Age and Gender Differences in Study Habits: 
A Framework for Proactive Counselling Against Low Academic Achievement 

Dr. Moses C. Ossai
Senior Lecturer, Department of Educational Psychology
Delta State College of Physical Education, Mosogar, P.M.B 4088, Sapele, Nigeria
E-mail: osmosess@yahoo.com
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Abstract Poor academic achievement of Nigerian candidates in the West African Examinations Council (WAEC) Senior School Certificate Examination (SSCE) over the past seven years has been a cause for concern to all stakeholders in education in Nigeria. This study, therefore, sought to project a proactive counselling approach for tackling this academic menace. Two hundred and eighty nine (289) students including prospective May/June 2012 WAEC SSCE candidates attending a Study Skills Improvement Therapy Workshop organized by Firm Family Foundation, an NGO in Nigeria, were used for the study. Their responses to a Study Habits Inventory were analysed on the basis of age and gender using t-test statistics. Results showed significant differences in the study habits of the students on the basis of age and gender. Study habits seem to improve with age and female students reported better study habits than males. This implies that proactive counselling against poor study habits should start at the basic level of education and diligent attention should be given to male students. How target-oriented counselling techniques should be utilized to help students improve their academic achievement was discussed.

Key Words: Study Habits, Age, Gender, Counselling

1. Introduction

There has been a public outcry in Nigeria over the consistent low academic achievement of Nigerian candidates in the West African Examinations Council (WAEC) Senior School Certificate Examination (SSCE) (Asikhia, 2010; Orintunsin, 2010; Nigerian Elites Forum, 2010; Guardian November 4 (2009), January 28, February 5 (2010); Vanguard, September 19, October 1, (2009); January 28 (2010)). The consistent low academic achievement in the WAEC SSCE could be clearly seen in the percentage of students who obtained grades A1–C6 in English language and Mathematics; the two key core subjects that determine the future educational and career pursuits of the students as presented in Table 1 below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Month of Exam</th>
<th>% Credit Passes (A1–C6 grades)</th>
<th>% Low Academic Achievement (D7 – F9 grades)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>English</td>
<td>Maths</td>
</tr>
<tr>
<td>2005</td>
<td>May/June</td>
<td>25.36</td>
<td>38.20</td>
</tr>
<tr>
<td>2006</td>
<td>&quot;</td>
<td>34.48</td>
<td>41.12</td>
</tr>
<tr>
<td>2007</td>
<td>&quot;</td>
<td>29.94</td>
<td>46.75</td>
</tr>
<tr>
<td>2008</td>
<td>&quot;</td>
<td>35.00</td>
<td>23.00</td>
</tr>
<tr>
<td>2009</td>
<td>&quot;</td>
<td>30.00</td>
<td>25.99</td>
</tr>
<tr>
<td>2010</td>
<td>Nov/Dec</td>
<td>43.06</td>
<td>48.88</td>
</tr>
<tr>
<td>2011</td>
<td>May/June</td>
<td>55.34</td>
<td>38.93</td>
</tr>
<tr>
<td>Average % for 7years</td>
<td>36.17</td>
<td>37.55</td>
<td>36.86</td>
</tr>
</tbody>
</table>


Data in Table 1 show the percentages of moderate to high academic achievement represented by Credit passes (A1–C6 grades) and the low academic achievement (D7–F9 grades) in the two key subjects in WAEC SSCE from 2005 to 2011. English and Mathematics are two core subjects in Nigeria and other West African Countries in which a candidate must obtain credit passes (A1-C6) along with three other relevant subjects to be eligible for admission into higher institutions of learning (Joint Admissions and Matriculation Board [JAMB], 2012). Most candidates who sat for the SSCE from 2005 -
failed to meet this criterion. The average % achievement in the two subjects for the seven years (grades A1-C6) is 36.86 while the low achievement (grades D7-F9) is 63.14.

The above background has given rise to research efforts to find strategies for tackling the poor performance of Nigerian candidates in the WAEC SSCE especially given the fact that Nigeria presents the largest number of candidates for the examinations every year in West African sub-region. For example in May/June 2009 examinations 1.3 million Nigerian candidates enrolled (WAEC, 2009). Some recent studies have looked at the roles of teachers and parents in finding solution to the low academic achievement such as Asikhia (2010); Ojerinde, Kolo & Onyeneho (2010) but the counselling perspective has been scarcely explored. The present study has, therefore, narrowed down on age and gender differences in study habits as a basis for adopting a counselling framework for tackling the menace of low academic achievement in secondary school terminal certificate examination conducted by WAEC.

1.1 Conceptual Framework of the Study

This study is hinged on the conceptual framework presented in Figure 1 below.

**Fig 1: Proactive Counselling Framework for Improved Academic Achievement**

The conceptual framework presented in Figure 1 portrays proactive counselling as focusing on the age and gender of students; the likely determinants of their study habits with a view to improving academic achievement. Studies have affirmed the strong relationship between study habits and academic achievement. For example, Felipe (2008) and Aluja & Blanch (2007) indicated that students fail examinations because they do not study enough. Fielden (2004); Crede & Kuncel (2008) and Ossai (2011) in their respective studies found strong predictive relationships between study habits and academic performance related variables. The Ossai study investigated study habit as a predictor of students’ examination behaviour especially the tendency to engage in examination malpractices (cheating during examinations). It was found that students who had poor study habits were more likely to engage in examination malpractices and that gender did not significantly moderate this tendency. Conversely, students who scored highly on the study habits inventory seemed to possess more positive examination behaviour and traits related to better academic performance. The framework presented in Figure 1 is based on the coordination and balance that is encapsulated in an archer’s equipment (the bow and arrow) if the target is to be hit accurately. The bow is pulled in such a manner that the arrow flies directly to the target. This requires the right amount of force, balance, positioning, aiming and release of the arrow. The archer must be very skillful, knowledgeable and tactful to achieve his objective. The archer is represented by the proactive counselling and teaching that should be given to the students. The students’ age and gender are presented as the delicate balance in the position of the arrow (study habits) by giving the students the adequate amount of attention required of their age and gender in order for them to concentrate and hit the target (high academic achievement).

In some previous studies, study habits as a variable responsible for superior academic performance or otherwise has been examined vicariously in conjunction with other factors that interface with it to exert tremendous impact on academic achievement. Variables such as age, gender, class or grade level, IQ, parents’ socio-economic status or educational
attainment amongst other environmental and biological or personality factors have been suggested to interplay with study habits to determine academic achievement (Asikhia, 2010; Bagongon & Edpalina, 2009; Robinson, 1994; Aluja & Blanch, 2004; Ossai, 2004a, b; Singh, Muktesh & Snehalata, 2010). Results of studies on study habit as a function of age and gender have been very interesting and illuminating though findings have differed from one study to another. For example, the Aluja & Blanch study found that girls scored higher on a study habits measure whereas the Robinson study reported masculine characteristics as being more strongly related to effective study habits then feminine ones. On the other hand, the studies by Kagu (2003) and Ossai (2004a, b; 2011) found no significant difference in the study habits of male and female students. The age factor seems to have been a more predictable determinant of study habits. Powell (2011), for instance, found that students whose ages were above 23 reported using deeper level study habits more often than younger students. The younger students adopted more of the superficial level of study habits which correlated positively with lower academic performance. Therefore, the present study will analyse the differences in the study habits of students on the basis of their ages and gender with a view to establishing a proactive counselling strategy for prevention of low academic achievement in both WAEC and National Examination Council (NECO) SSCE.

1.3 Research Questions and Hypotheses

The following research questions guided the study:

(i) Do study habits differ according to the age of students?
(ii) Do study habits differ on the basis of students' gender?

It was hypothesized that:

(i) There is no significant difference in the study habits of the students on the basis of age.
(ii) There is no significant difference in the study habits of students on the basis of their gender.

2. Research Method

2.1 Design and Sample

The ex post-facto descriptive survey design was used in the study. No conscious effort was made to manipulate the variables of study habits, gender and age of the students. Rather 289 secondary school students attending a Study Skill Improvement Therapy Workshop organised by a Non-Governmental Organisation in Nigeria called Firm Family Foundation were used for the study. The researcher was one of the resource persons at the workshop. The sample consisted of students in two age ranges of 12 -15 years and 16 -19 years. 178 of the students belonged to the age range 12 -15 years with mean age of 13.5 years and 111 students were aged 16 -19 years with mean age 17.5 years. The sample further consisted of 151 males and 138 females.

2.2 Instrument

A 20–item Study Habits Inventory adapted from the Virginia State University and Polytechnic (2009) Division of Students Affairs and Cook Counselling Centre Study Skills Checklist was used for the study. The items were modified to suit the Nigerian subjects as well as addition of the 4-point Likert Scale format. The instrument was revalidated using Cronbach Alpha measure of internal consistency which yielded alpha index of 0.70 for the entire instrument. The instrument covered the following aspects of study habits: Time Scheduling (items 1, 2, 3); Concentration (items 4, 5, 6); Listening and Note-taking (items 7, 8, 9); Reading (items 10, 11, 12, 13, 14); Examination taking skills (15, 16, 17) and Writing Skills (18, 19, 20). The items were structured in such a way that higher scores were indicative of better study habits. The maximum score obtainable for the entire instrument is 80 and the minimum score is 20. The cut-off score between good and poor study habits is 50.

3. Data Analysis and Results

Data presented in Tables 2 and 3 below are used to answer the research questions and test the hypotheses.
Table 2: Independent Samples t-test Analysis for Difference in Study Habits on the basis of Age.

<table>
<thead>
<tr>
<th>Age Range</th>
<th>n</th>
<th>X</th>
<th>S.D</th>
<th>df</th>
<th>Calculated t</th>
<th>Critical t</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 – 15 years</td>
<td>178</td>
<td>44.99</td>
<td>6.94</td>
<td>287</td>
<td>12.17</td>
<td>1.96</td>
<td>P &lt; 0.05</td>
</tr>
<tr>
<td>16 – 19 years</td>
<td>111</td>
<td>58.73</td>
<td>8.02</td>
<td>287</td>
<td>8.02</td>
<td>1.96</td>
<td>P &lt; 0.05</td>
</tr>
</tbody>
</table>

Data in Table 2 show significant difference in the study habits of the two age ranges. Therefore, research question one is answered in the affirmative and the first null hypothesis is rejected. There is significant difference in the study habits on the basis of age. Study habits tend to improve with age as indicated by the higher mean performance of the 16-19 years old students. The older students reported better study habits in Time Scheduling, Concentration, Note-taking and Writing Skills.

Table 3: Independent Samples t-test analysis on Male and Female Students’ Study Habits.

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>X</th>
<th>S.D</th>
<th>df</th>
<th>Calculated t</th>
<th>Critical t</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>151</td>
<td>53.97</td>
<td>7.90</td>
<td>287</td>
<td>14.05</td>
<td>1.96</td>
<td>P &lt; 0.05</td>
</tr>
<tr>
<td>Female</td>
<td>138</td>
<td>62.74</td>
<td>9.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data in Table 3 reveal significant difference in the study habits of male and female students. Answer to research question one is in affirmative and null hypothesis two is rejected. The alternative is upheld. The higher mean score for the female students suggests that they have better study habits than the males. The female students showed better study habits in the areas of Time Scheduling, Concentration, Listening, Note-taking and Reading.

4. Discussion of Implications for Proactive Counselling

Guidance and Counselling services are provided in the school system to assist students overcome educational, vocational and personal-social problems (UNESCO, 2000 a & b). One of the essence is to enable students attain their optimum levels of academic achievement. Therefore, the findings of the present study have implications for counsellor’s roles in adopting proactive intervention strategies towards improving academic achievement in secondary schools. The disparity in study habits on the basis of age implies that counseling interventions in study skills should start from the lower levels of education such as the basic education or Primary School. According to the Federal Republic of Nigeria (2004), Primary Education is for children aged 6 to 11 plus. Thereafter, pupils progress to the Junior Secondary School or Upper Basic Education from ages 12-15 while the Senior Secondary School is from 16-18. Proactive counselling aimed at improving study habits should be introduced at the early stages of education. This is in tandem with the findings of Singh, Muktesh and Sinehalata (2010) that study habits improve with age and class or grade levels in children. However, most study habits are formed before the SSCE level. If a student develops poor study habits in earlier stages of education it will be difficult to change them overnight. Hence, the thrust of the argument being put forward here is that counsellors should start early to lay a foundation for good study habits before the students reach the SSCE level. The reported mean score for the 12-15years old (44.99) and the 16-19 years old (58.73) show that most of the students in the two age ranges have poor study habits. Brown (1999), Spivey (2006) and Asikhia (2010) have suggested that the parents of the pupils should be involved by counsellors in laying a solid foundation of good study habits from an early age. Parents could be involved in monitoring and encouraging their children to start utilizing good study habit techniques as early as possible in their life. Brown further suggested that parents who are not proficient in the English Language negatively impact on their children’s academic achievement especially in countries where English language is the medium of instruction in schools. This is a strong indicator of one of the cogent reasons for the poor performance in the English Language itself in Nigeria. Parents of most candidates in the SSCE are not proficient in English language. For most Nigerian parents, English is a language of the Colonial Masters (Britain) and there is a very strong influence of the mother tongue or the pidgin English in the low academic achievement in English language. There are over 250 indigenous languages and ethnic groups in Nigeria. Therefore, school counsellors have a lot of work to do through parent consultation and education classes aimed at improving parenting styles and provision of conducive home environment as well as materials for effective study to be undertaken by their children.

Osadebe (2009: 148) evaluated students’ academic performance in Senior Secondary Schools with counselling
services and found that “the SSCE result of students is an improvement because academic counselling was provided to the students on regular basis”. The Osadebe study affirmed the fact that counselling services in schools help to improve the study habits of students which in turn contribute immensely to improved academic achievement. The Counselling Association of Nigeria [CASSON] (2003) clearly articulated the roles and functions of school counsellors in Nigeria. Amongst these roles is academic counselling which includes study habits therapy. Moreover, Hussain Ch (2006: 35) in an experimental study investigated effects of guidance services on study attitudes, study habits and academic achievement of secondary school students and found that “guidance services have significant effect on the students’ study attitude, study habits and academic achievement”. This implies that effective guidance and counselling in the secondary school will go a long way to change the present ugly situation of low academic achievement in the Senior Secondary Certificate Examinations by WAEC and other examination bodies around the world.

Counselling intervention strategies should also take into cognizance the gender differences in study habits. The present study found that female students are better in Time Scheduling, Concentration, Listening, Note-taking and Reading. This agrees with Singh, Muktesh & Snehalata (2010) study which reported that girls have better study habits than boys. Therefore, individual and group counselling methods should be utilized to help male students as well as female students who have poor study habits to improve. Individual counselling refers to a one-on-one interaction between a counsellor and a client (student) with a view to helping the latter develop good study habits whereas group counselling involves 10 to 15 clients at a time (UNESCO, 2000b; Ossai, 2012). Studies have shown that both methods are effective if appropriately utilized to improve study habits. For example, Yahaya (2005) in a study of effects of group counselling and SQ3R on the study habits of secondary school students in Nigeria found that group counselling on its own and in combination with SQ3R improved the study habits of students. It was inferred that the opportunity for sincere interaction among group members facilitated improvement in study habits. This was corroborated by the Love (2008) research. She examined impact of the then current practices in group counselling on the academic achievement of African American adolescents. She concluded from her analysis of extant literature at that time that academic achievement groups yielded positive results for African American adolescents and that academic achievement begins with youth empowerment. Similarly, Brown (1999) reported a strategy adopted in Wake County, North Carolina schools in the United States of America in which school counsellors were asked to identify 30 students at risk of low academic achievement and develop programmes of counselling activities that will help improve their academic performances. This direct method was found to be very successful in helping students perform better academically. More individualized counselling methods have also been tested and found very effective such as Metacognitive and Motivational Study Strategy by Elliot, McGregor & Gable (1999); Involvement Strategy by Reed, Schallert & Deithloff (2002); and Drawing Construction (Meter, 2001). The Elliot, McGregor & Gable studies tried to ascertain the correlation between academic achievement goals, study strategies and performance in examinations and it was found that students excelled in academic performance when they set performance approach and mastery goals of study for themselves as well as utilize deep processing study strategy. A performance approach goal is one that projects the students’ self-esteem through superior academic performance while mastery goals aim at demonstrating high level internalization and competence in material being studied. Counsellors will also find the involvement study strategy very useful in helping students to achieve better academic performance. Reed, Schallert & Deithloff described this study as attentional operations that lead to psychological engrossment. It is a process of being immersed or involved in what one is studying. The degree of involvement experienced along with other affective and motivational variables that may accompany it, can be a major factor in a student’s level of concentration and assimilation of study material. Drawing Construction strategy requires that students draw pictorial representation of content to be learned. Meter demonstrated that this method can be used effectively with 5th and 6th grade students (elementary school pupils) to improve academic performance. The Meter study was a replication of the Dean & Kulhavey (1981) study which was carried out among college students and it was found that drawing construction study technique facilitated college students post-test performance when learning complex details about a fictitious tribe. Drawing construction study strategies is, therefore, a good study method which could be utilized by school counsellors along with other tested and proven study strategies to help students improve their academic achievement.

5. Conclusion and Recommendations

Age and gender are significant variables accounting for differences in the study habits of students. Study habits tend to improve with age and female students seem to have better study habits than their male counterparts. Therefore, proactive counselling strategies should be adopted in helping students improve their study habits in order to attain better academic achievement in the Senior School Certificate Examinations conducted by West African Examinations Council.
Towards attainment of this desirable educational standard in Nigeria and other developing and developed countries of the world, the following recommendations are made:

(i) Counselling strategies for prevention of low academic achievement should begin at the Basic Education level;
(ii) Parents should be involved in monitoring students study habits at home and provision of enabling home environment conducive for deep concentration and effective study;
(iii) Students-at-risk of poor academic achievement especially the male students should be identified and direct individual and group counselling approaches should be utilized to help them improve their study habits;
(iv) A wide range of proactive counselling strategies identified in this study along with others should be used by school counsellors to prevent low academic achievement.
(v) Government agencies, individuals and NGOs\(^1\) should collaborate to provide opportunities for seminars and workshops on study skills improvements for students in basic and secondary education.

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\(^1\) Firm Family Foundation, an NGO in Nigeria, is appreciated for the opportunity provided for the researcher to participate in the Study Skills Improvement Therapy Workshop for secondary school students at Mary Mount College Agbor on October 19, 2011 and Delta State University Secondary School, Abraka on February 2, 2012.

72


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