

Gender differences in Achievement Goals and Performances in English Language and Mathematics of Senior Secondary Schools students in Borno State, Nigeria

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Abstract

The paper investigated gender difference in achievement goals and performance in English Language and Mathematics of senior secondary schools students in Borno State, Nigeria. The study specifically sought to determine gender differences in students' academic performances in English Language, Mathematics and overall academic performance as well as the effects of gender on these differences in performance if any. The study was based on the 'A Hierarchical Model of Approach and Avoidance Achievement Goals Motivation' propounded by Elliot and Church (1997). The study used Correlational design with a sample of 827 (414 boys and 413) students selected via stratified random sampling from 18 schools across the state. "A Hierarchical Model of Approach and Avoidance Achievement Goals Motivation" Scale was used to measure achievement goals, tests in English and Mathematics were used to measure achievement measures in the two subjects domains while the aggregate of average scores in the two tests was used to measure overall academic performance. The instruments were administered to the participants in a classroom seating position and collected on the spot and the data was analyzed using MANOVA. The results revealed that males performed significantly better than females in English Language and overall academic performance but there is no gender difference in Mathematics performance; and there is significant effect of gender on students' learning goal orientation in favour of males, whereas there are no gender effects on performance –approach and performance-avoidance goals orientation of students. The implications of the study for education and research were highlighted.

Keywords: Gender, differences, achievement goals, performance, English language, Mathematics, senior secondary schools students. Nigeria

1.1. Introduction

The importance of achievement motivation goal in any kind of performance, most especially academic performance, cannot be over emphasized. Among the contemporary theories of achievement motivation, the achievement goal theory (Dweck & Leggett, 1988) is gaining more ground in accounting for students' social-cognitive thinking and behaviours in achievement situations, predicting achievement as well as explaining gender differences in educational achievement. The basic contention of achievement goal theory, Covington (2000) explained, is that depending on their subjective purposes, achievement goals differentially influence school achievement indirectly through their cognitive self-regulation processes. Cognitive self-regulation refers to students being actively involved in their own learning, by analysing the demands of school assignments, planning for and mobilising their resources to meet these demands, and monitoring their progress towards completion of tasks. Consequently, one's achievement goals orientation will influence the quality, timing and appropriateness of cognitive strategies which in turn control the quality of one's accomplishments. Students differ in their goal orientations which is one of the factors which underpin the differences in their levels of academic performance. Musa (2007) and Musa and Hartley (2015) reported a significant relationship between trichotomous achievement goals and academic performance of students in English and overall academic performance in Borno State.

Achievement goal theory is simply refers to as 'Goal orientation theory'. It is a social-cognitive theory of achievement motivation which originated early in the 20th century. The theory focuses on what motivates people to achieve in achievement context, especially on the reasons why students engage in theory academic work (Ames, 1984; Dweck 1986; Elliot, 1999; Elliot & Dweck, 2005). It also seeks to understand why some people are motivated to overcome obstacles, while others give up easily or avoid trying (Dweck, 1999). Goal Orientations theory is defined as "the purpose for students' engagement in tasks" (Maher, 1989), as the goals or purposes that motivate students within the academic setting (Wolters, 2004). Dweck (1986) explained that the specific types of goal adopted are posited to create a framework for how individuals interpret experiences and act in their achievement pursues.

Achievement Goal Theorists conceived motives in terms of goals which entice the individuals towards action (Elliot & Dweck, 1988; Nicholls, 1989, Elliot & Harackiewicz, 1996; Elliot & Church, 1997). Researchers from this perspective assume that all actions are given meaning, direction, and purpose by the goals that individuals seek out in the achievement context. Meaning is the critical determinant of achievement behaviours, such as participation; persistence; intensity; choice of task; and performance (Maehr & Braskamp, 1986, Dweck, 1999; Nicholls, 1989). Thus, the quality and intensity of behaviour will change as these goals change. Consequently, by rewarding some goals and not others, teachers can change students' goals in achievement contexts.

Initially, achievement goals was conceptualised as a dichotomous goal orientations: Mastery goals and performance goals, which were used to understand and to explain students' behaviours in achievement situations (Dweck 1986; Ames, 1992). The two goal orientations theory posits that student holds either a mastery goal or performance goals. Those oriented toward mastery goal are concerned with the understanding of or mastery of the task at hand in order to improve themselves. They tend to compare their current level of achievement to their own prior achievement. On the contrast, students who are performance-oriented are concerned with the demonstration of their abilities relevant to others in achievement context. Performance oriented students are interested in competition, demonstrating their competence, and outperforming others. They tend to use other students as points of comparison, rather than previous achievement (Pintrich, 2000).

Due to contradictory findings in the predictability of academic achievement by the performance goals orientations, more recent goal theorists have argued for separations of the performance goals into two distinctions: approach and avoidance goals orientations such that one could either focus on attempting to look competent (performance-approach) or attempting to avoid the appearance of incompetence (performance-avoidance) (Elliot, 1997; Middleton & Midgley, 1997). Consequently, Elliot and Church (1997) and Elliot & Harackiewicz (1996) expanded on the dichotomous goal theory by categorising the performance goals orientation into two: performance-approach goal and performance-avoidance goal orientations; thereby having a thrichotomous goal orientations: learning goal (mastery goal), performance-approach goal and performance-avoidance goal. Performance-approach goal focuses on the attainment of favourable judgments of competence whereas performance-avoidance goal focuses on avoiding unfavourable judgments of competence, both relative to others in achievement contexts; whereas learning goal focuses on the understanding, development of competence and task mastery. Furthermore, some researchers have argued for separation of the learning goal into two distinctions: mastery-approach and mastery-avoidance goals orientations (Elliot, 1999; Pintrich, 2000b). However, there is less empirical evidence to support this view. This study therefore adopted the thrichotomous goal orientations

1.2. The Theoretical Framework

The theoretical framework for the study is the Hierarchical Model of Approach and Avoidance Achievement Goals Motivation by Elliot and Church (1997). Elliot and Church (1997:230) proposed "A Hierarchical Model of Approach and Avoidance Achievement Motivation" in which "mastery, performance-approach and performance-avoidance forms of regulations are conceptualised as mid-level representations of their underlying motive dispositions - achievement motivation and fear of failure". They viewed competence expectancies as empirically related to but conceptually distinct from motive dispositions (Heckhausen, Schmalt & Schneider, 1985). They believe that competence expectancies are best portrayed as antecedents of achievement goals rather than as moderators of their effects. In essence, they perceived the effect of competence expectancies on achievement-relevant outcomes to be relatively independent of motive disposition. They posited that competence expectancies, like motive disposition, exert their primary influence on achievement behaviour indirectly, via their effects on achievement goals adoption. This is represented in figure 1

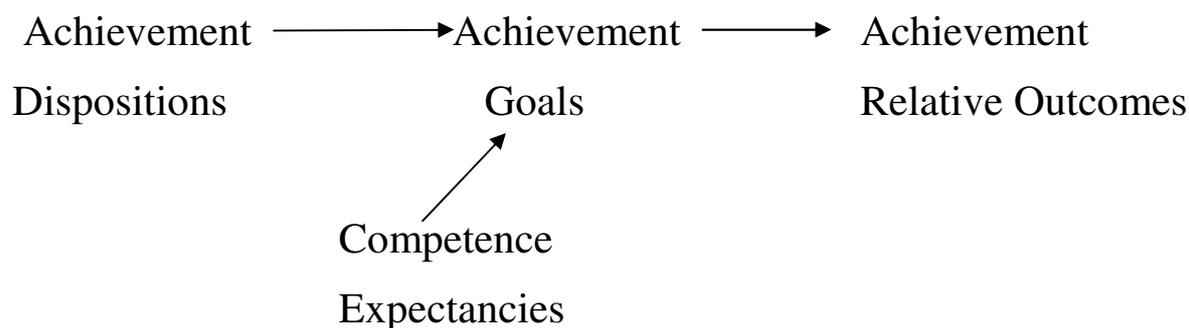


Figure 1. A hierarchical model of approach and avoidance achievement motivation

Taken from Elliot and Church, (1997:220).

Elliot and Church (1997:230), in their study “A Hierarchical Model of Approach and Avoidance Achievement Motivation”, using a correlational study in a classroom, examined the relationships between the trichotomous achievement goals and graded performance in a psychology course with a sample of 204 (82 males and 122 females) undergraduate psychology students with mean age of 20.01. They reported that mastery goal facilitates intrinsic motivation but has no significant relationship with graded performance; performance-approach goal correlates significantly with graded performance but has no significant relationships with intrinsic motivation; whereas performance-avoidance goals undermine both intrinsic motivation and graded performance.

Elliot and Church proposed that, depending on their achievement needs dispositions, students adopt three types of goals in achievement situations: mastery goals (also referred to by other achievement goal theorists as learning goal); performance-approach goals; and performance-avoidance goals. They view these three types of goals from the hierarchical perspective “as situation-specific regulators of achievement behaviour that are energized or impelled by underlying motive dispositions” (p 228).

Elliot and Church’s achievement goals framework does not only replaced the concept- achievement motivation but explains students’ competence striving behaviours in achievement contexts in terms of three distinct measurable goals representing students’ thought processes influencing their performances

The antecedents and consequences of these goals are as follows: Mastery goals are grounded in high achievement motivation and competence expectancies (uncontaminated by fear) (White, 1959) which facilitate processes such as challenge appraisal, excitement, task absorption and enjoyment (Elliot, 1994). Consequently, mastery goals facilitate intrinsic motivation. Performance-approach goals are grounded in achievement motivation, fear of failure and high competence expectancies. Hence, they enhance achievement motivation and graded performance. Performance-avoidance goals are grounded in fear of failure and low competence expectancies and are likely to elicit threat appraisals, evaluative anxiety and vigilant attention to fear-related information (Elliot, 1994; Huggins, 1995;). Consequently, performance-avoidance goals undermine both intrinsic motivation and graded performance. This process is illustrated in figure 2

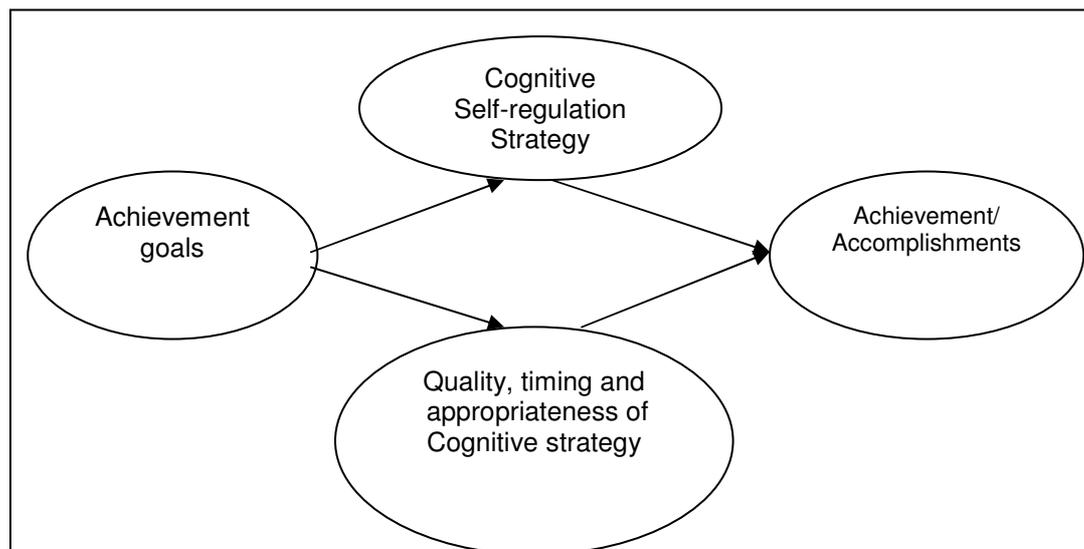


Figure 2. Process of the influence of achievement goals on academic achievement.

Studies that examined the relationship between this thrichotomous goal orientations and academic performance revealed contradictory reports. For example, Chiungjung (2012) studied the discriminant and criterion-related validity of achievement goals in predicting academic achievement. Chiungjung analysed 151 studies which yielded 172 independent sample and correlated them among achievement goals and between achievement goals and academic achievement; and reported that approach motivations (performance approach goals) were associated with higher academic achievement whereas avoidance motivations were associated with lower academic achievement.

Keys, Conley, Duncan, and Domina (2012) studied the role of goal orientations for adolescent Mathematics achievement, with a sample of approximately 2000 seventh and eighth grade White, Hispanic, and Vietnamese students in a low-income urban school district in California. They used the thrichotomous goals orientation and reported that the three achievement goal orientations were correlated with Mathematics achievement. However, only a mastery goal orientation consistently predicted achievement when a full set of prior achievement and demographic controls were included. Performance-approach and performance-avoidance goals orientations did not predict achievement when the prior achievement and demographic controls were included.

1.3. *Gender, as Moderator of the Effects of Achievement Goals on Academic Performance*

There are some environmental, socio-cultural, and psychological factors which moderate the effects of achievement goals on academic achievement, such as gender, age, location, task difficulty, self-esteem, self-efficacy belief theories and, attributions. However, this study focused on the moderating effect of gender.

Tischler, Whither and Hunter (cited in Keightley, 2011) defined gender as socially learned patterns of behaviour that reflect emotional expression of attitudes that distinguishes males from females. Historically, gender has three meanings and common applications in contemporary society. Most commonly, it applies to the general differences between men and women. Bronfenbrenner (2005) explained that gender refers to the social differences and relations between men and women. A person's gender is learned through socialization and is heavily influenced by the culture of the society concerned. Hence, gender is socially constructed and it is learned, therefore it can be changed. Gender is therefore concerned with masculinity and femininity as categorized to each sex in the society. Furthermore, Bronfenbrenner posited that gender differs and varies within and across cultures overtime; results in different roles; responsibilities, opportunities, needs and constraints for women, men, boys and girls.

There are many inhibitions posed by gender on students' academic achievement which relate to sex role differentiation in which certain activities are recognized as masculine and others as feminine and probably their achievement goals orientations. Bronfenbrenner (2005) asserts that the general views are that boys and girls are suited differently to particular academic subjects. Research findings revealed that boys perform better than girls in science and Mathematics achievement tests, while girls scored higher average performances on most of the verbal school achievement tests (Rashid, N. and Javanmardi, F, 2012; reiterated Rose'n, 1998), and, consistently also on school grades than boys, at least in Scandinavia Niemivirta, 1997

Aremu (1999) reported that boys are better than girls in Mathematics and other science subjects while Ton (2003) found that girls out performed boys in some other school subjects. Gisela (2011) examined the influence of gender on achievement and found that, male and female students tend to perform differently in various subject areas of education. Mathematics, science and reading are traditional subjects that are prone to obvious achievement gender gaps. Male students tend to be more motivated to achieve better in Mathematics and science subjects while female students perform better in readings. Obioye (2002), in a study, reported that sex is a factor in school Mathematics achievement. On the general trend, in Nigeria, Obioye asserts that male learners tend to achieve higher in Mathematics than their female counterparts. Hanna and Kuendiger (1999) reported a pattern of achievement results in Mathematics which indicated that girls were more successful than boys in Belgium, Thailand, Finland, Hungary; but least in France, Nigeria, Israel and the Netherlands. Inomiesia (1994) and Okwo (1991), showed no gender differences in academic achievement in school subjects

Research on gender differences in goal orientations does not provide clear results. Some studies revealed that there was a significant relationship between gender and the type of achievement goal orientations students held in different academic settings as well as under various conditions. For example, research by Henderson and Dweck, (1990) showed gender differences with females being more extrinsic or performance oriented. Kenny-Benson, Pomerantz, Ryan, and Patrick (2006) reported, from their study, that boys and girls differ in their approaches towards their academic tasks, which may be related to the type of goal orientations that they adopt. Girls were more oriented towards adopting learning goals than boys; whereas, boys were more oriented towards adopting performance -approach goals and to be viewed as smart to others. So also is the report of other studies that females were more interested in adopting mastery goals than males (Brdar, Rijavec, & Loncaric, 2006; Meece, Glienke, & Burg, 2006; Meece & Holt, 1993; Roeser, Midgley, & Urda, 1996) while males were oriented towards performance goals (Ryan et al., 1997; Middleton & Midgley, 1997; 1999; Patrick, Ryan, & Pintrich, 1999).

In contrast, the results of some studies showed that females were more performance goal oriented than males (20 Kwok-wai, Po-yin, Man-tak, & Phillip, 2002), males were more inclined to adopting performance-avoidance goals than females (Brdar et al., 2006; Meece et al., 2006).

Much recently, Rashid and Javanmardi (2012) investigated the Relationship between Iranian EFL Students' Achievement Goal Orientations and Their Gender with a sample of 182 B.A. students, both males and females, majoring in English Literature at Shiraz University. They reported that mastery goal was the dominant goal held by students followed by performance approach, work avoidant, and performance avoidant goal orientations. The results also revealed no significant effect of gender on students' goal orientations in English Language. This is in line with the report of other studies which found no gender differences in students' goal orientations (Midgley & Middleton, 1997)

1.4. The Context of the Study.

One of the continuing problems in Borno State, Nigeria, is the poor academic performance of adolescents and between males and females in their seeming differences in academic performance in English Language and Mathematics. Researchers have established that there are relationships between achievement goal orientations of students and their academic performance; and that there are effects of gender on goal orientations. However, there is not research on academic performance of student in English Language and Mathematics as functions of the effects of gender on students' goals orientations in Borno State., hence the need for the study.

1.5. The Purpose of the Study

The study have two purposes: First it sought to determine whether there is significant gender difference in students' performance in English, Mathematics and overall academic performance. Secondly, it sought to determine whether there are effects of achievement goals (learning goal, performance-approach goal and performance avoidance goal) orientations on students' performance.

2. Methods

2.1 Design and Participants

The population for this study is final year Senior Secondary School students (SS111) from boarding schools in Borno state. Their age range is 16-21 years, which fall within the middle and the late phase of adolescence. This level of students was chosen for the study because they would be writing their Senior Secondary School Certificate Examination (SSSCE) by the end of the session, and was conscious of the importance of obtaining

good grades to enable them further their education. They were also aware of the consequences of failure. A sample of 827 (414 boys 413 girls) students was selected from 18 public boarding schools via stratified random sampling technique. The boarding schools in the state were stratified according to single and coeducation, then into urban and rural schools. Then from each stratum 9 schools were randomly selected and from each school 46 students were randomly selected. One student did not write the Mathematics test during the administration of the instruction and so was dropped.

2.2. Instruments

The study focused on three types of achievement goals: learning goal, performance approach goal and performance avoidance goal; two subject domains – English and Mathematics, and the overall academic performance. Three sets of research instrument were used for the study: “A Hierarchical Model of Approach and Avoidance Achievement Motivation” scale was used to measure achievement goal orientations; Mathematics test and English test were used to measuring performance in Mathematics and English subjects domains while the average scores of students’ performance in English and Mathematics was used as measure of overall academic performance.

Achievement goals instrument scales. The initial interest was to adopt Elliot and Church’s (1997) scale, “A Hierarchical Model of Approach and Avoidance Achievement Motivation” to measure achievement goals. The scale has a total of 18 items with three sub-scales with 6 items each measuring a type of achievement goal of the three hierarchical achievement goals. Smith, Duda, Allen and Hall (2002) explain that the scale demonstrates a good factorial validity, internal consistency, discriminate and convergent validity as well as construct validity. Elliot and Church reported that the sub-scales have Cronbach Alpha coefficient reliability indices of .91, .89 and .77 for the three sub-scales: mastery goal, performance-approach goal and performance-avoidance goal respectively. However, on the advice of Elliot, who gave permission for the use of the instrument, that all the items he sent from the modified versions of the scale should be used even if the research does not seek to measure some of the dimensions, the scale used for the study was therefore adapted from three studies: Elliot & Church (1997); Elliot & McGregor (2001); Elliot & Reis (2000). All the items in the 1997’s study were retained as well as the name of the scale and the items given by Elliot from the 2001 and 2003 were added, giving a scale with 30 items. The instrument was then pilot tested where a factor analysis of the scale revealed that the scale has Cronbach Alpha coefficient reliability index of .64 (with 22 items) while the sub-scales: learning goal has .69, (with 10 items) performance-approach goal .68 (with 6 items) and performance-avoidance goal .59 (with 6 items).

The performance-avoidance goal sub-scale items primarily focus on students’ fear of failure and anxiety. This sub-scale in Elliot and Church’s (1997) study did not demonstrate internal reliability due to the inclusion of item no 17 (I wish my university classes are not graded). The deletion of the item resulted in acceptable alpha level. Furthermore, Elliot’s (1999) modification of the item to “My goal for this class is to avoid performing poorly” solves the problem of internal reliability. In addition, MacGregor (1999), cited in Smith, *et al.* 2002) reported that the inclusion of the modified item has slightly improved the internal reliability. Hence, the modified item 17 was used in place of the original item 17 in this study.

The scale is a Likert 7-point scale ranging from 1 (not true like me) to 7 (very true like me). However, for ease of response, the items were adapted to 5-point Likert scale ranging from 5 (very much like me) to 1 (not very much like me as well as to avoid any culture and gender bias issues that may be inherent in them and also to suit the language background of the participants.

Academic achievement instruments. Students’ test scores in English and Mathematics (set and marked by standard markers of SSSCE /WAEC for the purpose of this study) were used to measure academic performance. The English test consists of three sections: essay, comprehension and objective questions, while the Mathematics test consists of two sections: essay and objective questions. The tests were modified after the pilot study where the most difficult and ambiguous items were dropped.

2.3. Procedure

The population for the study is secondary school students (adolescents/youths) aged 16-21. Hence, as boarding students, the Ministry of Education, principals and teachers take decisions concerning them on behalf of their parents. Therefore, the whole procedure for informed consent was sought at three levels: First, the purpose of the research and procedure for data collection were explained both in writing and verbally to the state Commissioner for Education so as to obtain written permission to conduct the research in the schools. Secondly,

a copy of this written permission was given to the principal in each school followed by verbal explanation of the purpose of the research and the procedure for data collection for their permission and request for the cooperation of, and assistance of, some teachers for the administration of the research instruments. Finally, the purpose of the research and procedure for data collection as well as implications for acceptance to participate was verbally explained to the students to enable them decide whether or not they would participate. Students who decided that they would not participate were asked to stay away from the class before the sample was selected.

The instruments were administered to students in a classroom situation which they all completed at the same time and were collected. First, they completed the achievement tests, then the academic achievement goals scale. The procedure for completing the instruments was explained to the students before they started completing each instrument. The researchers and the teachers assisting with the administration of the instruments helped students who had problems reading the question items. Items which students found difficult to understand were explained to the entire students in English and translated into Hausa. During the collection of the instrument form students, the instruments were checked to make sure that students responded to all items before collection. Special care was taken to ensure that the teachers did not assist their students in the achievement tests. Thus, all questions from students during the administration of the achievement measures were responded to by the researchers only.

2.4. Methods of Data Analysis

MANOVA statistical technique was used to analysed the data. MANOVA tells you if there is significant difference between your groups on the composite dependent variables and also provides you with univariate (two way analysis of variance ANOVA) results for your dependent variables separately (Phallant, 2005)

3.1 Results

The results of the study are presented in tables followed by their interpretations

Table1. Means and standard deviations on the sub-scales of the dependent variables and achievement measures for gender

Dependent Variable	Sex	Means	SD	95% Confidence Interval	
				Lower Bound	Upper Bound
Learning goal	male	39.13	5.71	38.524	39.757
	female	38.03	7.27	37.484	38.715
Performance-approach goal	male	19.26	3.82	18.881	19.646
	female	19.37	4.19	18.989	19.753
Performance avoidance goal	male	18.84	18.90	18.412	19.215
	female	18.90	4.28	18.491	19.292
English	male	21.49	9.47	20.653	22.287
	female	18.52	8.28	17.710	19.343

Mathematics	male	10.82	4.78	10.389	11.258
	female	10.21	4.43	9.788	10.655
Academic performance	male	16.48	5.86	15.981	16.966
	female	14.52	4.86	14.036	15.020

Table1 shows that there are no gender differences in mean scores of adolescents on performance-approach goal, performance avoidance goal orientations and Mathematics performance. However, there are some gender differences in adolescents', learning goal orientation and in English and overall academic performance.

Table 2. Tests of Between-Subjects Effects: Gender differences on the individual dependent variables: LG, PG, PAG, English, Mathematics and overall academic performance

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared	Eta	Observed Power(a)
sex	Learning goal	223.658	1	223.658	5.509	.019	.007		.650
	Performance-approach goal	2.380	1	2.380	.152	.696	.000		.068
	Performance-avoidance goal	1.245	1	1.245	.072	.788	.000		.058
	English	1786.120	1	1786.12	25.014	.000	.030		.999
	Mathematics	74.765	1	74.765	3.705	.055	.005		.485
	Academic performance	780.515	1	780.52	30.130	.000	.036		1.000

N=827, Corrected Model df =13, Intercept df=1, Interaction df=1, Error df=511, Corrected Total=826

The univariate analysis on table 2 reveals statistical significant gender differences in: learning goal $F(1, 811) = 5.51, p = .019$; English $F(1, 811) = 25.01, P = .000$; and Overall Academic performance: $F(1, 811) = 30.13, P = .000$. However, there are no statistical significant gender differences at $p < .05$ in performance-approach goal [$F = .152, P = .696$]; performance avoidance goal [$F = .072, P = .788$] and Mathematics [$F = 3.705, P = .055$].

An inspection of the mean scores of males and females on table1 indicates that males scored significantly higher on the learning goal scale ($m = 39.14, SD = 5.71$) than females ($m = 38.10, SD = 6.55$) do. However, there are no significant difference between males and females in their scores on the performance-approach goal and the performance-avoidance goal scales. This means there are significant gender differences only on adolescents' learning goal. Males appear to be slightly more learning goal oriented than females. Gender explains only 1% [Partial Eta Squared = .007] in adolescents learning goal, which is 65% [Observed Power = .650] confidence that

the difference is not by chance. The Alpha Level $P = .019$ on the whole suggests that there is more than 95% confidence that the difference is not by chance.

Secondly, males performed significantly better ($m = 21.47$, $SD = 9.47$) than females ($m = 18.53$, $SD = 9.01$) in English and also in overall academic performance ($m = 16.47$, $SD = 5.86$) for male and ($m = 14.53$, $SD = 5.47$) respectively. However, there is no significant gender difference in performance in Mathematics. This means that males performed significantly better than female in English and overall academic performance. Males explain 3% [Partial Eta Squared = .030] in English and 4% [Partial Eta Squared = .036] in overall academic performance, which are both 100% confidence that the differences are not by chance [Observed Power = .999 and 1.00 respectively].

3.2 Discussion

The present study shows that there are no gender differences in adolescents' performance-approach goal, performance-avoidance goal and Mathematics performance. However, there is gender differences in English and overall academic performance and learning goal orientation. Males are more learning goal oriented and also performed significantly better than females in English and over all academic performance. The differences in English language performance could be attributed to the differences in learning goals adaptation by male and females. Learning goal, according to literature is concerned with understanding and mastery of learning material. When students have a good understanding and mastery of what is learned, they are bound to performance well in examination, all things being equal. Thus it is interpreted that the adoption of learning goal by males most have facilitated their better academic performances in English and overall academic performance than that of the female who are less oriented towards learning goal.

This finding corroborates previous studies which reported gender differences in mastery/learning goal orientation of students favouring females. Meece & Holt (1993) found that girls were more likely to have learning as a primary goal, whereas boys were more inclined to have extrinsic or performance goals. This gender difference in learning goal supports the report of Makri-Botsori (2006) that, across grades, boys show higher interest for challenge than do girls. However, it partially contradicts the report of Chan and Chan (2005) that there is no significant gender difference in achievement goals (learning and performance goals) of teacher education students in a tertiary institution in Hong Kong. The whole report of no gender difference in performance-approach and performance -avoidance goals orientation of students in this study support the report of Rashid and Javanmardi, (2012) while the findings of gender difference in learning goals contradicts their findings.

Furthermore, the finding of no gender differences in Mathematics, in this study, contradicts previous studies which reported gender differences in Mathematics in favour of males. This means that gender is not an issue in Mathematics performance. Obioye (2002) in a study reported that sex is a factor in school Mathematics achievement. On the general trend in Nigeria, Obioye asserted that male learners tend to achieve higher in Mathematics than their female counterparts. Hanna and Kuendiger (1999) reported a pattern of achievement result in Mathematics which indicated that girls were more successful than boys in Belgium, Thailand, Finland, Hungary; but least in France, Nigeria, Israel and the Netherlands

The findings of gender differences in English language and overall academic performance in the present study, also contradicts the traditionally held belief and reports from Western countries that females perform significantly better than males in English/language (Marsh, Relich & Smith, 1983; Armstrong & Leo, 1998); that males performed significantly better than females in Mathematics (Roger, *et al*, 1998), but support the reports that there is no significant gender difference in Mathematics performance (Marsh, Relich & Smith; 1983, Musa, 2007).

4. Conclusion and Recommendations

The paper examined gender difference in achievement goals orientations and performance in English Language and Mathematics of senior secondary schools students in Borno State, Nigeria. From the findings of the study, it is concluded that there is significant gender difference in students' academic achievement only with reference to specific subject domain - English Language and overall academic performance, but not Mathematics in Borno state. Only learning goal adoption of students moderates the effects of gender on academic performances in English Languages and overall academic performance, whereas performance-approach and performance-avoidance goals do not.

It is, therefore, recommended that researchers wanting to examine gender differences in achievement goal orientations of students and academic achievement should consider looking at performance from specific subject domains rather considering the aggregate performance of students across subject' domains.

In view of the fact that males are more learning goal orientated than females and also performed significantly better than females in English Language, teachers should encouraged male and female students to adopt learning goal, through emphasizing mastery and understanding of learned material during lessons and by giving class work which will develop the quest for understanding and mastery of learned materials in their teachings.

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