficacy have shown better performance. These areas include career self-efficacy (Betz, 1992); academic self-efficacy and college student satisfaction (DeWitz & Walsh, 2002); academic self-efficacy and study skills acquisition (Zytowski & Luzzo, 2002); maths and science self-efficacy (Lapan, Boggs & Morril, 1989); vocational self-efficacy and its relationship with major / career selection (Rooney & Osipow, 1992); and job seeking self-efficacy (Barlow et al 2002). These findings have led researchers to name specific types of efficacy beliefs being studied (ie vocational self-efficacy and academic self-efficacy) (DeWitz and Walsh, 2002). Bandura et al. (1996) examine the effects of content specific self-efficacy on academic functioning. Other researchers consequently examined how academic self-efficacy applies to scholastic activities (Lindey, & Borgen, 2002; Pajares, 1996).

Self-efficacy appears to have relationship with persistence in completing post secondary education. Dewitz and Walsh (2002) describe a positive relationship between self-efficacy beliefs and both persistence and academic performance in college. Two recent unpublished studies have found a relationship between academic self-efficacy and high school Grade Point Average (GPA) in an American Indian Population (Bryan, 2003; Downs, 2005). Academic self-efficacy has been identified as a likely factor in academic functioning and no research currently exists that examines the four components of self-efficacy, namely: performance accomplishments (past success), vicarious experience (modeling), verbal

persuasion and psychological state (emotional arousal/anxiety) and their relevance to students.

Bandura (1977, 1997) posits that the degree of self-efficacy belief in a particular domain would affect whether an individual approaches or avoids a given behaviour and his or her level of persistence and performance while engaging in that behaviour. Following Bandura's original work, studies have sought to define and apply self-efficacy in various spheres (Bandura & Locke, 2003; Betz, 1992). Academic self-efficacy is a construct, which has its roots in Albert Bandura's (1977, 1997) theory of self-efficacy or social learning theory. Evidence from several studies consistently shows that, higher self-efficacy expectation contributes significantly to motivation and desired performance in academic settings (Hackett, 1985; Lyman et al., 1984; Pajares & Kranzler, 1995; Schunk, 1989). Academic self-efficacy is a term suggesting the possibility that self-efficacy with respect to academic behaviours may influence scholastic persistence and performance.

Hackett and Betz (1981) report finding a positive relationship between academic efficacy beliefs and academic performance. Researchers have conducted hundreds of studies testing Bandura's self-efficacy theory. However, it is essential to mention that there is a large body of research which demonstrates the relationship between academic efficacy beliefs and academic performance (Bandura, 1997; Brown, Lent & Larkin, 1989; Eccles et al., 1998; Hackett, 1985; Lent & Larking, 1984; Linnenbrink & Pintrich, 2002; Lyman et al., 1984; Multon, Brown & Lent, 1991; Pajares & Kranzler, 1995; Pintrich, 2000; Pintrich & Schunk, 2002; Schunk, 1989; Zimmerman, 2000).

Lent and Lark (1984) observe that students reporting high educational self-efficacy generally achieved high grades and persisted for long time in scientific or technical majors in a university setting. Brown, Lent, and Larkin (1989) demonstrate that global efficacy perceptions had effects on academic performance and persistence in students entering college. Findings from the numerous studies conducted on this topic are best summarised in a meta-analysis of all the research conducted in this area over a nine-year period from 1981 to 1990 through which a positive, statistically significant relationship between self-efficacy beliefs, academic performance and persistence was demonstrated (Multon, Brown, & Lent, 1991). These findings, added to recent studies appear to have established the validity of

academic self-efficacy as a predictor of students' learning, motivation, persistence and achievement (Zimmerman, 2000).

Recent empirical findings have continued to demonstrate the relationship between efficacy beliefs and educational performance and persistence. These studies have been more detailed in analysing the relationship between efficacy beliefs in certain academic majors/subjects or with elementary and secondary level students. Bandalos, Yats, and Thorndike-Christ (1995) studied the effects of maths efficacy beliefs and outcome in undergraduate college courses. Their finding showed that those with low reported levels of math self-efficacy had higher test anxiety and lower grades than those with moderate and high reported levels of math self-efficacy. Linnenbrink and Pintrich (2002) correlate academic self-efficacy with not only academic outcomes, but also persistence in elementary and secondary level students. This study support previous findings, which yielded similar results (Bandura, 1997, Pintrich, 2000; Pintrich & Schunk, 2002) Lopez et al. (1997) associate mathematics self-efficacy with interest and performance in math courses in high school students. The aforementioned findings lend further support to the notion of the association academic efficacy beliefs has with academic performance for students of all ages and levels of education and in various subjects.

Studies have found significant relationship between self-efficacy and academic persistence/performance (Linnenbrink & Printrich, 2002; Mayo & Christened, 1999; Nichols & Steffy, 1999; Tashakkori & Thompson, 1991). These findings suggest self-efficacy is a construct, which can explain deficits in academic achievement. There has been research on academic self-efficacy, most of which examine factors contributing to low rates of academic persistence and achievement (Brown & Kurpius, 1997; Byran, 2004; Downs, 2005; Hill, 2004; Jackson & Smith, 2001; Jackson, Smith & Hill, 2003; Lin, 1990; Well, 1989). Bryan (2003) and Downs (2005) conducted studies in which self-efficacy was significantly positively correlated to academic achievement. Bryan (2003) as part of his study on cultural identity and school performance identifies the strong relationship between GPA and scores on a self-report measure of academic self-efficacy, the Self-in-School (Smith, 1988). He concludes that higher academic performance would result from higher self-efficacy (Bryan, 2003). Bryan (2003) suggests that efforts to improve academic self-efficacy could positively impact academic performance in Navajo American Indian students.

Adding to these initial findings Downs (2005) conducted a study to determine parental influences on students' academic beliefs. The subsequent findings lent further support to the notion of a significant correlation between academic expectancy beliefs and educational performance as measure by GPA (Downs, 2005). Further Downs (2005) finds that scores on self-report measures of academic self-efficacy are significantly positively correlated to scores on Standardised Academic Test (SAT).

Muris (2007) links the finding from Bryan (2004) and Downs (2005) with themes from qualitative research on lower than expected levels of academic achievement and post-secondary persistence (Jackson & Smith, 2001; Jackson, Smith & Hill, 2003) which suggest that Navajo American Indian students lack exposure and feedback in the form of efficacy information. While academic self-efficacy has been shown to correlate with academic achievement (Bryan, 2003; Downs 2005) there are issues with the instrumentation and measurement involved with the construct of academic self-efficacy. Adeyemo (2001) also observes that students' curricular option was influenced by self-efficacy. Academic self-efficacy has been found to correlate with semester and final year grades in class work, homework, examinations and quizzes, essays and reports (Pintrich and DeGroot, 1997) Academic self-efficacy therefore greatly influences students' academic performance as a whole.

The predictive utility of self-efficacy has been tested using causal models. Schunk (1981) employed path-analysis to reproduce the correlation matrix comprising long-division instructional treatment, self-efficacy persistence and achievement. The most parsimonious model showed a direct effect of treatment on achievement and an indirect effect through persistence and self-efficacy, indirect effect of treatment on persistence through self-efficacy and a direct effect of treatment on achievement and persistence. Research supports the positive relationship between self-efficacy beliefs and academic achievement; much of the evidence have been garnered in such areas as sports and traditional Math classes (Schallert, 2006). Correlation analysis between attitude towards science and self-efficacy for science showed that the two factors were positively related $r = .60, p < 0.001$. Another correlation showed that attitude towards science and self-efficacy was positively related to the science achievement test: (r. sub. Attitude) = .11, $p < 0.05$; (r. sub. Self-efficacy) $r = .28; P < 0.001$. Regression analysis examining whether students self-efficacy beliefs and attitude towards

science would predict students post-science achievement scores, showed a significant (r. sub. 2) of .08, $f(2,489) = 22.30$. $p < 0.001$. Of the two predictors self-efficacy was found to significantly predict science achievement. (Beta) = 0.33, $t(489) = 6.02$, $p < 0.001$) while attitude was not. ($p > 0.001$) Schallert, 2006.

Haggins (2002) examines the impact of using integrated meta-cognitive instruction on high student's achievement, self-efficacy and test anxiety. He made use of 40 students in two advanced geography classes in a large urban high school. The level of meta-cognitive strategies of students used at the beginning of the semester was assessed and compared to that of the semester and these levels were compared to those of control group. The motivated strategies for learning Questionnaire (MSLQ) was used in measuring Meta cognitive strategies use self-efficacy for learning and test anxiety. It was hypothesised that treatment group would have higher scores on an achievement test that would report higher self efficacy scores and that they would also report lower test anxiety scores. Treatment effect was in the direction that was hypothesised, but there was no significant difference, different interactions found between gender and achievement meta-cognitive self-regulation and test anxiety. Males had higher achievement scores and females reported high levels of Meta cognitive strategy used and higher levels of anxiety. Umoiyang (1999) posits that test anxiety has no direct causal link with Mathematics achievement at the thinking level. However, an indirect link was observed through attitudes towards Mathematics and achievement at the knowledge level. Abe (1995) observes that there is no direct causal linkage between test anxiety and achievement.

Relevance of the Subjects passed in Senior School Certificate Examinations to Students' Future Career Aspiration

Different disciplines or professions require proficiency in certain school subjects for admission to pursue such careers in institutions of higher learning. Thus, the overall performance of a student can be regarded as poor if the student has distinctions in all the irrelevant subjects and fails in the few subjects (e.g. English and Mathematics) which are very critical to his or her future educational aspirations. Even more practically, if a child is aspiring for a course in Computer Science at the University level and earns an ordinary pass, and not credit in the 'O' level examination, this would be regarded as a poor performance (Uwakwe, et al., 1995).

Performance in public examination in Nigeria has been consistently depreciating in the past decades, with the annual percentage pass hovering around 30 per cent. For illustration, data available from the West African Examinations Council and National Examinations Council (WAEC & NECO Statistics Unit (2009) show that the number of candidates who sat for the English Language and Mathematics papers rose from 3,352,163 to 4,635,670 in 2009, shockingly however, only 26.78% made the credit pass in 2007, 13.63% in 2008 and a bare 25.99% in 2009 and 31.54% made credit pass in 2007, 23% in 2008 and 10.33% in 2009 respectively. Those who made the flat failure (F9) in 2007 were 65.7%, 59% in 2008, and a phenomenal 82.4% in 2009. It should be emphasised here that a failure in English Language is a major disaster since a credit pass (Grades 1-6) is a prerequisite for admission into most post-secondary institutions.

This same trend is also observable in other subject areas in the Arts and Sciences. Biology is the favourite subject chosen by 350,476 candidates in 2009, 299,034 in 2008, and 276,990 in 2007. The results however were very poor with only 11.73% of the candidates making the credit grade 1-6, in 2009, 10.6% in 2008 and 8.93% in 2007. Over 65% of the candidates had outright failure in 2009, 2008 and 2007. Economics is perhaps the most popular and favourite subject of candidates besides English Language which is compulsory. In fact, 427,194 candidates sat for Economics in 2009, though only 22.2% of them passed with credit grades 1 to 6. Outright failure was 60.7% of the candidates. The best result in Economics was 44.4% of the students who passed at the credit levels in 2007.

At the primary school level, empirical evidence shows that a considerable percentage of the pupils go through the stage without acquiring the basic academic survival skills. Most of them at the completion of primary school education can neither read nor write (Uwakwe, et al., 1995). From the foregoing, it is very obvious that the problem is really overwhelming. In an interview granted "The Punch" newspaper by the former Minister of Education (Mrs Obiageli Ezekwesili) and published on Page 52 of Friday, November 17, 2006's edition titled "Education reform: Escape from conquest through knowledge", the minister grievously described the near total collapse of the educational sector in the country. In her words, "...the policy structure of educational governance, physical infrastructure, quality of curriculum, monitoring and inspection, deployment of technology, teachers' quality and

supply, funding, academic and equity issues. She agrees that Nigeria has a very long way to go in attaining quality educational development” (p. 52).

Data, as at November 2006, revealed that Nigeria had a total of 11,000 secondary schools, 6,700 of these were public-owned while 3,400 were operated by the private sector (Ezekwesili, 2006). Of the 11,000 schools, 102 were unity schools being operated by the Federal Government (Ezekwesili, 2006). Academic achievements in these schools were woeful. For instance, only 23.37 per cent of students who wrote the SSCE and the NECO between 2000 and 2004 across the nation made five credits – including English and Mathematics. In 2005, only 23.1 per cent of the candidates that sat for the Universities’ Matriculation Examination (UME) passed. Between 1999 and 2006, about 10 million candidates could not secure admission into higher institutions (Ezekwesili, 2006). In 2006 UME, 868,000 applied for university admission 200,000 scored above the cut-off point but only 148,323 stood the chance of gaining admission because of the low-carrying capacity of the nation’s 76 universities (Ezekwesili, 2006). Even those who were lucky enough to gain admission were not well groomed because of decay in the sector as exemplified by cultism, examination malpractices, system abuse and corruption” (Ezekwesili, 2006).

The minister’s interview lends credence to Aremu (2001)’s findings that “government factor” accounted the most for poor academic performance in the country. According to the interview, the curriculum was not up-to-date until recently when teachers’ quality was low, funding was inadequate, the structure of governance was largely public-sector-driven (50,871 public pre-basic /basic education schools as against the 9,317 privately owned ones) and physical infrastructure was grossly inadequate (barely half of the needed number of classrooms were available and out of this, only about 50 per cent were considered to be in good condition while only 29.65 per cent of primary schools had access to water and light).

However, the minister argued that contrary to expectations, increased funding had not raised the standard of education in the country. Giving data, she claimed that between 2000 and 2006, N622.62 billion was budgeted for the sector. In 2000, education got N23.6 billion; N56.84 billion in 2001; N82.12 billion in 2000, 78.95 billion in 2003, 93.77 billion in 2004, 120.03 billion in 2005 and 167.31 billion in 2006. Also, between 1999 and August 2006, the Education trust fund allocated a total 81.6 billion to universities, polytechnics and

colleges of education, while the Universal Basic Education (UBE) disbursed N15.7 billion to states between 2005 and July 2006. While funding was increasing by an average of N23.95 billion annually, according to her, the performance within the sector was taking a downward slide. For instance, 76.63 per cent of students that sat for the West African Examinations Council failed.

In addition, the average success rate of five credits, including mathematics and English, for unity schools students in NECO between 2000 and 2006 was 38 per cent. Also, NECO's ranking of the top 100 secondary schools in the country in terms of performance in its examination between 2000 and 2006 showed that the first unity school was ranked 54th despite the fact that over N18.7 billion had been expended on these unity schools which had 122,000 students and 23,110 teachers during the period under review. From this, she concluded, it was clear that increased funding per se had not translated into improved performance. As funding went up, performance declined.

Politically, every modern society needs well trained, skilled and principled human resource in the art of governance and the running of the affairs of the state, especially men and women who are well educated and have achieved optimally in their various fields of endeavour. In other parts of the world, especially in Europe and North America, the trend and tradition that have sustained their development as industrialised nations is that well seasoned academics that have made their marks in their professions are saddled with the mantle of running their countries. The reverse is the case however in most underdeveloped nations, including Nigeria. In this country, the spiral trend of academic underachievement, which has become a national malaise, has dire consequence on the nation's political stability, which means the intellectual potential of the country may never really be maximally harnessed.

Psychologically, education fosters and facilitates the process of human adjustment. In other words, education equips the individual with the requisite social psychological skills to cope with the demands of modern life and living. The analogy here therefore is that, underachievement is a drag on the individual in the modern society, and it should therefore be tacked vigorously and ameliorated speedily. The situation of academic underachievement does not only worry government but also parents. Many parents are bored to find out that after spending huge sums of money in training their children and wards in post-primary

schools for about six years, they come out without a standard certificate. To the government, the situation does not augur well with its educational objective to produce a future generation that would be educationally and technologically sound (Ogolo, 1996).

To ameliorate this problem of poor academic performance by students, government over the years have been recruiting and posting, from time to time, teachers, in an appreciable number to its post-primary institutions and thus striving to improve upon existing learning facilities in the schools. Many parents have on their part increased their support for their children's wards' education. They maintain prompt payment of fess and provision of essential textbooks. All these efforts notwithstanding, the academic performance of students in post-primary institutions is discouraging. Various studies have been carried out on different aspects (e.g. English) of students' performance as determined by factors such as motivation, self-efficacy, parental influence, emotional intelligence, locus of control, task-value beliefs, goal-orientation, among others. However, few studies have proved useful in explaining the interactive roles of a number of these variables in enhancing students' academic performance and achievement, though the investigator is not unaware of recent attempts made by scholars like Aremu (2001, 2003, 2004, 2005) and a few others in this regard.

Factors Affecting Academic Performance among Students

Low academic achievement is measured in various ways. The most commonly cited indicator is the rate of high school completion, but statistics are also available on grades, standardised test scores, absenteeism, suspensions and expulsions, and the percentage of students who have been held back. This section summarises the latest available information on grade, retention, test scores and high school completion. Gender and race differences are presented, and the societal costs of academic failure are also discussed.

Below is the modal grade level for one's age as statistics relevant to school failure, since many students who are held back to repeat a grade may ultimately become discouraged and drop out of school (Mahan & Johnson, 1983; Massachusetts Advocacy Centre, 1988; Carnegie Council on Adolescent Development, 1989; National Commission on Children, 1991). According to 1988 data, 35 per cent of male and 25 per cent of female, 13 year olds were behind their age peers; black males have especially high retention rates, approaching 50 per cent (National Centre for Education Statistics, 1999).

Standardised achievement tests are another common measure of school achievement. International comparisons show that, adolescents in the U.S. are behind their peers in other countries in mathematics and science scores (National Centre for Education Statistics, 1999). Substantial numbers are also deficient in basic reading comprehension and critical thinking skills (Carnegie Council on Adolescent Development, 1989; National Commission on Children, 1999). According to recent estimates, less than half of 17 year olds have the basic skills necessary for employment or continuing education (National Commission on Children, 1999).

Dropping out of school before high school graduation is a commonly cited indicator of academic failure. Approximately, one-fourth of 18 and 19 years olds have not completed high school (National Centre for Education Statistics, 1989), while 17 per cent of the sophomore class of 1980 dropped out before they graduated (National Centre for Education Statistics, 1991). A substantial number of youth who dropped out, however, would subsequently complete high school or obtain an equivalency diploma. For the sophomore class of 1980, almost half of those who did not complete high school on time had obtained a high school or equivalency diploma within six years (National Centre for Education Statistics, 1991). In addition, a substantial number entered training programmes of some kind within two years of dropping out (Ekstrom, Goertz, Pollack, & Rock, 1986).

A recent report from the National Centre for Education Statistics (McMillen, 1992) looks at dropout rates prior to high school, and finds substantial dropout rates between 8th and 10th grades, especially among Hispanics and blacks. The report also cites evidence suggesting even higher Hispanic rates due to dropping out even earlier. The gender and race differences in high school completion are significant. Overall, males have higher dropout rates than females; black females, however, exceed black males in dropout rates (National Centre for Education Statistics, 1991). Whites have higher rates of high school completion than blacks and Hispanics, however black male completion rates are improving (National Centre for Education Statistics, 1999). In 1987, the proportion of 25 to 29 year olds who were high school graduates was 86.0 per cent, ranging from 58.6 per cent among Hispanic males to 87.1 per cent among white females (National Centre for Education Statistics, 1999).

Rates of high school attendance have improved over the course of this century (Centre for the Study of Social Policy, 1986) and were still improving what in the 1980's (National Centre for Education Statistics, 1991). Dropout rates are still a matter of concern, however, due to the continuing social costs incurred by lower earnings as well as higher rates of unemployment, welfare dependency and criminal behaviour that are associated with school failure (Centre for the Study of Social Policy, 1986; Carnegie Council on Adolescent Development, 1989; National Commission on Children, 1999). The employment rate for recent high school graduates is almost 72 per cent, compared to about 47 per cent for recent high school dropouts (National Centre for Education Statistics, 1999). For males in the 25 to 34 age group, high school graduates have an employment rate of almost 90 per cent, compared to about 75 per cent for those with only 9 to 11 years of schooling. Median annual earnings of white male dropouts are about 3-fourths as much as for high school graduates while those who complete college earn almost one and a half times as much (National Centre for Education Statistics, 1999). For black males, the earnings and employment differentials between high school dropouts and high school graduates are even larger (National Centre for Education Statistics, 1999).

Aside from race and gender differences, other social and demographic factors make them especially vulnerable to school problems. Of the 3.7 million children born in 1984, it is estimated that 500,000 (about 13 per cent) were initially at risk of low school achievement, due to health-related factors such as physical or mental disabilities or chronic illness (Higgins & Mueller, 1988). In addition, about a quarter of children under the age of six are living in poverty, a factor that is highly relevant to school failure (Higgins & Mueller, 1988). Overall, an estimated 40 per cent of children in the United States are at risk of school failure due to poverty, race, immigration, poor English language skills, living in a single parent family, parents with little education, or health problems (National Commission on Children, 1999).

Individual Factors and Academic Performance

An individual student might do poorly in school and subsequently leave prematurely for various reasons. A national survey conducted in the early 1980's, high school and beyond, asked students their reasons for dropping out. The most common responses were, not liking school (reported by a third of dropouts) and getting poor grades (also about a

third). Other reasons given were not getting along with teachers and several life events. Males and females differed in their most common reasons. Males were more than twice as likely as females (13 per cent versus 5 per cent) to drop out due to expulsion or suspension, employment (27 per cent vs. 11 per cent), or to contribute to family support (14 per cent vs. 8 per cent). Females were much more likely than males to drop out due to marriage (31 per cent vs. 7 per cent) or pregnancy (23 per cent vs. 0 per cent) Ekstrom et al, 1986).

Poor Self-Concept and Low Sense of Control and Academic Performance

In one study, a group of low income 6th to 8th graders were asked to rate themselves on general competence and academic ability. Positive ratings, both overall and academic, were correlated with better grades and test scores (Sapp, 2000). Self-concept is also moderately related to arithmetic test scores among recent dropouts (Sewell, Palm & Manni, 2001). Dropouts have poorer self-concepts than their peers who stay in school; however, this relationship is moderate (Sewell et al., 2001) or is restricted to certain aspects of self-concept rather than global self-esteem (Ekstrom et al, 2006). Dropouts score higher on external locus of control, the feeling; that their fate is determined by circumstances that they cannot change (Ekstrom et al, 2006). Dropouts also have less sense of efficacy or responsibility (Sewell et al, 2001).

Because the evidence on self-concept and school achievement is largely correlational, we don't know which came first or which the causal factor is. Perhaps having low self-confidence is the cause of doing poorly in school. On the other hand, poor school performance might cause a negative self-concept, which in turn might precipitate dropping out of school. Recent research supports this latter view, suggesting that improving school performance may enhance self-confidence (Steinberg, 1999; Sundius, Entwisle, & Alexander, 1999).

Learning Styles and Academic Performance

In a study comparing dropouts to high school students in alternative and traditional school settings, Gadwa and Griggs (2005) measure three different aspects of learning style: cognitive, affective and psychomotor. Their results show significant differences among these three groups in their preferences for how the learning environment is structured. For example, dropouts are less favourably disposed towards learning situations where they work alone. They are more authority-oriented and prefer more teacher assistance but resist

assistance from other adults. Dropouts also prefer a varied learning environment that includes visual, auditory, tactile and kinesthetic teaching styles, to other students. Dropouts were also found to be less alert in the morning and more alert in the evening than others in the study.

Early School Problems and Academic Performance

Early school problems may be at the root of academic failure in high school. Many students, especially minority, decide to leave school during early adolescence and a substantial number drop out of school before the end of the 10th grade (Carnegie Council on Adolescent Development, 2005). Being below grade level, especially by more than one year, is correlated with the likelihood of dropping out of school (Mahan & Johnson, 1999; Centre for the Study of Social Policy, 2006). Poor Performance in school leads to discouragement and ultimately to dropping out (Ekstrom et al, 2006; Steinberg, Blinde, & Chan, 1994; Gadwa & Griggs, 1995). Special problem-solving skills training for a group of low-income minority 6th graders resulted in improved report card grades 40 weeks later (Larson, 2005). Although no long-term follow-up was reported in this study, the results suggest the value of interventions that are early and that target cognitive skills.

Testwiseness and Academic Performance

Success in testing does not require only competence in the content of the subject matter. It is a well-known fact that some students who know a great deal about a subject will not automatically perform well when tested on that subject. Sometimes, the obstacle to success in an examination is often not lack of content knowledge but lack of test-taking skills (Sternberg, 1999; Smith and Jorgenson, 1997; Ornstein, 1993). Various researchers have investigated the effect of Testwiseness on test scores. However, research findings are mixed. Some studies find that teaching test-taking strategies increase test scores while other studies report no effects.

Dreisbach and Keogh (1982) investigate the effects of training in test-taking strategies on students' performance in a school readiness test. The experimental group was trained in content-free test-taking skills: introduction of the test booklet and explanation of the purpose of tests; familiarisation with standardised testing vocabulary; practice of three different written responses required in readiness test-taking, circle, underline and cross out; emphasis in the importance of practicing good auditory reinforcement of attending skills,

and practice in the following directions. It was found that trained participants performed better than untrained participants. They concluded that teaching test-taking strategy has an important influence on the test performance of students from non-majority background and should be taken into account in readiness assessment programmes.

Butler (1981) investigates the effects of instruction and practice in the Testwiseness of fourth grades as measured by changes in standardised test scores. The study compared the mean scores of an experimental group (N = 22) and a control group (N = 20) of fourth grade subjects on nine subjects of the Iowa Test of Basic Skills. The purpose of the study was to investigate the effect of six hours of instruction and practice on test-taking skills on students' test performance as measured by change in scores between the fall of 1979 and fall of 1980 test batteries. Their research design was the experimental method with particular emphasis on the randomised pre-test and post-test techniques. One-way analysis of variance was used to compare groups, measures and their interaction on each of the nine subjects. Results indicated that subjects receiving instruction in test-taking showed greater gains in each of the nine subtests. Statistically, there were significant differences found between measures on five of the nine subtests, the findings suggest a relationship between the treatment effects and greater gains in test performance.

Zeidner, Klingman, and Papko, (1988) cited by Wiersma, (1990) reports on a study with 497 of fifth and sixth grade students. Homeroom teachers implemented the training. The programme consisted of five, one-hour sessions held two weeks apart. The content included time management, work schemes and relaxation techniques. Overall, they concluded that on the whole, the data pointed to the effectiveness of teacher-implemented training programmes in meaningfully enhancing students' cognitive performance during test situations.

Chance (1992) investigates the effect of Testwiseness on test scores. The participants were 6th and 8th grade students with middle ranking reading stained scores. The objective of the study was to increase consistently below average reading comprehension scores of 8th graders; the objectives included raising reading comprehension scores using task specific strategies, developing a more positive attitude toward reading and utilising higher order questioning strategies. The result of the study indicated that students didn't show the expected increase in reading comprehension scores but 88% showed some increase. The

posttest scores also indicate that attitude towards reading was more positive, skill in determining the meaning of unknown words through contextual analysis improves participation in class utilising higher order questioning strategies increased. The findings suggest that the utilised Testwiseness strategies could facilitate an increase in achievement test.

Seaton (1992) studies the effectiveness of test preparation seminars on performance on standardised achievement tests. The participants were 30 white female high school juniors. The study indicated there was a gain in posttest scores consistent with the literature. The findings suggest that teaching test taking strategy has an important influence on test score. Gallagher (1992) investigates the effect of problem-solving strategies employed by high-scoring examinees in the mathematical section of the Scholastic Aptitude Test (SAT). In one part of the study, the researcher analysed the relationship among students' performance in SAT, the type of strategies employed, the participants attitude towards mathematics and the test taking strategies. The result of the study showed that a strong relationship exist between performance in mathematics and test taking strategies.

In a study conducted by Dolly and Williams (1986) on test taking ability on four cognitive strategies, which are part of Testwiseness skills. The subjects were 54 undergraduate students. The treatment consisted of a one-hour lecture/discussion presentation covering four cognitive strategies identified as comprising testwiseness. The result of their investigation indicated that the experimental group outperformed the control group in all measures of Testwiseness and concluded that, it is possible to teach the four cognitive strategies to students.

Afolabi and Eso-Olawale (1999) investigate the effect of Testwiseness training on performance in objectives tests. The sample consisted of 120. The experimental group (n = 60) was exposed to Testwiseness training package while the control group (n = 60) was given a placebo treatment. The result of the study indicated that: performance of students in objective test can be improved by exposure to Testwiseness training.

Family Factors and Academic Performance

An adolescent from a family of low socioeconomic status is more likely to exit from high school before finishing (Ekstrom et al, 2002 and less likely to attend college (Lambert, 1998). According to a recent report by the National Commission on Children (1999),

poverty can affect educational outcomes in various ways. Adolescents from poor families are more likely to lack basic academic skills and to have repeated a grade as children; they are at risk of poor health and nutrition, a factor that could affect their ability to concentrate in the classroom. The stress and lack of social support to parents in poor families may adversely affect parents' support for school success, thus, children's intellectual development. Poor families are likely to live in poor school districts with few resources to offer their students. Adolescents in poor families are more likely to be employed and this may be harmful to school achievement if work hours are extremely long (National Commission on Children, 1999).

Mother's educational attainment is a significant predictor of high school completion (Ekstrom et al, 1998; Howell & Frese, 1992) and of test scores (National Commission on Children, 1999). The effects of parents' education are due in part to the influence of education on parental expectations and parenting style (Howell & Frese, 2002).

Parental Involvement and Academic Performance

Community psychologists have demonstrated that, parental involvement in the school system have greatly improved the level of confidence in children. An individual who has a number of successful experiences is likely to believe in subsequent successful executions of similar behaviour. The sense of confidence can be instilled by parents or other close family members and other individuals who have particular influence on the individual (Muris, 2002).

Adeyemo (2006) in his study, found a relationship between parental involvement and academic self-efficacy and so explained that the significant impact of parental involvement on academic self-efficacy is best understood realised when it is realised that most parents have great expectations for their children. It is the desire of most parents that their children excel in life and they would live no stone unturned to make sure their children are given the needed support. Thus, it is believed that it would give them more confidence to forge ahead supporting their academics. Chandler (2006) studied the influence of parental involvement on academic self-efficacy of 264 undergraduates and found that, academic self-efficacy was significantly positively correlated with authoritative parenting style basing it on regression analyses of authoritative parenting style and academic self-efficacy. These were significantly predictors of academic performance. Beginning in infancy, parents and

caregivers provide expectance that differentially influence children's self-efficacy; Home influences that help children interact effectively with the environment positively affect self-efficacy (Bandura, 1997). Initial sources of self-efficacy are centred in the family, but the influences are bi-directional. Parents who provide an environment that stimulates youngsters' curiosity and allows for mastery experiences help to build children's self-efficacy. In turn, children who display more curiosity and exploratory activities promote parental responsiveness. When environments are rich in interesting experiences that arouse children's curiosity and offer challenges that can be met, children are motivated to work on the activities and thereby learn new information and skill (Meece, 1997). As children grow, peers become increasingly important. Parents who steer their children toward efficacious peers provide further vicarious boosts in self-efficacy. Homes also are prime sources of persuasive information. Parents who encourage their youngsters to try different activities and support their efforts help to develop children who feel more capable of meeting challenges (Bandura, 1997). Self-efficacy suffers in homes in which novel activities are discouraged.

Factors Affecting Academic Performance among Students

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Ethnic Minority Status and Academic Performance

Minority adolescents have higher dropout rates (Ekstrom et al, 2006). Black and Hispanics have lower grades than whites (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 2007). Much of the effect of minority status on academic performance may be actually due to the influence of socioeconomic status. Whites' dropout rates are actually higher than that of blacks, after controlling for socioeconomic status (Howell & Frese, 2002). Hispanic students have higher dropout rates than other "language minority" youth; this is largely due to the lower socioeconomic status of many Hispanics (Steinberg et al, 2004).

A number of factors have been suggested to explain the low academic achievement of minority students, aside from socioeconomic status. Minority students are more likely to live in poor families or in single parent families, their parents are likely to have less education, and they usually attend lower quality schools, all of which are risk factors for school success (National Commission on Children, 1999). They also may face discrimination and prejudice at school, and the value systems of school may conflict with family and ethnic subculture values (Centre for the Study of Social Policy, 2006; Fordham & Ogbu, 2006; Fordham, 2008; National Commission on Children, 1999). In the face of high black unemployment rates and widespread discrimination in hiring and promotions, minority students may be realistically pessimistic about the future opportunities that education can provide them (Fordham & Ogbu, 2006).

Research on minority students whose first language is not English shows they are not below average in cognitive ability, but may be underachieving in school because they are hesitant to speak up in the classroom and participate in discussions (Feldman, Stone, & Rendered, 1999), or because of parent teacher attitudes (Steinberg et al, 2004).

Single and stepparent Family

Family structure affects both behaviour in school and absenteeism (Dornbusch, Carlsmith, Bushwall, Ritter, Leiderman, Hastorf, & Gross, 2005) Students who experience family disruption or live in single parent families are more apt to be placed in a special education school (Lambert, 2002). Adolescents in single parent and stepfamily households have lower grades than those in two-parent households (Dornbusch et al, 2007). Achievement test scores are lower for students in single-parent families, but the family structure differences in scores are statistically significant only for younger students (Milne, Myers, Rosenthal, & Ginsburg, 2006). Adolescents in single parent families are less likely to be in school at age 17 and less likely to graduate from high school than others (McLanahan, 2005). Students' living with both biological parents are more likely to complete high school; however, this holds for whites and hispanic only, not for blacks (Ekstrom et al, 2006).

Several explanations have been proposed for relationship between family structure and adolescents in school. Low income in single parent families is a major factor (McLanahan, 2005; Milne et al, 2006). When asked why they dropped out, students cite family stress (Mahan and Johnson, 2003); thus, the stress of family break up may place

students at risk. McLanahan (2005) finds that the effects of stress are greatest during the initial transition to single parent arrangement, thus reduces over time. The absence of a father has been linked to less parental supervision, another possible link to lower achievement. If the father is not present, the mother is more likely to be employed and thus less available to supervise, suggesting a loss of potential supervision by both parents. (National Commission on Children, 1999).

School Factor and Academic performance

Effective teachers are those who like their students (Edmonds, 2003, cited in Good & Weinstein, 2006; Centre for the Study of Social Policy, 2006), are highly involved with students (National Commission on Children, 2001) encourage participative learning (Edmonds, 2003, cited in Good & Weinstein, 2000); and have high expectations for their students (Edmonds, 2003, cited in Good & Weinstein, 2006; Centre for the Study of Social Policy, 2006; Linney & Seidman, 1999; National Commission on Children, 1999). More experience and training does not, in itself, connote effective teaching, but opportunities for staff to periodically upgrade their training appear to be critical (Spady, 1996; Boyer, 2003).

Inflexible Curriculum and Academic Performance

A curriculum that is flexible and open to innovations is another characteristic of effective schools (Centre for the Study of Social Policy, 2006; National Commission on Children, 1999). Instruction that is structured to suit a variety of learning styles may prevent discouragement and dropping out (Gadwa & Griggs, 1995). The curriculum should also take into account the different values and experiences of students from various ethnic and social class backgrounds, in order to prevent student alienation (Centre for the Study of Social Policy, 2006; Massachusetts Advocacy Centre, 2008). If the school provides an opportunity for participation in decision-making, students are more satisfied with school and have higher grades (Epstein, 2003).

Lack of Counselling Service for At-Risk Students and Academic Performance

At-risk students may require extra attention, especially at stressful times, from either teachers or counselors (Carnegie Council on Adolescent Development, 1999). When Students are close to dropping out of school, counselor availability and information about alternatives could make a difference (Mahan & Johnson, 2003). The high dropout rates of

language minority students may be due to lack of attention from teachers (Steinberg et al, 2004).

School Transitions and Academic Performance

Changing schools is stressful and may cause either temporary or more long-term problems with academic performance. Transition to junior high school requires learning new skills (Larson, 1999). Students who enter junior high school while also facing biological and social changes are at risk of low grades and declining participation in school activities (Simmons, Brugeson, Carlton-Ford, & Blyth, 2007). The more complex structure of the high school may cause adjustment problems leading to academic problems (Mahan and Johnson 2003; Carnegie Council on adolescent Development, 2005). An experimental programme during the transition into high school which provided extra peer and teacher support to reduce uncertainty resulted in lower rates of absence, higher grades, less decline in self-concept, and a more positive attitude toward school among participants, compared to a control group (Felner, Ginter, & Primavera, 2002). Residential mobility may also result in changing schools. The number of moves and school changes experienced by an individual are correlated with dropping out of high school (Mahan & Johnson, 2003; Lambert, 2008) and a lower likelihood of attending college (Lambert, 2008).

Weak Administrative Support and Academic Performance

A strong principal is an important component of effective schools. Leadership and involvement in instruction are key factors (Boyer, 2003; Edmonds, 2003, cited in Good & Weinstein, 2006; National Commission on Children, 1999). A good principal should be supportive of teachers (Boyer, 2003) and should be willing to involve them in decisions and planning (Massachusetts Advocacy Centre, 2008). The principal should have enough autonomy from the school district to exercise authority (Boyer, 2003).

Large School District and Academic Performance

The size of a school district influences academic performance: small rural districts and large urban districts have higher dropout rates (Gadwa & Griggs, 2005). A recent study of Wisconsin dropouts reported higher dropout rates in larger school districts and found that size of school district was the most significant predictor of dropout rates (Centre for the Study of Social Policy, 2006).

Large School

A separate issue from the size of the district is the size of the school itself. Large schools have the advantage of more resources, but they have the disadvantages of being too impersonal and having more disorder or crime. Smaller schools are considered better, especially for at-risk students (Boyer, 2003). In large schools, a smaller subunit, or school-within-a-school programme is recommended (Dorman, 2007; Carnegie council on Adolescent Development, 1999).

Low Participation in Extracurricular Activities and Academic Performance

High school dropout report lower levels of participation in extracurricular activities (Ekstrom et al, 2006). The benefits of participation are different in large and small schools. In small schools, participation is more active and there is more pressure on each individual student to participate. Students in these schools benefit from the challenges and developmental opportunities of activities. In a large school, a smaller proportion of the students participate in activities and they report a feeling of belonging as the main benefit. Students who feel alienated from the school are especially likely to be left out of extracurricular activities in these larger schools (Barker & Gump, 2004).

Negative School Climate and Academic Performance

The general atmosphere of a school is considered an important factor in students' success. Lack of an orderly classroom environment (Edmonds, 2003, cited in Good & Weinstein, 2006; Linney & Seidman, 1999; National Commission on Children, 1999) and a sense of safety (Edmonds, 2003, cited in Good & Weinstein, 2006) are the major risk factors in a negative school climate.

Work Factors and Academic Performance

Early involvement in work may provide an alternative focus for some students and may lead to dropping out or to lowered aspirations for post-secondary education (Ekstrom et al, 2006; Steinberg, 1999). Ekstrom and her colleagues (2006) observe that 27 per cent of male dropouts cited employment as the reason for leaving school and 14 per cent cited family support obligations. While part-time work has some developmental benefits for adolescents, employment while still in high school may present problems for those who work excessively long hours. Working long hours may lead to increase absenteeism, less

time spent on homework, choice of easier classes, cheating in tests and lower teacher expectations (Steinberg et al, and.; Steinberg, 1999).

Community Factors and Academic Performance

The general socioeconomic level in a community appears to be related to school success. Adolescents in communities with high rates of welfare and unemployment are less interested in school (Nettles, 1999). However, parenting style and social relation may mediate the negative effects of living in a poor community with persons outside the community via kin and friend networks as well as via church and other organisation memberships (Steinberg, 2008).

Studies that have compared the relative influence of the family and the community have been inconclusive. Some assert that community effects may be largely explained by individual family factors such as parental resources. Looking at school characteristics as indicators of neighbourhood characteristics, Mayer & Jencks (1999) find that the average socioeconomic status in the high school does not affect the status of the student, that is, whether he/she goes to college or not, except in its correlation with the socioeconomic status of the individuals parents. Looking more directly at neighbourhood characteristics, they also find that individual test scores explain most of the neighbourhood socioeconomic effect. On the other hand, recent preliminary findings by Dornbusch and Ritter (2001) suggest that the average parenting style in a community may outweigh the influence of an individual adolescent's own parents' style on his or her grades.

There is also disagreement about relative impact of community characteristics on youth of different socioeconomic status. Dornbusch and Ritter (2001) find that community norms have less impact on parents with less education; while Steinburg (2008) reviews evidence that community support is especially beneficial for adolescents from disadvantaged family backgrounds.

Lack of Community Resources and Academic Performance

The amount of funding spent on education by the local government appears to be related to effectiveness of education, but the processes are unclear (Spady, 2006; National Commission on Children, 1999). School districts with more funding have lower dropout rates (Centre for the study of Social Policy, 1996). Inadequate funding of a school district may impair recruitment of high quality teachers as well as maintenance of textbooks and

other curriculum materials (National Commission on Children, 1999). Spady's research review (2006) is inconclusive about whether expenditures affect student outcomes because of investments in teachers, materials, administrators, or facilities. Studies in this area have been additionally flawed in not considering the possibility that high ability students might be drawn disproportionately to high quality school districts, confusing selection effects with expenditure effects.

One factor that contributes to the funding ability of a community is the presence of industry, which creates a strong tax base (Spady, 2006). In addition to public funding for education, local business and other organisations also provide community resources such as money, equipment, and expertise (Irvine, 1998). In Milwaukee, a programme that obtained computers from local business donation demonstrated a mean reading improvement of 3 grade levels and mean maths improvement of 3.9 grade levels after 100 hours of computer-assisted instruction (Mann, 1996). The Boston Compact involved public schools, local businesses, and nearby universities in an attempt to prevent high school students from dropping out. In its first phase, the programme reported improvements in test scores and youth employment, but no change in the dropout rate. Efforts were planned for the next phase to focus more on school retention (Hargroves, 2006). In Atlanta, volunteers from the business community served as mentors in a successful programme to promote academic success (Mann, 2006).

Students and Academic Achievement

Okoye (1987) notes the deplorable state of most of the public secondary schools and further observe that teachers bother less to improve their teaching quality to attract students to school. Akinboye (2000) observes that for effective teaching and learning to take place, teaching objective must be related to learners' experience and interest.

Ukwuje (1986) further cited many studies which identified specific factors as being responsible for poor academic achievement of students, which he said are perceived alike by teacher and students. He offered suggestions on staffing, counseling facilities, stable policies and development of positive attitudes (Babjo, 2002). In the study carried out by William Herman, he explored student perceptions of academics' effort and the relationship between effort and ability when outcomes are success and failure. The investigation found that, individual difference in the perceptions of effort and ability determines the high and low

academics exam achievement level earned by students. Though the study, comprising of 603 mostly white catholic boys from Australia, makes it difficult to draw generalisations about the extent to which this pattern would hold for all adolescents. Marsh (1994) examines a national sample of adolescent in the U.S (the National Education Longitudinal Study of 1988) also finds a link between students test scores and grades and their levels of academics self – concept. Additionally, Marsh and Yeung (1997) observe that, the path from students earlier test scores in a given subject area to their later levels of academics self-concept in that same subject occurs mostly through the grades they receive within that subject. In other words, students who score good marks in a test, tend to receive higher grades in school, which in turn leads to their having higher levels of academic self- concept.

In addition to the reciprocal relationship between achievement and academic self-concept, it also appears that adolescent' academic self-concept in a given subject area can be affected by their achievement within another subject area. For instance, a study following a national sample of some adolescents for a three –year period found that students who received a high grade in one academic subject area (e.g. Maths) demonstrated lower self-concepts within another academic subject area (e.g. English) at a later point in time. This relationship was found in the presence of controls for earlier level of English self-concept and grades in English Class, suggesting that, the results were not due to difference in achievements or self-concept at the beginning of the study. Authors of studies along with other researchers interested in academic self-concept, suggest that, adolescents form their academics self-concept in a given subject, based on both internal and external frames of reference. In other words, the self-concept in a given subject is not only on external indicators of competence in that area (such as grades or test-scores), but also on relative achievement in one subject compared to others. Hence, the better an individual performs in Maths, the lower his or her English self-concept will likely be and vice versa (Marsh & Yeung, 1997). Two studies have documented differences in adolescent's levels of academic self-concept by the gender of the adolescent. Marsh (1991a) posit that girls held higher global academic self-concept than boys in the high school and beyond survey. The second study, a national survey (the National Educational Longitudinal Survey. 1988 dataset), Marsh and his colleague observe that girls held higher English, but not Maths, academic self-concept than boys in this sample.

King (1994) contends that higher levels of financial support from non-residential fathers were related to higher level of global academic self-concept in a national sample of children ten years or older who were living in separate homes from their fathers (King, 1994). This study accounted for a number of other factors, such as the mother's wedlock status at the time of the child's birth, the child's distance from his or her father and the family's economic status. However, because this study was non-experimental in design, a casual relationship between child support and academic self-concept cannot be determined.

Murdock, Anderman, and Hodge (2000) examine the relationship between the educational aspirations of adolescent peers and their own levels of academic self-concept in a study of 240 most African-American or Caucasian students in a mid- Atlantic school. The finding suggested that adolescents who perceived their peers as holding higher educational aspiration in the 7th grade held higher academics self-concepts in 9th grade than those who perceived their peers as holding lower educational aspirations. This findings held even after controlling several other variables, such as prior levels of achievement and academic self-concept. However, it is important to note that the measure of peer aspirations was taken from students own reports not their peers reports' and may therefore tell us more about the benefit, of adolescents perceiving their peers as holding high aspiration as much as benefits of adolescents associating with peers who hold high aspiration. Ryan & Patrick 2001 examine the relationship between teachers' levels of support for their student-teacher relationship, the extent to which they promote social interaction between students, the extent to which they promote mutual respect between classmates and extent to which they emphasise achievement goal in a sample of over 200 students from three ethnically different middle schools. Their study suggested that 8th grade students whose teachers placed more emphasis on mutual respect between classmates tend to feel more efficacious in their schoolwork than those whose teachers place less emphasis on mutual respect. This relationship held even with controls for the students' level of motivation and academics achievement in 7th grade.

A number of researchers have examined the individual-level influences on structure of adolescent' achievement motivation. These studies have focused on adolescents' perceptions of their own ability in the academics arena (their academics self-concept, as discussed earlier), their feeling about school and education and their prior educational

experiences. Additionally, a few studies have examined differences in achievement motivation for boys and girls, which can provide information about whether adolescents of a given sex are more educationally at-risk and in which subject area. Research has identified a number of individual predictors of academics achievement, including academics ability, psychosocial factors, gender, race, out-of school activities, and employment. Most of the studies examined prior achievement as a predictor of later achievement. Although this variable was typically centred in to the analysis to “control” for selection bias, all of the studies that included a measure of prior achievement found it to be statistically significant predictors of later academics success. For instance, Jordan and Nettles (1999), in an analysis of data from the National Educational Longitudinal Study of 1988 (NELS), found that 10th grade reading achievement predicted Math & Science achievement in the 12th grade. This relationship was also documented by McNeal (1999) and Gamoran (1992), using data from high school and beyond. Further, this relationship consistently held while controlling for other important background factors, such as family income, parental education and race. Higher composite reading and math scores predict college attendance (Zaff, Moore, Papilo & Wollians, 2001). One study found that earlier grades predicted later grades (Butman & Eccles, 1999), while another found that reading and math test scores were the strongest predictors of later achievement scores (Gortmakers; Salter, Walker, & Dietz, 1990). In analyses of data from the National Longitudinal Survey of Youth of 1979 (NLSY), adolescents’ achievement test score predicted the likelihood to graduate from high school (Ludwig. 1999, Mensch &Kandel, 1988).

With regard to adolescent sense of the academics competence, study by Harter found that lower- to upper-middle class students who experience an increase in academic self-concept between 7th and 9th grades tended to experience a sizeable increase in intrinsic motivation over this period (Harter, 1992). In contrast, those who did not experience a change in academics self-concept experience only a slight increase, and those who did not experience a decline in self –concept experience a decline in achievement motivation over this same period. This finding occurred after controls for earlier level of academics self-concept.

Anderman and Anderman (1999) examine the relationship between students’ feelings of belonging at school, adherence to school rules, interest in social status at school

and their achievement motivation, specifically their endorsement of mastery and achievement goals. They found that students who placed greater importance in being liked by their classmates, and being liked by the “popular” crowd specifically in 6th grade were more likely to hold achievement goals (e.g. emphasising the importance of doing well) than those who did not place as strong an emphasis on their social contacts at school. In contrast, those who reported feeling a greater sense of belonging at school and those who believed it was important to adhere to school rules were more likely to endorse mastery goal orientation (e.g. emphasising the importance of mastery of the topics), and at times less likely to endorse achievement goals orientations, over the periods. This finding occurred in an economically and ethnically diverse sample of about 660 adolescents, and was found even after accounting for differences in students’ earlier levels of academics self-concept and achievement. The findings from other studies on adolescent’s academic achievement suggest that adolescents’ earlier levels of academics adjustment have implications for their later achievement motivation. In a sample of urban African American Junior high school students, Connell and Harper- Felsher (1997) posit that adolescents with higher level of educational risk behaviour (including low attendance, low standardised tests score, suspension, subject failure, being below the grade level expected for one’s age) reported being less self-regulated in school. However, it is important to note that, while this study examined multiple variables over time, the relationship between educational risk behaviour and achievement motivation was examined at a single point in time. Therefore, it is impossible to determine the direction of causality in this relationship.

Also, sex differences have been found in the achievement motivation of male and female adolescents, with girls generally showing more adaptive form of achievement motivation than boys. For instance, Andeman, Maehr, and Midgley (1990) report that boys were likely to report achievement goals and more extrinsic goals than girls in a sample of about 300 ethnically diverse students transitioning from 5th through 7th grade in a working class community. Likewise Ryan (2001) reports higher levels of intrinsic motivation among 331 seventh grade girls than boys in an economically and ethnically diverse sample from an urban middle school.

The study by Connell and Halpern- Felsher (1997) suggest that high perceived adult involvement in the adolescent’s education at home (e.g., caring about the adolescents’

education, allowing the adolescents to have influence over decisions affecting him or her) was related to higher levels of self-regulation in learning a sample of about 740 urban, African American Junior high school students (Connell & Halpern-Felsher, 1997). This relationship was found for boys and girls in this sample of urban, African American Junior high school students and was found even after controlling for adolescents' levels of prior educational risk behaviour, such as their prior suspensions, level of absenteeism and test scores.

Also, living in a home with a more cognitively stimulating environment in childhood (at age 8) has been found to be related to higher levels of intrinsic motivation both in childhood and in adolescent (at age 13). The sample for this study composed mostly of white, middle-class children and their families (Gottfried, Fleming & Gottfried, 1998). The author found that the relationship between the quality of earlier home environment (e.g, whether the child was taken on trips and encouraged to develop hobbies, whether the child had access to a computer, whether the family learnt about new and different things) and later achievement motivation occurred largely through the influence of living in a cognitively stimulating environment and this was also found to be related to higher levels of achievement motivation in adolescence.

The basic tenets of self-regulation theory suggest that parental autonomy granting ought to be related to student's achievement motivation, a hypothesis that is supported by a study to examine the relationship between parental and teacher autonomy, supported a small sample of adolescents in the U.S and Russia (Chirkof & Ryan, 2001.). No differences in the pattern of relationships were found for Russian and U.S. students. The author found that students whose parents provide greater autonomy have lower levels of extrinsic motivation and higher levels of identified regulation (a more self-regulated form of motivation). The study is cross-sectional in nature and therefore should be interpreted with caution, though this study has provided support for a relationship that has been identified in a number of studies using less direct measure of student motivation with younger children or adult and therefore should not be dismissed as invalid.

Ryan (2001) examines the relationship between the levels of achievement motivation among adolescents' peers and change in their own levels of achievement motivation from the beginning to the end of 7th grade in an economically and ethnically different sample from

an urban middle school. The finding of the study suggests that while intrinsic motivation is generally declining across the 7th grade, adolescents whose peers were more intrinsically motivated at the beginning of the 7th grade experienced less of a decline in their own intrinsic motivation between the beginning and the end of the school year than those whose peers were less intrinsically motivated.

A set of studies has found relationship between the characteristics of the school environment or school based- approaches to learning and adolescents' achievement motivation. These studies generally found that the type of goals emphasised in the school environment, the teaching strategies used in the school, and adolescents' feeling of educational support from the adults at school all have implications on adolescent achievement motivation. The level of support that adolescents receive from adults at school may have important implication on their achievement motivation. Connell and Halpern-Felsher (1992) observe that higher levels of perceived adult support at school were related to higher levels of self-regulated motivation among a sample of African-American adolescents in urban junior high school. Ryan and Patrick (2001) also find a link between 8th grade students' perception of their teachers' support, as well as their perception of teachers' emphasis of mutual respect between classmate and their motivation in middle school in a sample of students from three ethnical diverse midwestern middle schools. Further, the Ryan and Patrick (2001) study was longitudinal and controlled for prior levels of motivation and achievement, therefore providing further evidence for supporting Connell and Halpern Fleisher's finding.

To cap it all, a handful of studies have suggested that the characteristics of adolescent' schools have implications for their achievement motivation (Akintoye, 2007). Achievement on test showed great improvement and high academics motivation and an improved attitude to schoolwork. She suggested that, the goals that are emphasised in school, the level of focus on mastering tasks versus performing well are both related to goals that adolescents themselves endorsed as important motivators for achieving, with adolescents tending to endorse goals that are emphasised in their school context. She also found the use of cooperative learning strategies in school as relating to more positive achievement motivation. Her practical instance also suggested that support from adults at school seems to lead to higher levels of achievement motivation.

In the World Health Organisation (WHO), survey of Health Behaviour in School-aged children (HBSC), which tend to examine the health behaviours of youth conducted in 35 countries across Canada found that:

- # School is a very important place for adolescents as they spend a substantial part of their lives there.
- # What adolescents experience in a school setting strongly influence both positively and negatively their social, emotional health and development.

The HBSC study which focused on six different aspects of school experience found that greater population of girls than boys thought their school was good. This was evident in their achievement in school work (72% of boys and 81% of girls). While boys believed they were intelligent; girls were less confident in their intelligence than boys. Though higher school achievement was largely associated with school satisfaction and lack of pressure to achieve, it was found that students who had higher achievement levels were less likely to engage in risk behaviour or have friends who engaged in these behaviours (Boyce, 2003).

The survey found a decline in the proportion of students who said they liked school a lot since the 1994 HBSC survey- though girls tend to like school more than boys, self-esteem and overall health and life satisfaction were generally found to be higher in adolescents who were satisfied with school (Boyce 2003)

The result from this survey echo previous research, which shows that teachers are more likely to have students who are satisfied with school if they create a supportive classroom environment. Of about 7,235 youth studied in this survey, three- quarter felt they could get extra help if they needed it.

Adolescent's self-confidence levels and sense of self are greatly affected by social acceptance or rejection by peers. The 2002 HBSC survey found positive relationship were weakly associated with perceived achievement and more strongly associated with higher school satisfaction and positive teacher relationship.

Also, the research supports the motion that students whose parents are involved in and supportive of their school are more likely to be successful in school. About 80% of the students agreed that their parents would be willing to come to school while over 90% felt that their parents encourage them to do well in school (Boyce, 2003).

Ruff (1998) admits that learning challenges and demands change significantly during adolescence. Demands on attention in adolescents require more consistent and sustained mental energy, more efficient processing of information and an increased ability to produce schoolwork. Adolescents, need more techniques for remembering, recalling, and summarising new information. This is because success in school is an excellent mark for general adolescent wellbeing. School failure in adolescents is a powerful indicator of other high –risk behaviours such as delinquency and pregnancy. Ruff therefore suggested effective programme for prevention of school failure and dropout focusing on the antecedents of school failure rather than on the failure itself (Micheal 1998).

The secondary school years represent a significant period of transition for adolescents (Levines, 1998). Students move from pupil-oriented elementary or lower schools to more content-driven secondary school setting. Much of the secondary school curriculum demands rapid and exact recall of facts and material learnt (Lindsay & Reed, 1992). The study of professionally successful adults who were academic underachievers during adolescence by Peterson (2001) explores the phonological experience of underachievement; with particular focus on potentially interactive factors that might be associated with onset, maintenance and reversal of underachievement. Under-involved and non-encouraging parents and teachers, negative parental attitudes to work, family conflict, lack of career direction and family transmission were found to be associated with underachievement (Peterson, 2001).

Studies have also documented a link between adolescent' childhood IQ and their later academics achievement. Teo, Carlson, Mathieu, Egeland, and Sroufe (1996), examine the effect of IQ and other individual factors on achievement outcome at ages of 11 and 16. They found that, of all the variables examined, IQ was the strongest predictor of individuals' reading and math achievement in grade 6 and at age 6. This relationship was found in a racially diverse sample of 174 urban youths from Minneapolis and it was documented even after the authors' controlled for other key variables such as; individual' socio-emotional adjustment, early home environment, and maternal life stress.

Elder (1997) study also finds gender to predict academics achievement. Conger and Elder found that, males reported having significantly lower GPAs than did females in 10th grade after controlling for a number of background factors. The sample of 357 was created

from a larger study of white lower to middle- class- families from rural lower who were followed from grades 7 to 10. In addition to evidence showing females having higher grades than boys, Smith (1990), in her analysis of a sample of 7th graders who were followed through the 9th grade, found that, females grow in verbal achievement, as measured by their language test achievement than males. Similarly, Guo (1998), in an analysis of NLSY, data observes that females scored higher than males in reading recognition and comprehension tests, after controlling for family background factors.

Conversely, Jordan and Nettles (1999), in an analysis of data from National Educational Longitudinal Survey of 1988 (NELS), find that girls had lower scores in a maths and science tests in the 12th grade than boys. Additionally, Gamoran (1992) finds that girls scored lower in a test of maths and verbal achievement. Likewise, Entwistle, Alexander, and Olson (1994) observe that adolescent males outperformed adolescent females in Maths concept and application test: a subtest of the California Achievement Test focused on Math reasoning. The sample included 270 Black and White students from Baltimore. Further, the difference in boys' and girls' achievement was most severe among highest achieving youth. Among the relatively small sample of high achieving (31 boys and 38 girls), the average score for boys was 22.5 points higher than that for girls. Further, this difference was even stronger among African Americans in which there was a greater gap between high-performing males' and females' test scores (Entswile et. al., 1994). This pattern held despite the fact that African American females were far more likely to be enrolled in algebra class (62 per cent of females versus 33 per cent of males).

Not all studies support this pattern, for instance, Entwisle et. al, (1994) also posit an opposite pattern among the low-performing youth, with girls outperforming boys within this subgroup. Also, Guo (1998), in an analysis of NLSY, finds that male and female scores did not differ significantly in the maths achievement tests, after controlling a number of background factors. Guo (1998), in an analysis of NLSY, finds that, adolescents with high birth weight had higher Maths test scores than those who were born with low birth weight. Further, some studies documented a relationship between individual's psychosocial adjustment, both within and outside the academic realm and their academics achievements. For instance, Teo et al. (1996), in study described above, find a relationship between individuals' cumulative socioemotional adjustment, as measured by teachers handling

children on their emotional health and peer competence in the 1st, 2nd, 3rd and 6th grades, and their reading as well as Math achievement at age 16. Further, Jordan and Nettles (1999) find that 10th grade academics self-concept predicted Math and Science achievement in the 12th grade after accounting for background factors.

In addition to individual characteristics, adolescent' individual choices, such as their use of time during non-school hours, have been found to predict academics achievement. For example, some studies have found that adolescents who were involved in extracurricular activities had higher levels of achievement than those who were not. In an examination of a sample of 1,259, mostly white adolescents, Eccles and Barber (1999) posit that adolescents in the 10th grade who participate in team sport, school leadership or school spirit activities, academics clubs and performing arts were independently related to having a higher 12th grade GPA, after controlling for students' gender, verbal and maths ability and parental education. Likewise Jordan and Nettles (1999) examine the relationship between participation in various out-of-school activities in grades 10 and 12 in a national sample. They observe that adolescents who participate in greater levels of structured activities and those who spend more time alone were both independently associated with higher levels of achievement in Math and Science in the 12th grade.

Smith (1992) observe that, time spent in doing chores was significantly related to academic outcomes as a measure by language, reading and mathematics scores. Smith (1992) analyses a sample of 1,584 students in grades 7 to 11 in public schools, in racially and economically diverse South Eastern metropolitan country. He found that, hours spent doing household chores was predictive of decreased growth in academic achievement over two years, with those spending more time on chores over the two year study period showing lower growth rate in achievement. Smith's analysis showed that, time spent in doing chores were more adverse for White than for Blacks.

Another potentially important determinant of adolescents' academic achievement is the time spent viewing and using different forms of media, especially watching television. The type of programmes they watch may be important as well. Two longitudinal studies showed mixed evidence of the relationship between television viewing on academics achievement. Collins, Wright, Anderson, Huston, Schmitt, and Mc Elroy (1997) examine the effects of television watching during early years on academics achievement in adolescent.

Specifically, they looked at type of time spent on television viewing at age 5 on achievements during high school. The sample was made up of 491 students (86% of original pre school sample) from white working class and middle class families who were re-interviewed at age 15. After all controls, maths grades and book use (reading) were predicted by the viewing of child-information programming during preschool years. Viewing Sesame Street, a child- informative programme, was predictive of book use, GPA and Science, Maths and English grades. For boys, child- informative television viewing during pre school years was predictive of grades in English, maths, science, GPA and book uses. For girls, sesame street viewing and viewing of child-informative programmes overall at age 5 was not predictive of grades, GPA or book use. Adolescent boys who had viewed television programmes that was not child-informative at age 5 did not have significantly lower test scores than boys who had not watched such programmes.

In contrast, Gortmaker, Salter, Walker and Dietz (1990), in a national sample of children who were followed up at ages 12 to 17, found no relationship between television viewing, reading and Math scores. Although their cross sectional finding showed that current television viewing was significantly and negatively related to reading and Math test scores, after controlling for prior achievement, parents' education, age, income, number of children in family, birth order, race and parental restriction; these finding became significant. Two studies using more recent data replicated this study with cross sectional finding becoming insignificant when prior recent television viewing and test scores were considered (Smith, 1990; Smith, 1992). Yet, Harborg (1995), in a cross-sectional analysis of a semi-rural sample of 152 high school students found no difference between light, medium and heavy television viewers after controlling for employment, gender and SES.

Smite (1992) also observes that adolescents who spend more time listening to the radio or music recording are likely to have lower levels of growth in reading achievement between the 7th and 9th grades. Employment, another common use of out-of-school time among adolescents has been found to be predictive of academics achievement. A large number of families' background variables have been documented as predictors of adolescents' academics achievement. These include indicators of families' socioeconomics status (SES), including their family income and parental education; their family structure,

including marital status and family size; as well as parents' levels of involvement and monitoring.

Family income and parental education were found to be important predictors of adolescents' grade and tests scores. For instance, Conger, Conger, and Elder (1997) posit that greater levels of family income were associated with higher GPAs in grade 10. Further, the findings indicate that adolescents' experience with poverty is also predictive of their grades in school. Downey (1995), in a cross-sectional analysis of national data, observes that adolescents in large families have low reading and Maths scores. These findings held after controlling for SES, as indicated by family income, parental education and occupation, family structure, urban residence, race, gender, and religion. The interaction found between sibling size and number of siblings, and parental resources may provide support for a parental resource dilution theory- a theory that posits that as the number of sibling increases, availability of parental resources, including time, interpersonal resources and economic resources decrease.

A number of studies have found that parents who are involved in their adolescents' lives are able to influence their academics' success, although certain form of involvement appears to matter more than others. Akintoye (2002) in a study of how parental involvement affects academics self-efficacy and adjustment among fresh secondary school students in Oyo state found that, parental involvement is necessary to achieve a successful growth (academically) of young learners. She advocated for parents' involvement as a first educator at home as a partner in the school and as an advocate for children in the society. Supporting her claim are Majorribanks (1983) Seigenera and Bloom (1983) who confirm that important variables have great impact on a child's academic self-efficacy parental involvement. Former American President Bill Clinton, in his plea during the 1994 state of the union message said, 'parents who know their children's teachers, turn off the television, help with the homework, and teach their kids right from wrong are those that can make all the difference'. Mc Neal (1999) examines the relationship between parent involvement and science achievement in a national sample of students. The measure of parental involvement included parents' PTO involvement, the frequency of parent-child discussions, parental monitoring and parents' use of educational support strategies. Greater frequencies of parent-child discussions were related to higher levels of science achievement. However, he found

that, adolescents whose parents were more involved in PTO activities actually had lower levels of science achievement than adolescents who were less involved in those activities. Further, McNeal (1999) finds that, the relationship between parental PTO involvement and monitoring with adolescent achievement was stronger for families with higher level of SES.

Teo, Carlson, Mathieu, Egeland, and Sroufe (1996) find adolescents who experienced more positive early home environment, had higher grades at grade 6 and age 16 than adolescents experiencing less positive home environment in their early years. Further, they found that adolescents whose mothers stress have higher grades at grade 6 and age 16 than those whose mothers experience high level of stress, after controlling for IQ and other background variables.

Also, studies have examined the relationship between school type and adolescents' academics achievement. Gamoran (1992), using high school and beyond data, observe that adolescents attending Catholic schools are more likely to have higher average academic achievement overall, than those attending public schools. He also found that, students attending catholic schools are more likely to have higher individual average reading and maths achievement at school level. Lee and Smith (1995) also posits that students attending Catholic High School had higher Math scores. Gamoran (1996), using NELS data to analyse academic outcomes of around 5000 students attending public comprehensive, Catholic, and secular private schools, found that adolescents attending Catholic schools have higher maths skills, and that other adolescents attending secular private schools do not have any academics advantage over those attending comprehensive public schools, after controlling for pre existing differences between students.

Ayoade and Lawal (2002) in their survey of private participation in the provision of secondary education in Oyo State, note that students attending private schools perform better in their final year examinations. This, they attributed to the quality of teachers in private schools and the level of infrastructural facilities and enabling environment available. Another school-level factor that has been examined and found to predict adolescents' achievement outcomes is the background of their teachers. Teachers with content – specific training in maths have been found to be more effective in increasing maths achievement than the teachers without such credentials. Druva and Anderson (1983), in a meta-analysis of studies looking at the relationship between teacher background and students' science

achievement, find that teachers' number of science courses taken, experience teaching biology (for biology students), and attendance at academics institutes were positively correlated with students' achievement outcomes in high level science courses. Goldhaber and Brewer (1997) in an analysis of NELS 8th and 10th grade data, observe that high maths achievement is found in students with maths training, after accounting for background factors. The sample was made up of 35,419 public school students from 638 schools with 2,245 different mathematics teachers.

Evidence on the importance of having a teacher with a high-level degree is mixed. White adolescents whose teachers had at least a master's degree had lower scores than those whose teachers had less than a master's degree, but black students whose teachers with at least a master's degree had higher scores than students whose teachers did not (Ehreberg & Brewer, 1994). Goldhaber and Brewer (1997) posit adolescents whose teachers had a B.A. or Master's degree did not have significant higher gains in maths achievement, unless the degrees were in mathematics. Ehreberg and Brewer (1994) posit that gains in test scores between the 10th and 12th grades were positively associated with average selectivity of the undergraduate institutions attended by their teachers. This relationship was stronger for Black students than for white students.

Along with teachers' educational background, skills and training, researchers have examined the effect of teachers' racial' ethnic background and gender on achievement. Hanushck (1992) posits that black teachers were more effective than white teachers improving scores of black children in Baltimore. Further, it appears that black teachers from low-income backgrounds were more effective in teaching low-income black students. More recently, Deci (2001) in analysis of data from Tennessee's project, STAR class- size experimental evaluation, found that having a teacher of same race may improve academics achievement among a sample of children and young adolescents. Students were randomly matched with teachers, so racial pairing was assigned independently. Results suggest that a one year assignment to an own-race teacher increases achievement in maths and reading scores by around three to four percentile points (Dec, 2001).

Steingberg Brown and Dorbusch (1996) monitore new entrants into high school up to their senior year and found development patterns in the influence of peer pressure on many activities including academic motivation and achievement. Peer pressure rises during

childhood and peaks around grade 8 or 9 but then declines through high school. A key time of influence is roughly between ages 12 and 16, a time during which parental involvement in children's activities declines. Steinberg et. al., also found that students who begin high school with similar grades but who become affiliated with academically oriented crowd achieve better than students who become affiliated with less-academically oriented crowd.

The finding that self-efficacy beliefs tend to decline as students advance through school (Pintrich & Schunk 1996) has been attributed to various factors, including greater competition, more norm-referred grading, less teacher attention to individual student's progress and stress associated with school transitions. These and other school practices can weaken academics self-efficacy, especially among students who are less academically prepared to cope with increasingly challenging academic tasks. A wealth of research finding indicates self-efficacy correlates with achievement outcomes. Self-efficacy also correlate with indexes of self-regulation, especially use of effective learning strategies. Self-efficacy, self-regulation and cognitive strategies use are positively intercorrelated and predict achievement (Pintrich & De Groot, 1990). Students with high self-efficacy for successful problems solving display greater achievement monitoring and persist longer than students with low self-efficacy (Bouffard- Bouchard, Parents, & Larivee, 1991). Writing self-efficacy correlates positively with students' goals for course achievement, satisfaction potential grades, and actual achievement (Zimmerman & Bandura, 1994).

The predictive value of self-efficacy has also been tested using causal models. Schunk (1981) employed path analysis to reproduce the correlation matrix comprising long-division instructional treatment, self-efficacy, persistence, and achievement. The most parsimonious model showed a direct effect of treatment on achievement and an indirect effect through persistence and self-efficacy, an indirect effect of treatment on persistence through self-efficacy, and a direct effect of self-efficacy on achievement and persistence. Mathematics self-efficacy has been found to be a better predictor of mathematics achievement than mathematics self-concept, math anxiety, perceived usefulness of mathematics, or prior experience (Pajares & Miller, 1994) and it has a powerful and direct effect on mathematics achievement as does mental ability, a variable often presumed to be the strongest predictor of academic achievement (Pajares & Kranzler, 1995). Self-efficacy

affects achievement directly and indirectly through its influence on goals (Zimmerman & Bandura, 1994).

Instructional variables affect self-efficacy in part through the intervening influence of attributions. Schunk and Gunn (1986) examine the effects on changes in children's division achievement due to use of strategies, attributions, and self-efficacy. Achievement was influenced by use of effective strategies and self-efficacy. The strongest influence on self-efficacy was ability attribution for success.

Senior Secondary School Examinations Result and Future Academic Performance

The great increase in demand for higher education, and its attendant problems as well as the general problem of searching for ways of improving selection procedures have made researches on correlates of academic success quite popular. Various variables have been tested as possible correlates of future academic success. Thus, predictor variables include: motivation (Kapur (2002), Smithers and Batcock (2000)); aptitude test scores (Cooney (2005)); and above all, previous academic achievement. From the literature reviewed, the findings are basically the same, though details may vary from country to country. Investigations into the predictive validity of public examinations on student's future performances are numerous. Useful summaries of the result of some of the large number of predictive validity studies that have been undertaken elsewhere over the past several decades could be found in Morgan (1989), Hezlett et al. (2001). Gonnella et al (2004), Rothstein (2004), Geiser and Santellices (2007) among others. On the local scene, notable individual researchers on the subject include Ohuche (1974), Ojerinde (1974), Obemeata (1974), Alonge (1986), Adegboye (1997) and Gbore (2006), Obioma and Salau (2007).

There are so many research works on the predictive validity of achievement in examination within the local and foreign scene. Park, Susaria & Massey (2006) evaluate the possible associations between a variety of measures used to evaluate didactic knowledge and clinical performance within a pre-doctoral dental programme. Clinical performance was assessed by clinical productivity and proficiency across different competency areas. Operative density, major restorative density, fixed prosthodontics and removable prosthodontics. Pre-dental and pre clinical predictors were undergraduate GPAs (overall and science), DAT subtest scores including the Perceptual Ability Test (PAT), and performance on subtests of part 1 of the National Board for Dental Examination. The sample consisted of

84 students at the Harvard School of Dental Medicine who graduated during the period 2002-2004. Associations between predictors and outcomes were first evaluated individually. Associations that were near statistically significant ($P \leq 0.15$) were then included in a multiple linear regression model. The criterion for statistical significance in the multiple linear regression models was $P \leq 0.05$, while a number of measures were associated in bivariate analysis. Few predictors were statistically significantly associated with clinical outcome in the multiple regression analyses. The data indicated that, within the study population, there is little or no uniform association between pre clinical didactics performance and measurements of clinical productivity and proficiency.

A similar study was carried out by Bergman, Susaria, Howell & Karimbux (2005), the study was to examine the relationship between performance on the Dental Admission Test (DAT) and Part 1 of the National Board Dental Examination (NBDE Part 1) for students at the Harvard School of Dental Medicine (HSDM). The study was a retrospective cohort examining HSDM students over an eight-year period. Data regarding DAT and NBDE Part 1 scores were obtained from the office of the Registrar. Descriptive Statistics were computed for all study variables. Multiple Linear Regression analyses were subsequently computed to examine the relationship between DAT subtest scores and performance on NBDE part 1 subtests. Goodness of fit for the models was evaluated using the R-squared value. Statistically significant associations were those with P-value ≤ 0.05 . Data were available for 244 students who matriculated at Harvard School of Dental Medicine (HSDM) during the period, 1995 to 2002.

DAT reading comprehension scores were statistically associated with performance in all four subsections of the NBDE Part 1. DAT general and organic chemistry scores were associated with performances in the microbiology and pathology subtest of NBDE Part 1. Performance in the perceptual ability test was associated with performance in dental anatomy and occlusion subtest. Performance in the DAT reading comprehension subtest was the most reliable predictor of performance on the NBDE Part 1. However, the variability in NBDE Part 1 scores is not accounted for significantly by variability in DAT scores. Other few research studies out of a lot in the foreign scene over the past several decades include Morgan (1989) Hezlett et al (2001); Giser with Studley, (2003); Geiser and Santelices (2007); Latif & Robertson, (2000); Bastias, Ballaroeal, Zuniga, Marshal, Verascola Mena

(2000); Bridgeman, Pollack & Burton, (2006); Burton & Ramist, (2001); Rothstein (2004); and House & Johnson, (2002). In the local scene however, few ones among the studies include; Ojerinde (1974), Obemeata (1974) Ohuche (1974), Alonge (1986), Adegboye (1997) and Okwilagwe, (1999). Some of the current ones include Gbore (2006), Umo & Ezendu, (2007) and Obioma & Salau (2007).

Obioma & Salau (2007) determine the extent to which scores in examinations conducted by the West African Examination Council (WASSCE), National Examination Council (SSCE) and National Business and Technical Examination Board (BNCE/NTCE) in conjunction with the Joint Admissions and Matriculation Board (UME) predict future academic achievement of students in university degree examinations. Records on performance in the public examinations of a random sample of 4904 candidates were obtained from 22 Nigerian universities that satisfied certain predetermined criteria. In addition, the candidates' academic records were obtained from these universities in eight core disciplines. The forward inclusion multiple linear regression analysis was used to analyse these data and the postulated hypotheses, tested at 0.01 significance level. The study revealed that, there was low but positive relationships ($0.118 \leq r \leq 0.298$) between each of the predictor variables under study. Public examinations generally predicted students' university academic achievement poorly, when compared individually with other predictors. WASSCE was the best single predictor of students' Cumulative Grade Point Average (CGPA).

The result of the study revealed that, though public examinations were statistically significant, they were not of much practical importance in predicting the achievement of university students. However, it was established that the first year university examination results accounted for about 48.2% of the final year examination results. It is therefore an indication that formative evaluation plays a significant role in predicting the achievement of university undergraduate (Obioma & Salau, 2007). The four public examinations in the study employed achievement tests. Certificate examinations conducted by WAEC, NECO and NABTEB are designed to measure achievement, however, UME, which is designed as a selection examination to employ achievement test, is technically flawed. For this purposes, aptitude tests are preferred to achievement test. To this end, Obioma & Salau, (2007) opine that there is a need for a paradigm shift from achievement test to aptitude test for UME.

Given the limited ability of public examinations to predict university outcomes, it is essential that admissions' criteria exhibit "content" and "face validity" as well as "predictive validity". It is to say that the criteria bear a direct and transparent relationship to university work as being advocated for by JAMB, (JAMB, 2002). Since University Matriculation Examination (UME) or its variants will continue to be used as a criteria for admission, a strong case is put up by Obioma & Salau (2007) for curriculum based aptitude-type tests, since those tests not only have predictive value but also measure knowledge and skills that are unquestionably important in university work.

Another recent study was undertaken by Salami (2008). The research work investigated the relationship between psychopathology and students; academic performance and the moderator effects of study behaviour, self-efficacy and motivation. Participants were 476 SS2 students (228 males, 248 females) randomly selected from ten co educational secondary schools in Ibadan, Oyo State, Nigeria. Measures of psychopathology, study behaviour, self-efficacy and motivation were administered on the sample. Data collected were analysed using hierarchical multiple regression. Results showed that psychopathology correlated negatively but non-significantly with academic performance. Study behaviour, self-efficacy and motivation correlated significantly with academic performance and moderated psychopathology-academic performance nexus. The result suggests the need for counsellors to design therapeutic interventions for alleviating the students' psychopathology, increasing their study skills, self-efficacy and motivation for improved academic performance.

Umo & Ezendu (2008) also examine the relationship between the UME and the post UME scores at the University of Nigeria Nsukka (UNN). The UME results and screening scores of applicants in the nine faculties of the UNN constituted the target population for the study. The faculties include; Arts, Social Sciences, Biological Sciences, Engineering, Environmental Studies, Medicine, Agriculture, Physical Sciences and Education. Systematic sampling technique was adopted in selecting the sample for the study. 50 per cent of the cases of candidates that sought admission in each of the nine faculties were selected and used for the study. The analytical tools used were the Pearson's Product Moment Correlation Coefficient and the T-test of r for testing the significance of the correlation.

The result shows that, only Faculties of Agriculture and Medicine have good correlation of 0.67 and 0.54 respectively. Faculties of Arts, Social Sciences and Physical Sciences have low correlation of 0.042, 0.056 and .162. This means that only two out of the nine faculties had correlation coefficients that suggest good positive relationship between UME and screening scores and they are highly professional areas. The study therefore suggests that something is wrong with other faculties. Either the UME or screening score is faulty or fraught with error scores. It also sees Medicine and Agriculture to appear to be hitch free of the examination fraud because people entering into both professions appear to be focused and they have discovered themselves. The study suggests that exam malpractices are more in Arts, social sciences, biological sciences and in the physical sciences.

The study concluded by indicating that, JAMB contributed enormously to the low level of correlation due to the malpractice which had eaten deep into the examinations process. The researchers advocated for conducting the screening tests by the universities to further enhance the reliability of JAMB scores. It states, "if the screening test takes place for upwards of five years, malpractice in JAMB will fizzle out as candidates will know that JAMB alone does not provide the answer" (Umo & Ezendu, 2008). In Britain, the correlations obtained were generally low, but all the studies indicated that previous academic achievement was the best single predictor of future academic success. Students who did well in high school tended to do well in the University. Smithers and Sheila; observe that, performance in the University was significantly related to entry qualification. Students with good 'A' – levels tended to do better than students with poor 'A' – levels. However, this relationship was more pronounced in the Department of Language than in the Sciences. No student in Modern Language who came in with poor 'A' level grades got a First Class or Second Class Upper Division. A similar result was obtained by Nisbet and Buchan (2005). In addition, they established that, assessment at age 11 was related to performance in the University though the correlation was very low. Nisbet and Welsh (2006) look at the problem from the point of view of failure. In three follow-up studies and a series of detailed studies of first year students permanent in the faculties of Science and Arts of University of Aberdeen, they found that students with superior entry qualification, tended to fail less than those with poor qualification.

Richards and Wilson (2004), went ahead to calculate the probability of success for people with various 'A'- Level as entry qualification. The population for the study were the students in the Department of Physics, University College of South Wales and Monmouthshire, who entered for a pass-degree in the years 1994 to 98 inclusive. The students were grouped according to the quality of their mean 'A'- level grades. For each group, they found the number admitted and the number that passed the examination at first attempt. With this, they calculated the percentage that qualified for a pass-degree in each group. The figures obtained suggested that, with mean 'A'- level grades below 55%, the probability of passing the degree was almost constant at about 40%. But for students scoring above 60% at 'A'-levels, the probability of success increased steadily from 74-85%. A somewhat similar relationship was discerned by Kapur (2002) in his study, "Student Wastage at Edinburgh University: Factors Related to Failure and Dropout." On the basis of students' performance at the end of their first academic session, he classified them as follows:

Very Successful

Moderately Successful

Failure

Dropouts

He found out that previous academic achievement was good at distinguishing between a very successful student and an average student but did not distinguish sufficiently between an average student and a 'poor' student; this has its implications for using correlation technique. Pilkington and Harrison (2007) on the other hand, did a comparative study of the relative value of two high-level Intelligence tests. Advanced level and first year University examination marks for predicting degree classification. The Intelligence tests used were A.H.S. group test of high-grade Intelligence' and 'Valentine reasoning tests for high levels of Intelligence.'

The result indicated that mean 'A'- level grade was better at predicting performance in the first year than any of the two Intelligence tests. The correlation for the mean 'A'- level grade was 0.241 while that of the IQ tests were 0.115 and 0.114. But in predicting degree, that of the IQ tests were 0.115 and 0.114. But in predicting degree results, 'A'-levels and

valentine reasoning tests for high levels of Intelligence test did not differ significantly. The correlation, with A level grades was 0.3 while that of the intelligence test was 0.276.

The low correlations obtained in the studies reviewed should not be surprising. This is partly because a high correlation implies a strong linear relationship between the dependent and independent variable. But the results of the study by Kapur (2002), Richards and Wilson (2001) indicate that, this may not be the case with 'A'-level grades with performance in British Universities. In their study, the very successful students differed significantly from the other category of students, in terms of their mean 'A'- level grades. But also, these other categories did not differ significantly from each other. This implies that, the relationship is not linear at all points; so, low correlations should be expected. Moreover, the British University system is highly selective and the subjects used for these studies were not those admitted into the University on the basis of their 'A'- level grades. And from all the studies reviewed, there was no indication of correction for this restriction in range. If this were done, the correlation coefficient obtained might have been higher. So, while agreeing that in Britain, 'A'-level grades are related to performance at the University, nothing conclusive can be said now about magnitude of the correlation. In America where the system is not so selective, moderately high correlations were obtained. Moreover, aptitude tests had fairly high predictive validity. But Intelligence tests were not so reliable.

Fishman and Pasanella (2004), summarise prediction studies in America from 1949 to 59 in the article, "College Admission Selection Studies." Of the 580 researches reviewed, 70% investigated the relationship between "intellective predictors" and "intellective criteria. In 263 studies in which High School records (average grade or rank in class) were correlated with overall first year "intellective criteria," the correlation was approximately 0.5. For an additional 31 studies, the correlation with final year performance was 0.48. Certain standard achievement tests (e.g. co-operative Tests in Social Studies or natural science, or the Iowa tests) were also found to show substantial correlation with global "intellective criteria." In 84 of such studies, the correlations with freshman grade point average ranged from 0.03 to 0.74 with a median value of 0.45.

The researches also indicated that aptitude tests were almost as good a predictor variables of previous achievement. The mean correlation obtained, by using aptitude test as predictor variable, was 0.74. When the aptitude tests were used in conjunction with High

School records, the correlation coefficient obtained were generally higher than those obtained by using any single one of them. In 216 studies, in which multiple correlations of “intellective criteria” (usually using aptitude test and High School record) with freshman grade point average (G.P.A.), was found, the correlation coefficients ranged from 0.37 to 0.83 with a median of 0.62. In 11 similar studies in which correlation was with grades beyond first session work, the correlation lies between 0.5 and 0.72 with a median of 0.65, but considering the aptitude test and High School records singly, the High School records were slightly better at predicting future success.

Scannell (2000) in his study “predicting College Success from Elementary and secondary School Performance” also confirms that, the best single predictor of college success was High School grade point average (G.P.A); which, in his study yielded correlation of 0.67 and 0.59 with freshman and 4-year G.P.A. respectively. He also established that elementary school test scores could be useful in predicting success at college. With a sub population representative of 8th grade, he correlated the score in Grade 8 Iowa Tests of Basic Skills with freshman G.P.A. and the estimated correlation was 0.85. Significant relationship between secondary school leaving examinations (H.S.C.) and performance at University was also obtained in Australian studies. In the studies reviewed, achievement in HSC provided sound basis for selection in to the University.

Cooney (2005) tries out three selection models for University. These were:

- (a) Standard regression model
- (b) A canonical model – where the dependent and independent variables were treated as vector
- (c) The discriminant model-where the prediction was for groups.

With the three models, he found out that HSC aggregate score was very good at predicting performance at University. In his analysis, using regression model, he used the aggregate score in the four first year courses as the criterion (dependent) measure. He then used various measures of achievement at H.S.C. and aptitude tests as the predictor (Independent) variables. He found out that:

- (a) Achievement in H.S.C. was much better at predicting success than aptitude test scores.

- (b) Performance in H.S.C. science and mathematics were better at predicting performance in science at University than any other single subject. The correlation coefficients obtained in using them were 0.56 and 0.591 respectively.
- (c) Aggregate score at H.S.C. yielded higher correlation than single subjects or other global measures. The aggregate score yielded correlations ranging from 0.585 to 0.696 with a median value 0.671.
- (d) The highest coefficients of correlation were obtained when multiple correlations was used. Other researches in Australia also tend to emphasise previous achievement. In the study by Anderson (1999) for instance, he found out that students with low-level achievement in school leaving examinations tended to perform badly at University irrespective of their level of intelligence. In fact, he ended up by saying that, students who rated high in intelligence but low in previous achievement were 'bad risks' in Science based faculties. John (2005), concludes by saying that school leaving certificate was an excellent guide in predicting the quality of result in English at University.

Generally, there appears to be an agreement on the value of previous academic achievement in predicting success at University. But then, these researches were conducted overseas. The fact that all the three countries found previous achievements to be useful in predicting future performance does not imply that the situation will necessarily be the same in Nigeria. Significant differences in result could arise from various factors, which include the relationship between the secondary school curriculum and the University curriculum, as well as the reliability of both the predictor and the criterion measures in Nigeria as against what obtains in those countries.

The researcher's reviews can only give insight into what variables to use as well as methods of attacking the problem. But in term of specific information regarding the relationship in Nigeria, they are of little use. In the research conducted by Emenari (1994) in Nigeria, there were two negative correlations between performance in Biology at WASC and performance in selected Biology courses at the University of Nigeria Nsukka. But generally, the correlations were positive though low. Nine of the eleven cases he examined

had positive correlations. The correlation coefficients he obtained ranged from -0.19 to 0.44 with a median value of 0.21 but the question is:” Does this really reflect the situation in Nigeria? In order to get the position clarified, more researches have to be conducted in Nigeria. And this study will contribute in that respect. In carrying out this study, performance at WASC will be correlated with global measures of achievement at University and not with single subjects as was done by Emenari. The basic method of analysis will be correlational technique as was used by Emenari, but then due attention will be paid to finding of Karpur (2002), Richards and Wilson (2001). In Kapur’s study, mean ‘A’ – level grades were able to discriminate between an outstanding student and an average student but hardly did between an average student and a ‘poor’ student. In the study by Richards and Wilson, they found that mean ‘A’- level grades below 55%, the probability of passing was constant at about 40%. The implication of these for correlational technique is that low correlations might be obtained while in actual fact, performance in school leaving examination is significantly related to performance at University.

Another research work by Faleye and Afolabi (2005) find out the predictive validity of Osun state Junior Secondary Certificate Examination in the SSS performance. The researcher found out whether there is a significant relationship between the overall performance of students in the JSSCE and their performance in the SSCE, including aggregate SSS1 and SSS2 results. The works also determine the nature and strength of the relationship between selected JSSCE subjects and their corresponding equivalent in SSS1, SSS2 and SSSCE. The subjects for the study consisted of 505 students from six purposefully selected secondary schools in Osun State, Nigeria. The schools were the top three schools of science in the state plus three other public secondary schools. The students sampled were those whose results were obtained from the 1993 JSCE through SSS1, SSS2 and WAEC’ SSCE. (i.e. those who completed SSS took the SSSCE and those who had intact academic records). Examination scores of the students were obtained from school records in six JSSCE subjects. These include: English language, Mathematics, Integrated science, Yoruba language, Social Studies and Agricultural Science. For the purpose of comparison, the researchers used the promotion examination results of students in SSS1 and SSS2 and their final SSSCE result were also obtained in school subjects corresponding to the selected JSSCE subjects. The only exceptions were chemistry and biology in the SSSCE which were

paired and matched with integrated science in the JSSCE. Physics candidates were few in the three other public schools and geography in the SSSCE was matched with social studies in the JSSCE. Economics, government or history were not offered in any of three schools of science sampled JSSCE grades A, C, P and F were awarded 3, 2, 1 and 0 points respectively while SSS promotion grades and SSSCE grades of distinction, credit, pass and fail were treated likewise. Those, aggregate scores were obtained from each student in all subjects that were amenable to correlation analysis.

The result shows that 56.9% of the students who obtained A in JSSCE also obtained A's in SSSCE. However, 70.8% of students who obtained Cs in JSSCE also obtained C or better in the SSCE: and only 59.4% of students who obtained F grade in JSSCE did likewise in the corresponding or equivalent SSSCE subjects. From the result of this research it may be deduced that three of the six schools investigated had relatively low but significant correlations between JSSCE and SSSCE results. Two of them had significant correlation between JSSCE and SSS2 result. Overall performance in JSSCE tends to have low capacity to predict performance in SSSCE. It appears that, the predictive capacity of the JSSCE could be affected by the quality of the examination questions and the integrity of the procedure of its administration and scoring (Faleye et al 2005). This opinion may be true because most of the states that set and conduct JSSCE often get their question papers leaked. More often than not, teachers in each school are also made to invigilate their own students. Likewise, the marking and awarding of grades tend to be abused.

Even, the assignment of continuous assessment (CA) scores is often arbitrary and usually inflated (Ojerinde, 1986; Adejumo and Afolabi, 1990; Faleye and Afolabi, 2005). The practice of C.A. that provides part of the final score (FRN, 1992) for each of the subject at the SSCE needs to be improved. It has been confirmed by the researchers (Osokoya, 1999, Faleye and Afolabi, 2005) that not all JSSCE subjects have adequate predictive strength. This however, negates the principle of testing (Especially for public examinations), where all the items are expected to have been pre-tested and all the necessary psychometric strengths of adequate predictive power, discrimination index and moderate difficulty level ensure before they are administered on real candidates; (Hopkins, 1998; Pophamm 2002).

Nigeria has witnessed so many educational reforms since 1954. The agitators for self-rule led the British colonial rulers to change the educational system in operation then

from 8-6-2-3 system that was eight years primary, 6 year secondary, 2 years higher school certificate and 3 years university to a new system of 6-5-2-3. The change resulted in reducing the number of years at the primary and secondary school levels. The hope of educational reforms continued to rekindle after independence Gusau, (2008). The freedom of self-rule Nigeria was enjoying had to match with educational progress. In September 1969, there was a National curriculum conference held in Lagos. Participants at the conference were eager to see Nigeria chart a new course in its educational reform system, a system they reasoned would empower the country towards the path of scientific and technological development. They criticised colonial education system as lacking in vitality and relevance. The conference therefore recommended changes in the system, from 6-5-2-3 systems of education to 6-3-3-4 system (Gusau, 2008).

Omolewa (1986) states that, the programme was conceived as an instrument of national unity. It was designed to inject functionality into the Nigerian school system. The 6-3-3-4 was fashioned to produce graduates who would be able to make use of their hands, head and ear. Babafemi (1995) opines that the 6-3-3-4 systems of education is a functional education, which enables its recipients function economically, socially, morally, intellectually and politically. Fagbamiye (1987) calls it, a job oriented educational programme. It places premium on manual activities, technical proficiency, and respect for dignity of labour and economic efficiency. It is to provide the child with basic tools to prepare him or her for local craft. Ogundare (2005) concludes that 6-3-3-4 system of education in Nigeria emphasises acquisition of vocational skill at the secondary school stage; while it is professionally oriented at the tertiary stage so as to minimise unemployment and produce skilled manpower, in science and technology. One can therefore submit that the 6-3-3-4 system of education in Nigeria is meant to make individuals capable economically and socially. In terms of moral upbringing of a child, it was stated that religion will be given priority and moral instructions for the moral and spiritual well being of individuals but “no child would be forced to accept any religious instruction which is contrary to the wish of his or her parents (National Policy on education 2004). This is to conclude that 6-3-3-4 is comprehensive enough to take care of all aspects of a child if the implementation is carried out as planned.

However, many researchers observed that the 6-3-3-4 system of education in Nigeria was not adequately planned for (Ogundare 2005; Gusau 2008). According to Segun Adesina (1980), planning is the process of applying scientific or rational procedures to the process of educational growth and development so as to ensure the efficiency and effectiveness of the educational system. The lower education, especially primary education was the first to suffer the effect of inadequate planning. Free Universal Primary education was launched in 1976 but the policy on education itself was established in 1977, one year after implementation of the programme Gusau (2008). In this kind of situation where implementation is ahead of policy, confusion would certainly emerge.

Students' academic achievement could be influenced by so many factors. These according to many research work Okanle, (2007); House, (2002); Shitu (2004); & Considine and Zappada (2002) include home background, parents level of ducation, socio-economic status peer influence, school's factors, teachers and the head of schools including the general tone of the school. Okanle (2007) referring to United States Department of Education (USDE, 2000) says, home background influences academic and educational success of students and school work; while socio-economic status reinforces the activities and functioning of the teachers and students. From the above, it is revealed that, the quality of parents and home background of a student goes a long way to predict the quality and regularity of the satisfaction and provision of his/her functional survival and academic needs. Poor parental care with gross deprivation of social and economic needs of a child, usually, yields poor academic performance. On the other hand, where a child suffers parental and material deprivation and care due to divorce or death, or absconding of one of the parents, the child's schooling may be affected as the mother alone may not be financially buoyant to pay school fees, purchase books and uniforms, such child may play truancy; thus, his/her performance in school may be adversely affected (Shittu, 2004).

Similarly, good parenting supported by strong economic home background could enhance strong academic performance of the child. This further predicts academic performance where the child is properly counseled in the choice of his/her courses and vocation that matches his/her mental ability, interest and capability, whereas, children left in the care of illiterate mothers will find themselves roaming the streets labouring to make ends meet. Danesy and Okediran lament that, street hawking among young school students has

psychologically imposed other problems like; sex networking and juvenile delinquent behaviour, which take or occupy much of the students school time that leads to poor academic performance and drop out syndrome noticed among them. Nevertheless, they also lament that deprivation of essential needs of young students by parents prompt their poor performance in public examinations such as JSSCE, WASSCE and NECO.

House (2002) opines that students' characteristics, their living and learning environments and instructional activities, contribute to their achievement. However, NEETF (2000) divides factors that influence learning outcomes into five categories. These include: External, internal, social, curriculum and administrative. Patrick (1991) observes that "achievement has been associated with the following factors; high educational attainment of parents, a home environment where reading and discussion of ideas are valued, limited watching of television, significant amount of time spent on home work assignments and stable family structure. The author believes students' achievement is positively influenced by challenging situations such as in-depth investigations of topics, discovery of alternative solutions to the problems; active learning and thinking; multiple resources and media for teaching and learning; use of technology; high expectation of student performance; a safe school climate and authentic on-going assessment. Many other researchers also believe students learn best when they have an opportunity to discover and investigate (House 2002; NAAEE & NEETF 2001; WDFD 1999).

Considine and Zappada (2002) sum up the factors that affect students' academic performance to be socio-economic status (SES), family structure, types of school, absenteeism, gender, ethnicity, geographical location and housing type. These factors were corroborated by other researchers like (Mukherjee, 1995; Rich 2000 Marks et al 2000; Buckingham 2000. Horne; HREOC, 2000; Selter, 2000; and Sparkes 1999). In their research work they found out that even within a group with considerable financial disadvantages, socio-economic status as reflected by the level of parental education was a key predictor of student academic achievement. This finding lends support to the notion advanced by some studies: (Zappada and Green, 2001; Calvert 2000; Horne 2000) that, the social and economic component of the socio-economic status equation may have distinct and separate influences on educational outcomes. While both components are important, social factors such as: parents 'educational attainment, have been found to be more significant than economic

factors in explaining children's educational outcomes and among the most replicated results in child development studies (Shonkoff and Philips, 2000).

According to Brandley (2003), gender difference in mathematics achievement decline as male students showed significantly greater gains than females in mathematics through secondary school. By the time they take Scholastic Aptitude Test (SAT) after secondary school education, male students as a group achieved significantly Higher mean score than their female counterparts on the SAT mathematics score (Haigh, 1995). Gender differences emerge on more complex quantitative tasks (Spekle 2005). In most studies, it was found that these differences begin during secondary school and grows larger with increasing age (Beilstein Wilson, 2000; Levine, Huttenlocher, Taylor; and Langrock, 1999; Beilstein and Wilson, 2000, Bradley 2003). Thus the issue of gender difference in academic achievement still requires attention in this study in order to ascertain the extent of its mediating effect on freshmen performance.

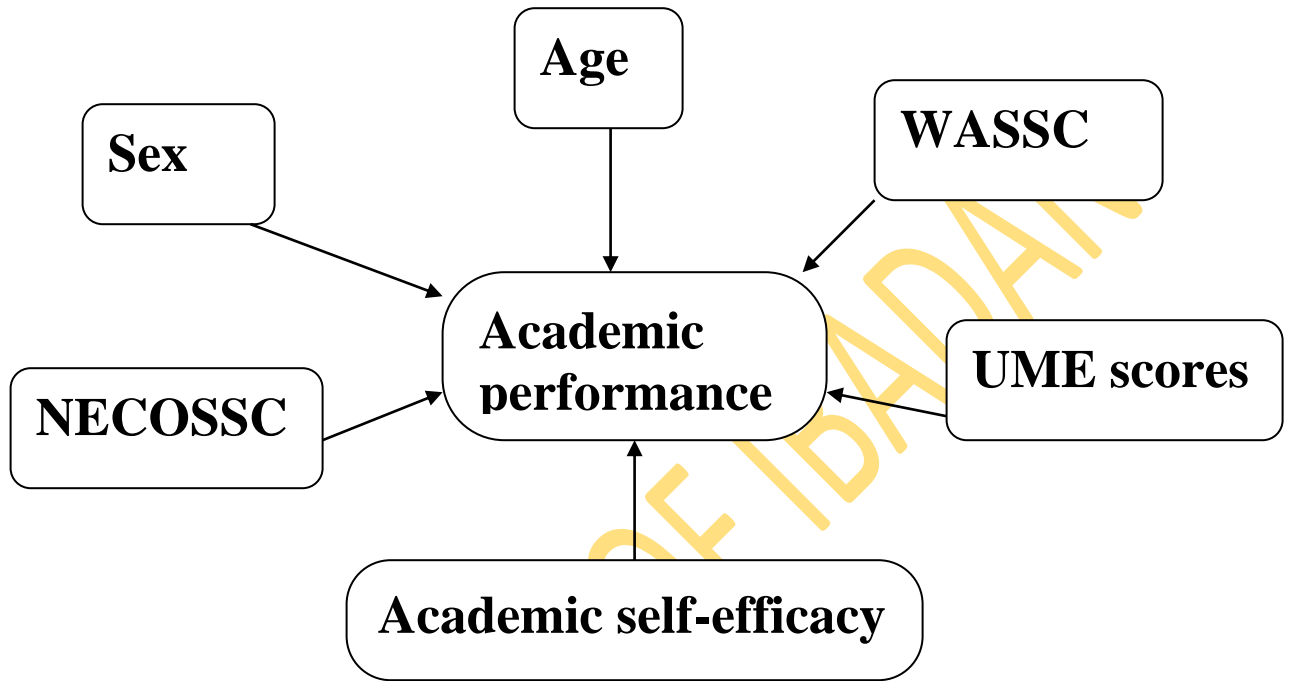
Religions and cultural practices have been found to impede the education of girls (Beckett and Connell, 1976; Nayana, 1985; Robertson, 1985 Kourouma, 1991; Okoje, 1995). Of these religious constraints, the education of girls is more affected than that of boys. For example, a study by Okoje (1995) finds out that religion had a significant effect on female education, as Muslim girls in Northern Nigeria were less likely to be enrolled in school. Cultural practices such as early marriage have been found to deny girls the opportunity to be educated (Kirui, 1992; Nayana, 1985). In most African societies, girls are expected to marry early and have children to whom they should devote their lives.

Parental income has been found to greatly affect the participation of female children, thus suggesting that the higher the income of the family the greater the desire of parents for their daughters' education. Household income does not correlate significantly with attitudes of parents regarding their son's education (Shafi, Mosheni and Motaba, 1977); which indicates that in the case of males, family economic hardship does not necessarily restrict their schooling. Nkinyangi (1980) reports that, in Kenya, when parents cannot pay school fees, they keep the female children at home. Similarly, Okoje's (1995) study on gender gap and access to education in Nigeria indicates that where there was financial stress, boys were usually given preference over girls in matters of schooling. According to Dall (1989), the reason why a lot of children especially girls did not go to school in Mali is economic. The

cost of education is believed to be high for the average family. Consequently, in the towns, girls stay at home to mind other children or to sell things from roadside stalls.

Also, the traditional domestic role assigned to girls has been identified as a major factor affecting girl's access to education. Research findings (Nyikana, 1982; Nayana, 1985; Yeoman, 1985) indicate that parents relied on girls for domestic help and that this resulted in poor school attendance. For example, girls do household chores, work on the farms, fetch water and firewood, among others. Recent studies (Lloyd and Gage- Brandon, 1992; Okoje, 1995) indicate that, size of the family has been found to impede girls' school attendance and attainment. It was found that the number of younger siblings negatively affects girls' chances of ever attending school; older girls from large families, especially in rural areas are less likely to be enrolled in school. Study by Jones (1980) Robinson, Markary and Ruhg, (1987), Anderson (1988) and Khan (1989) indicate that the distance from school or the location of school from home has significantly affected girls' school attendance. According to them, parents consider that a long distance is more dangerous to their daughters' security than it is to that of their sons (Anderson 1988; Khan, 1989).

Figure 1: The Conceptual Model for the Study



The Conceptual Model for the Study Indicating the Linear Relationships between the independent variables and the dependent variable (Academic Performance).

Research Questions

The following research questions guide the course of this study. The instrument that was used for this work shall therefore be designed to answer the following questions.

1. Are there significant relationships between the independent variables (sex, age, WASSC, NECOSSC, UME scores and academic self-efficacy) and dependent variable (academic performance) of university freshmen?
2. What is the composite contribution of the independent variables to the dependent variable?
3. What is the relative contribution of the independent variables to the dependent variable?

4. What is the percentage of attrition among the university freshmen?

Hypotheses

1. There will be no significant relationship between age and academic performance of university freshmen.
2. There will be no significant relationship between West African Senior school Certificate and academic performance of university freshmen.
3. There will be no significant relationship between NECO Senior School Certificate and academic performance of university freshmen.
4. There will be no significant relationship between gender and academic performance of university freshmen.
5. There will be no significant relationship between academic self-efficacy and academic performance of university freshmen.
6. There will be no significant relationship between UME scores and academic performance of university freshmen.
7. There will be no significant difference between the academic performances of high and low academic self-efficacy of university freshmen.
8. There will be no significant difference between the academic performance of university freshmen with WAEC and those with NECO senior school certificates.
9. There will be no significant difference between the academic performance of male and female university freshmen.

CHAPTER THREE

METHODOLOGY

This chapter discusses the design, subjects, procedure, instrument and the type of analysis that was used.

Study Design

Descriptive survey design of *ex-post facto* type was employed to investigate the relationship between these set of variables the WASSC, NECOSSC, UME scores, age, gender and academic self-efficacy (predictor variables) and academic performance of university freshmen (criterion variable). This design was used because both the cause and the effect had UTA already occurred while the data generated in the study were from the source without any manipulation.

Population

The population of this study consists of students who enrolled at the five federal universities in south- west Nigeria in 2009/2010 session. From this population, records on performance in public examinations from a random sample of 2,518 candidates were obtained from these universities' admission officers using predetermined criteria such as age categories, gender, UME scores and SSCE results from WAEC / NECO etc. The reason for considering these five Universities is that, they share similar admission requirements; similar curricula and they are located in the same geo-political zone.

Sample

The subjects for the study were randomly selected from the south west geopolitical zone using multistage random sampling technique. This is a sampling strategy that allows for the concurrent usage of sampling methods such as simple random sampling technique, stratified sampling technique, systematic sampling technique, purposive and cluster sampling technique in a single study in helpful varieties to appropriately satisfy the sampling requirements in the study.

The five federal universities in the south west, faculties and departments used in the study are presented below:

Table 3.1: Randomly selected Universities, Faculties and Departments from South West, Nigeria

OAU		UI		UNILAG		FUTA		UNAAB	
Faculty	Depart	Faculty	Depart	Faculty	Depart	Faculty	Depart	Faculty	Department
Technology	Comp. Engineering	Education	G&C	Education	Tech. Education	Technology	Elect/Elec	Agric	Agric Ext. & Rural dev
	Agric Eng.		KHE		Human Kinetics		Civil Eng		Agric Admin.
	Arch. Design		MGT		Rel. Studies		Agric Eng.		Agric Econs & Crop Production.
Science	Comp. Science	Scienc	Chem	Arts	Creative Arts	Science	Comp. Sci.	Science	Maths
	Agric Science		Botany		Eng. Lang.		Biochemistr y		Physics
	Maths		Maths		Yoruba		Physics		Chemistry
Social Science	Demo.& Soc. Stat.	Technology	Mech	Science	Maths	Agric	Agric Ext.	Agrono.	Ani. Physiology
	Geographynce		Civil		Physics		Food Sci. Tech.		Plant physiology
	Political Scie		Foodtec		Biochemist ry		Plant Breed&Tech		Animal breeding & genetics.

Using multistage sampling technique for the study, the table above shows the five federal universities that were randomly selected from the six states in south west, Nigeria. Three faculties were also selected from each of the five universities to make up 15 faculties in all. Furthermore, three departments were selected from each of the faculty to make up 45 departments used for this study.

The total number of candidates used for the study is 2518 university freshmen from the five federal universities, 15 faculties and 45 departments in southwest, Nigeria. The sample consisted of 1425 males and 1093 females with 666 holding NECOSSC while 1205 holding WAECSSC and rest 647 combined both SSCE results of NECO and WAEC. Also, 1414 of these participants are of low academic self-efficacy while 1104 are of high academic self-efficacy. The average age of the participants is 20.63 years with standard deviation of 2.96 years.

Table 3.2: Collection of Data from Departments

University	Number of Faculty used	Number of Department Used	Total number of respondents used in each Universities
OAU, Ile-Ife	3	9	500
UI, Ibadan	3	9	518
UNILAG, Lagos	3	9	500
FUTA, Akure	3	9	500
UNAAB, Abeokuta	3	9	500
Total	15	45	2518

Instrumentation

The following instrument was validated and employed to collect data for the study. Academic self confidence scale was adopted from Sander and Sander (2004). It is a 29- item Likert scale in which respondents are requires to indicate the extent to which they perceived these items as being confiden on a 5=point rating scale from very study is academic self-efficacy scale. The scale was adopted from Sander and Sander (2004). The instrument was divided into two sections; the first consisted of several items on respondents' socio-

demographic variables such as age, sex, family type, tribe and socio-economic status. The second part was made up of a 24-item Likert Scale in which respondents were required to indicate the extent to which they perceived these items as being confident on a 5-point rating scale from very confident (5 points) to not at all confident (1point). The original reliability coefficient of this instrument was 0.98.

The items were scrutinised through the assistance of the researcher's supervisor and other experts from Guidance and Counselling Department in order to ensure face and content validity. The instrument consists of 29-item in Likert format having two sub-scale sections A and B, which have 5 and 24 items respectively. The focus of each section of the instrument is as follows:

Section A: Demographic characteristics.

Section B: Academic confidence scale

The instrument was rated following a five-point scale where

Very confident = 5 Confident = 4 Moderately confident = 3

Of little confident = 2 Not at all confident = 1

In a pilot study conducted in the present study with the original scale adopted items, using split half reliability method an internal consistency reliability of 0.98 was obtained. The validity established however ranged between 0.3 and 0.8 using item total correlation which implies that the instrument measured what it was purported to measure. In an attempt to establish the reliability of section B of the instrument, the split-half reliability value obtained from a pilot study is 0.97 while the original validity coefficient of the academic confidence scale is 0.987.

Data Collection

Data on SSCE results, UME scores; age and gender were obtained from admission offices of each university concerned as secondary data while GPA was collected from the academic records office of the selected universities. The data were collected on the basis of the subgroups involved in the study. The subgroups were male and female and the age of candidates that gained admission on the basis of possession of minimum of five or six credit passes at one or two sittings in the WASSC and NECOSSC and that had enrolled as a student in any of five Federal Universities in the south west of Nigeria in 2009/2010 session.

Data Analysis

Data were analysed using simple correlation and multiple linear regression analysis. Independent sample two-tailed t-test was computed to answer the research questions raised on academic performance of university freshmen based on gender, age and level of academic self-efficacy. To facilitate the use of Pearson Product Moment Correlation method and multiple regression analysis, sex was coded as: male = 1 and female = 2. The SSCE results were coded as: A1=6, B2=5, B3=4, C4=3, C5=2 and C6=1 and sum up the scores and multiply by 2 amounted to 60% while UME scores were converted to 40% by dividing the UME scores by 10. The total will be 100%. This was done for uniformity purpose across the universities chosen. This idea was borrowed from university of Ibadan admission office.

UNIVERSITY OF IBADAN

CHAPTER FOUR

RESULTS

This chapter presents the results and summary of findings. The data generated for the study were analysed using multiple regression analysis, t-test and descriptive statistics. The results are presented in summary Tables subsequently.

Research Question 1: Are there significant relationships between the independent variables (sex, age, WASSC, NECOSSC, UME score and academic self-efficacy) and dependent variable (grade point average) for academic performance of university freshmen?

The result from Table 4.1 depicts correlations significant test among independent variables (age, sex, WASSC, NECOSSC, UME scores and academic self efficacy) and dependent variable (Grade Point Average (GPA)) of the university freshmen.

Table 4.1: Descriptive Statistics and Correlations Significant Test among Age, Sex, NECOSSC, WASSC, UME scores, Academic Self- Efficacy and Grade Point Average of the Respondents

Variables	1	2	3	4	5	6	7
Gender	1.00						
Age	0.06	1.000					
UME scores	0.04	-0.19	1.00				
ASE	0.03	-0.10	0.22	1.00			
WASSC	0.04	0.03	-0.06	-0.12	1.00		
NECOSSC	0.03	0.05	-0.02	-0.08	0.68	1.00	
GPA	0.15	0.17	0.15	0.17	0.18	0.16	1.000
Mean Scores	-	20.63	22.41	98.12	2.60	2.28	3.75
SD	-	2.91	2.35	11.02	0.98	0.95	0.92
Number	2518	2518	2518	2518	2518	2518	2518

The result from Table 4.1 shows that GPA had significant correlations with all the six independent variables viz: gender ($r = 0.146$, $p < 0.05$), UME Scores ($r = 0.153$, $p < 0.05$), age ($r = 0.165$, $P < 0.05$), academic self-efficacy ($r = 0.172$, $P < 0.05$), NECOSSC ($r = 0.161$, $P < 0.05$) and WASSC ($r = 0.175$, $p < 0.05$) of the respondents.

The researcher is interested in investigating whether sex, age, UME Scores, NECOSSC, WASSC and academic self –efficacy would significantly predict GPA of the university freshmen. To accomplish this laudable objective, multiple regression analysis was

resorted to, GPA as a dependent variable was regressed on age, sex, NECOSSC, WASSC, UME scores and academic self-efficacy as the independent variables.

Research Question 2: What is the composite contribution of the independent variables to the dependent variable?

TABLE 4.2: Summary of Regression Analysis of the Combined Prediction of Academic Performance by the Six Independent Variables

R	R-Square	Adjusted R-Square	Std. Error of the Estimate		
0.742	0.546	0.521	0.95701		
Analysis of Variance					
Source of Variation	Sum of Square	Df	Mean square	F	Sig.
Regression	142.284	6	23.714	26.125	0.000*
Residual	2280.154	2512	0.908		
Total	2422.438	2518			

*Significant at $p < 0.05$

Table 4.2 shows the prediction of all the six independent variables to the dependent variable. The, academic performance of university freshmen correlated positively with the six-predictor variables. It also shows a coefficient of multiple correlations (R) of 0.742 and a multiple R square of 0.546. This means that 54.6% of the variance in the academic performance of university freshmen is accounted for by all six predictor variables when taken together. The significance of the composite contribution or the prediction was tested at $p < 0.05$ using the F- ratio at the degrees of freedom (df= 6, 2518). Further, the Table shows that the analysis of variance for the regression yielded a F-ratio of 26.125 (significant at 0.05 level). This implies that the combined contribution of the independent variables to the dependent variable was significant and that other variables not included in this model may have accounted for the remaining variance.

Research Question 3: What is the relative contribution of the independent variables to the dependent variable?

TABLE 4.3: Relative Contribution of the Independent Variables to the Dependent Variable (Test of Significance of the Regression Coefficients)

Variables	Unstandardised		Standardised	T	Sig
	coefficient	Std. Error	Beta		
	B				
Constant	3.206	0.227	-	14.099	0.000**
Sex	0.094	0.045	0.047	1.294	0.296
Age	0.144	0.008	0.128	2.760	0.034*
WASSC	0.349	0.003	0.399	8.134	0.000**
NECOSSC	0.300	0.015	0.330	6.125	0.000**
UME-scores	0.012	0.010	0.030	1.369	0.324
ASE	0.153	0.003	0.150	3.812	0.012*

Notes: ASE:-Academic self-efficacy

** Significant at $P < 0.00$ * Significant at $P < 0.05$

Table 4.3 reveals the relative contribution of the six independent variables to the dependent variable, expressed as beta weights. The positive value of the effects of NECOSSC, WASSC, age, sex, UME scores and academic self-efficacy implies that the academic performance of university freshmen is actually determined by positive reinforcement of these six variables. Using the unstandardised regression coefficients to determine the relative contributions of the independent variables to the explanation of the dependent variable WASSC ($B = 0.349$, $t=8.134$, $P < 0.05$) is the most potent contributor to the prediction followed by NECOSSC ($B = 0.300$, $t=6.125$, $P < 0.05$) followed by academic self-efficacy ($B = 0.153$, $t=3.812$, $P < 0.05$); followed by age ($B=0.144$, $t=2.760$, $P < 0.05$); followed by UME- Scores ($B =0.012$, $t=1.369$, $P > 0.05$) and sex ($B =0.094$, $t=1.294$, $P > 0.05$) in that order. In a nutshell, the academic performance of university freshmen is determined by these six variables in the order in which they contributed to the academic performance of the university freshmen.

Research Question 4: What is the percentage of attrition among the university freshmen?

TABLE 4.4: Frequency Count of Grade Points Average (GPA) of University Freshmen in South West Nigeria.

GRADE POINT AVERAGE	FREQUENCY	PERCENT
6.00-7.00	-	-
4.50 –5.99	12	0.5
2.50-4.49	1228	48.8
1.50 –2.49	828	32.9
1.00 –1.49	271	10.8
0.00 –0.99	179	7.1
TOTAL	2518	100.0

The result from Table 4.4 shows the grade point average and the corresponding frequency counts and percentages of students falling into each category. The percentage of students that fall below the 1-point grade average is 7.1%. Therefore, the percentage of attrition is 7.1%. This result indicates that out of every 100 student admitted in a session, 7 of them fail and ultimately withdraw as a result of not being able to perform to expectation academically (not in good academic standard).

Hypotheses

Hypothesis 1: There will be no significant relationship between age and academic performance of university freshmen.

Table 4.5: Mean, SD, Correlation Showing the relationship between age and academic performance of university freshmen.

Variable	N	X	SD	df	r	Sig	Remark
Age	2518	20.63	2.91	5032	0.165	0.000	Significant
Academic performance	2518	3.75	0.92				

Table 4.5 reveals that the correlation coefficient “r” between age and academic performance is 0.165 and $P < 0.05$. Since $P < 0.05$, it implies that there is significant relationship between age and academic among participants. Based on this the null hypothesis is rejected.

Hypotheses 2: There will be no significant relationship between sex and academic performance among university freshmen.

Table 4.6: The Mean, SD and Correlation showing the relationship between sex and academic performance of university freshmen.

Variable	N	X	S D	df	R	Sig	Remark
Sex	2518	-	-	5032	0.146	0.005	Significant
Academic performance	2518	3.75	0.92				

Table 4.6 reveals that the correlation coefficient “r” between sex and academic performance is 0.146 and $P < 0.05$. Since $P < 0.05$, it implies that there is significant relationship between sex and academic performance of university freshmen. Based on this, the null hypothesis is rejected.

Hypotheses 3: There will be no significant relationship between UME and academic performance of university freshmen.

Table 4.7: The Mean, SD and Correlation showing the Relationship between UME and academic performance of University freshmen.

Variable	N	X	S D	df	r	Sig	Remark
UME scores	2518	22.41	2.35	5032	0.153	0.005	Significant
Academic performance	2518	3.75	0.92				

Table 4.7 reveals that the correlation coefficient “r” between UME scores and academic performance of university freshmen is 0.153 and $P < 0.05$. Since $P < 0.05$, it implies that there is significant relationship between UME scores and academic performance of university freshmen. Based on this the null hypothesis is rejected.

Hypotheses 4: There will be no significant relationship between WASSC and academic performance of university freshmen.

Table 4.8: The Mean, SD and Correlation showing the Relationship between WASSC and academic performance of University freshmen

Variable	N	X	S D	Df	r	Sig	Remark
WASSC	2518	2.598	0.982	5032	0.175	0.015	Significant
Academic performance	2518	3.75	0.92				

Table 4.8 reveals that the correlation coefficient “r” between WASSC and academic performance of university freshmen is 0.175 and $P < 0.05$. Since $P < 0.05$, it implies that there is significant relationship between WASSC and academic performance of university freshmen. Based on this the null hypothesis is rejected.

Hypotheses 5: There will be no significant relationship between NECOSSC and academic performance of university freshmen.

Table 4.9: The Mean, SD and Correlation showing the Relationship between NECOSSC and academic performance of University freshmen

Variable	N	X	SD	df	r	Sig.	Remark
NECOSSC	2518	2.276	0.952	5032	0.161	0.035	Significant
Academic performance	2518	3.75	0.92				

Table 4.9 reveals that the correlation coefficient “r” between NECOSSC and academic performance of university freshmen is 0.161 and $P < 0.05$. Since $P < 0.05$, it implies that there is significant relationship between NECOSSC and academic performance of university freshmen. Based on this the null hypothesis is rejected.

Hypotheses 6: There will be no significant relationship between academic self-efficacy and academic performance of university freshmen.

Table 4.10: The Mean, SD and Correlation showing the Relationship between academic self-efficacy and academic performance of University freshmen

Variable	N	X	SD	df	r	Sig.	Remark
Academic self efficacy	2518	98.12	11.02	5032	0.172	0.025	Significant
Academic performance	2518	3.75	0.92				

Table 4.10 reveals that the correlation coefficient “r” between academic self-efficacy and academic performance of university freshmen is 0.172 and $P < 0.05$. Since $P < 0.05$, it implies that there is significant relationship between academic self-efficacy and academic performance of university freshmen. Based on this the null hypothesis is rejected.

Hypotheses 7: There will be no significant difference between the academic performance of student with WASSC and NECOSSC among the university freshmen.

TABLE 4.11: The mean, SD, and t-test Showing the difference on Academic Performance of University Freshmen that Hold WASSC and NECOSSC

Variable	N	X	SD	T	Df	Sig	Remark
NECOSSC	666	2.2796	0.9517	6.795	1869	0.000	Sig.
WAECSSE	1205	2.5983	0.9820				

The result from Table 4.11 shows that $t = 6.795$, $DF = 1869$, $p < 0.05$. Since $p < 0.05$, therefore, there is significant difference in the academic performance of students with WASSC and those with NECOSSC among the university freshmen. This result indicates that students with WASSC perform better academically than students with NECOSSC in their first year of admission.

Research Question 8: There will be no significant difference between the academic performance of male and female University freshmen.

TABLE4.12: The mean, SD and t – test Showing the difference on Academic Performance of Male and Female University Freshmen

Variable	N	X	SD	t	df	Sig	Remark
Male	1423	2.4876	1.0104	0.859	2516	0.390	NS
Female	1095	2.4539	0.9300				

The result from Table 4.12 shows that, the value of ($t= 0.859$, $df = 2516$, $p>0.05$). Since $p> 0.05$, therefore, there is no significant difference in the academic performance between male and female university freshmen. This result indicates that sex is not a barrier to academic performance and that female students can perform better than male students and vice-versa.

Research Question 9: There will be no significant difference between the academic performances of high and low academic self-efficacy of University freshmen.

Table 4.13: The mean, SD and t-test Showing the difference on Academic Performance of High and Low Academic Self-efficacy of the Participants.

Variable	N	X	SD	t	df	Sig	Remark
High self-efficacy	1414	2.5148	0.9633	2.438	2516	0.015	Sig.
Low self-Efficacy	1104	2.4193	0.9904				

The result from Table 4.13 shows that the value of ($t=2.438$, $df = 2516$ $P<0.05$). Since $p< 0.05$, therefore, there is significant difference between the academic performances of high and low academic self-efficacy of university freshmen. This result indicates that students with high inner conviction that he or she possesses what it takes to effect positive change in their academic performance do perform better than those with low inner conviction about their academic performance.

Summary of Findings

1. That sex, age, NECOSSC, WASSC, academic self-efficacy and UME scores were significantly correlated with academic performance of university freshmen.
2. That sex, age, NECOSSC, WASSC, UME scores and academic self-efficacy jointly predicted academic performance of university freshmen, they accounted for 54.6%
3. The relative order of importance (in decreasing order) of the six-predictor variables to the criterion variable is as follows: WASSC, NECOSSC, academic self-efficacy, age, UME score and sex.
4. That the attrition rate among the university freshmen is 7.1%.
5. There is significant relationship between age and academic performance of university freshmen.
6. There is significant relationship between gender and academic performance of university freshmen.
7. There is significant relationship between UME scores and academic performance of university freshmen.
8. There is significant relationship between WASSC and academic performance of university freshmen.
9. There is significant relationship between NECCOSSC and academic performance of university freshmen.
10. There is significant relationship between academic self-self efficacy and academic performance of university freshmen.
11. That there is no significant difference in the academic performance of male and female university freshmen.
12. That there is significant difference in the academic performance between high and low academic self-efficacy of the university freshmen.
13. That there is significant difference in the academic performance between the university freshmen with WASSC and NECOSSC.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This chapter presents discussion of findings, conclusion and recommendations. It also contains implications and limitations of findings as well as suggestion for further studies.

Discussion of Findings

The result of the research question 1 shows that the six independent variables correlated significantly with academic performance (GPA) of university freshmen. Some past studies equally established that there was significant correlation between sex, and academic performance of university freshmen (Susec-Michieli & Kalsnik, 1983). Nevertheless, it has been equally well- documented in the literature that there was no significant relationship between gender and GPA of the University freshmen (Huff, Koenig, Treptau and Sireci 1999; and Salahudeen and Murtala, 2005). The result of this study also shows that UME scores do not correlate significantly with academic performance of university freshmen. This finding is in line with that of Obioma and Salau (2007). It also shows that majority of the students were below 20 years of age and the younger students performed better than older ones. Previous studies show that older students' poor performance were attributed to financial problems and family responsibilities which cause major stress that impact on course performances and often lead to withdrawals (Johnes, 1990; and Vander Hulst and Jansen, 2002).

The results of this study therefore suggest that the SSCE result is more potent to university freshmen academic performances than UME scores in a study conducted in UNN in which the SSCE result was a better predictor of students' performance (Obioma & Salau, 2007). Several factors could be responsible for the difference, including organisation of the examination and societal morality. Moreso, the finding shows that academic self-efficacy significantly correlated with academic performance of university freshmen. This finding is in line with Abe (1995); Fretz (1998); and Brown and Morrison (2004). The result of research question 2 shows that 54.6% of the variance in academic performance of university freshmen is accounted for by the SSCE results, UME scores and socio- personal factors. Though the value is small, the F-value 26.125 which was significant at $P = 0.05$ and shows that the effect is still significant. Luster and McAdoo (1994) posit that differences in

students' cognitive and behavioural adjustment are as a result of learners' variables like family size, material, education, poverty and home environment. Aber (1994) Adetona (2005) and Ukwueze (2007) also support the result by noting that socio-personal variables affect learning outcome. The result explains the need to look beyond one variable as accounting for either low performance or high achievement. If age or UME score is identified as responsible for academic performance, other variables like sex, academic self-efficacy or SSCE results may influence academic performance indirectly.

The result on research question 3 shows the relative contribution of each of these independent variables to academic performance among university freshmen. In the study, SSCE result appears as the most potent contributor to academic performance among university freshmen. This means that SSCE result of university freshmen is more important than any other factor in predicting their academic performance. Academic self-efficacy, age, UME score and sex in that order follow this. Academic self-efficacy was next to SSCE result in predicting academic performance of university freshmen. This finding was in line with Obioma and Salau (2007) who examined the extent to which academic self-efficacy will determine the academic performance of 100 level university students. They observe that academic self-efficacy was statistically significant in predicting university students' academic achievement. Also this study was found to be in line with Abe (1995) who notes that, it is possible to perceive the totality of a man's being guided and ruled by psychological variables in which self-efficacy is one. Also, this finding is in line with Onocha (1985) who conceptualises that the modern man as a person has his/her educational aspiration and accomplishment projected by the social and psychological variables in the environment.

Age was the next potent factor that predicts academic performance of university freshmen in South-West Nigeria. This shows that age is significant to academic performance. This finding corroborates Jansen (1996), and Hulst and Janean (2002), they observe that younger students have better study progress than older students indicating that higher age is an indicator of lower ability. Also, this finding is contrary to the finding of Trueman and Hartley (1996) that older students perform equally well or sometimes better than younger students. UME score is next to age, it is a less predictive factor of academic performance of university freshmen. This finding is in line with Umo and Ejedu (2008) who note that UME score had low correlation with grade point average. They conclude that UME

score correlates poorly with academic performance of university freshmen due to malpractices, which have eaten deep into the examination processes.

The result reveals that gender is not significant in predicting academic performance of university freshmen. This implies that gender has no significant effect on how a person will perform. This finding is contrary to the work of researchers like Akinsola (1984) and Amosun (2002) who find gender as a determining factor in doing well on a particular task. This may be due to the environment, teaching styles, instructional aids available, school environment, home background as found by researchers like Gamoran (1992), Olson (1994) and Jordan and Nestle (1999) who cited these as other factors that may enhance the achievement of students in a learning environment.

Result of research question 4 shows that the attrition rate is 7.1%. This rate is alarming almost about one-tenth of the total candidates' in-take per session are always withdrawn at the end of the session due to academic failure. This result is in line with Bamiro (2010) who notes that the percentage withdrawal were 12.2, 12.1, 10.6, 7.1 and 2.6 for 2003 / 04, 2004 / 05, 2005 / 06, 2007/ 08 and 2008/ 09 respectively at the university of Ibadan alone. The result of the study with respect to research question 5 shows that there is no significant difference in the academic performance of male and female university freshmen. This work supports Amosun (2002) finding that there is no significant relationship between students' gender and mathematics' ability on students' achievement. Okebukola (1984) also posits that sex of students has no significance on achievement, scientific attitude and practical skills in Biology.

Akinsola (1984) gave credence to this claim that students' sex on the overall achievement in mathematics is of no significance. This is also supported by Onasanya (1985) who finds no difference in the academics achievement of both male and female students in the mastery and enhancement of mastery-learning group. The study carried out by Jordan and Nestles (1999) runs contrary to this result. They note that girls scored lower in Mathematics and Science tests in the 12th grade than boys. Also, Gamoran (1992) and Olson (1994) observe that girls scored lower in a test of Mathematics and Verbal achievement than boys in a sub -test of the Californian achievement test focused on Mathematics reasoning. Alegbeleye (2005) also contend that there exists no significant effect of gender on students' performance on reading comprehension and students' attitude

to reading. This is equally supported by Obe (1983) and Okoye (1983) that gender has no significant effect on students' academic performance and attitude to learning.

Likewise, Okebukola (1993) believes that students, irrespective of their sex can perform equally in any given task. Also, Shamples (1969), Ejewu (1981), Campbell and Storo (1994) support this claim. Also, the result is consistent with Aboki (1990) and Onosode (2004), who both find no significant difference in the achievement of male and female participants used in their studies. The reason lies in the fact that, sex cannot be a determining factor in measuring achievement, suggesting that what a man can do a woman can do better. Though centuries back, it was a mere assignment that sex could determine what one can do but recent development, show that gender cannot be a barrier in measuring academic performance. What comes to play now is the level of intelligence exposure to instruction and preparedness. Whoever fails to plan may be planning to fail whether male or female. The result of the study in relation to low and high academic self-efficacy shows that there is significant difference in the academic performance on this count. This finding confirmed Brown and Morrissey (2004) that students with high self-efficacy performed better than those with low self-efficacy. Fretz (1989) also affirms that self-efficacy; knowledge, playfulness', job commitment and social support are predictors of anxiety and depression. He concludes that, the best predictors of pre-retirement worry were sense self-efficacy and planfulness.

The result of the study with respect to research question 7 shows that there is significant difference in the academic performance of university freshmen that hold WAEC and NECO results. This result is contrary to the findings of Kolawole (2001) and Fehintola (2009) that confirm there is significant relationship in the grade awarded by both WAEC and NECO in their public examinations. The finding also in line with Obioma and Salau (2007) who discovered that SSCE conducted by WAEC was the best single predictor of students' grade point average (GPA).

Implications for Counselling and Educational Practice

The findings from this study reveal the need for counsellors, teachers, psychologists and other stakeholders of education to take into account the SSCE result, UME scores and psycho-demographic factors in addressing university freshmen and secondary school students' academic achievement problems. Making students know the importance of their

achievement in their future endeavours will make them work harder and show seriousness in their studies. School should place emphasis on training and development in the area of academic self-efficacy and general self-efficacy. It is possible to address this issue through the staff development plan who will later on train their students. Counselling psychologists working in the school system have a significant role to play. The onus is on them to identify these factors as it affects students. They are to work with other personnel in the school system especially the teachers who handle different courses to develop intervention programmes that would enhance academic self-efficacy and reduction in examination malpractices hoping that, the resultant effect of the intervention will better academic performance. To ensure high academic performance, competent, adequate and qualified teachers with teaching experience should handle students' from secondary school level. If this is done, it would go along way to enhance high academic self-efficacy and reduce examination malpractices in the nation's public examinations. The study demonstrates the usefulness and effectiveness of multiple regression analysis technique in analysing variables relevant to academic performance. Therefore, it is used in determining the factors essential to account for the observed variations experienced in some of the variables used in predicting university freshmen academic performance.

Limitations of the Study

When understaking this study, a number of limitations were confronted, some of which are in what follows. Non-cooperation of some key officials in the concerned universities who delayed in releasing the academic records of their students. The records of some schools were not properly kept while some were kept bit by bit which made the collection difficult, like going from Admission office to Examination and Records Offices. Another limitation is that the study was conducted in five federal universities in the southwestern part of Nigeria, where we have different examiners, different ways of assessing students with different levels of assessment difficulty and different ways of determining the grade point average (GPA). Thus, this limits the generalizability of this study.

Contribution to knowledge

This study investigated the effect of SSCE results, UME scores and psychodemographic factors as it affects academic performance of University freshmen. The result

shows that academic self-efficacy, age and SSCE results are significant predictors of academic performance and that UME scores and sex are not significant in predicting academic performance of university freshmen. The result also reveals the importance of using cognitive and non- cognitive variables in the assessment of students' academic performance. This study establishes that students' poor academic performance can be caused by some hidden factors which may not be identified except in a study of this nature. The study will serve as a good database for government, examination bodies, curriculum planners and all other stakeholders of education. It also reveals the attrition rate of the university freshmen.

Finally, its contribution to knowledge also encompasses the expansion of the scope of literature, filling the existing gap, for example, the total effect of SSCE results, UME scores and psycho-demographic factors on academic performance of university freshmen.

Recommendations

Based on the findings from this study, the following are recommended: West African Senior School Certificate and NECO Senior School Certificate could be used and regarded as adequate entry qualifications into the university. Academic self-efficacy of the students should be boosted since it is highly germane to successful performance. Goleman (2001) notes that possession of academic self-efficacy skills enhances performance at work. Students need to be taught how to use academic self-efficacy to facilitate thinking and how they can enrich their self-efficacy to affect their academics positively. SSCE result is a better predictor of academic performance of university freshmen. Therefore more attention needs to be given to SSCE examinations as regards teaching of students while in school, the syllabus, handling of the examination supervision, invigilation and marking of the papers.

UME score is not a significant predictor of academic performance of university freshmen, therefore, the organisation of the examination and societal morality should be looked into in order to make the examination perform the role it is meant or designed for. Age of the students is a significant predictor of academic performance of university freshmen, the researcher observes that the younger students performed better than the older ones, the researcher therefore advises parents to see to their children's education while they are young. Difference in sex is insignificant in the academic performance of students. In the

light of this, parents should develop positive attitudes to female education as in the case of male children.

The researcher further suggests that each university, faculty and department should develop a system that suits its situation, including the type of students it would wish to admit and the characteristics of the community from which applicants may likely have impact. Therefore, the admission selection criteria may predict the performance of students during their preliminary programme. The universities should ensure post UME screening exercise is not abolished and also that the questions to be used are reliable and valid.

Universities should not compound the problems of the candidates they are choosing for the post UME screening exercise by asking them to use computer to answer the questions, bearing in mind that not all of them may have the opportunity of having computer knowledge. Education stakeholders and universities should try as much as possible to have scholarship facilities, soft loans and grants for the indigent students to minimise the problems confronting them.

Conclusion

The six independent variables explored in this study could be used to predict and facilitate academic performance among university freshmen. The high achievement or failure rate stems from a host of factors some of which have been studied in this work. The study reveals that a student may have more than one reason for poor academic performance and that a quick intervention will lead to the identification of the factors responsible appropriately inform the solution required. The model from this study is tenable in explaining the significant predictors between independent variables and dependent variable with WASSC being the most potent factor followed by NECOSSC, academic self-efficacy, age, UME scores and sex. This indicates that, parents should not toy with the future of their children, adequate concern must be shown and students must be encouraged to be committed to their studies so that after basic education, many of the transiting students will be able to perform well and the problem of low standard will completely be reduced considerably and academic standard will be uplifted. Only this can guarantee the nation the expected development and growth.

Suggestion for further studies

For a wider coverage and enhanced generalization, further research needs to be conducted to cover a larger variety of participants like students in polytechnics, colleges of education and mono-technique colleges. Apart from those listed above, more coverage in terms of geopolitical zones for faster remediation of the problem of falling standard of academic performance in the tertiary institutions in Nigeria is suggested.

Finally, other researchers can also investigate other variables affecting academic performance of university freshmen such as students' health, socio- economic status, school location, educational aspiration and effect of transition.

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Appendix 1

Academic Confidence Scale

Dear Respondent,

The purpose of this inventory is to ascertain the academic confidence of individual toward the actualization of your educational objectives and to ensure that you put in place adequate effort to achieve your goals. It is therefore essential that you respond honestly to the items in this inventory, as they apply to you. You may not need to put your name as the information given will be treated with confidentiality and it will be for research purpose only. Fill the data below in full.

BIO-DATA INFORMATION

Age:..... Sex:.....

Educational Qualification:.....

Level:.....

Department:..... Faculty:.....

S/N	How confident are you that you will be able to:	Very confident	Confident	Moderately confident	Of little confident	Not at all confident
1	Study effectively on your own in independent\private study					
2	Produce your best work under examination conditions					
3	Respond to questions asked by a lecture in front of full lecture theatre					
4	Manage your work load to meet coursework deadlines					
5	Give a presentation to a small group of fellow students					
6	Attend most taught sessions					
7	Attain good grades in your work					
8	Engage in profitable academic debate with your peers					
9	Ask lecturers questions about the material they are teaching in a one-to-one setting					
10	Ask lecturers questions about the material they are teaching, during a lecture					
11	Understand the material outlined and discussed with you by lecturers					
12	Follow the themes and debate in lectures					
13	Prepare thoroughly for tutorials					

14	Read the recommended background material					
15	Produce coursework at the required standard					
16	Write in an appropriate academic style					
17	Ask for help if you don't understand					
18	Be on time for lectures					
19	Make the most of the opportunity of studying for a degree at University					
20	Pass assessments at the first schedules					
21	Plan appropriate revision schedules					
22	Remain adequately motivated throughout					
23	Produce your best work in course assignments					
24	Attend tutorials					

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