

## ACHIEVEMENT MOTIVATION, ACADEMIC SELF-CONCEPT AND ACADEMIC ACHIEVEMENT AMONG HIGH SCHOOL STUDENTS

**Affum-Osei Emmanuel**

School of Management and Economics  
University of Electronic Science and Technology of China  
[affumnanaosei@yahoo.com](mailto:affumnanaosei@yahoo.com)

**Eric Asante Adom**

Department of Educational Foundations  
University of Cape Coast, Ghana

**Barnie Josephine**

Department of Educational Foundations  
University of Cape Coast, Ghana

**Forkuoh Kwarteng Solomon**

School of Management and Economics  
University of Electronic Science and Technology of China

### ABSTRACT

The study investigated the relationship between achievement motivation, academic self-concept and academic achievement of high school students. In addition, the study found out the students profile to ascertain the levels of achievement motivation, self-concept, and their academic achievement. A total of 120 students selected from four high schools participated in the study. The *Inventory of School Motivation (ISM)* developed by McInerney & Sinclair (1991) and *The Self-Concept Scale* by Cambra & Silvester (2003) were administered on the sample to assess their motivation and self-concept respectively. Percentages, and Pearson Product Moment Correlation Co-efficient were used to analyse the data. The results showed that, majority of the high school students were highly motivated, have high self-concept and performed well on the Mathematics Achievement test. The study also found a significant correlation between self-concept and academic achievement. Again, there was a positive relationship between achievement motivation and academic achievement but the correlation was not significant. The study confirms the importance of achievement motivation and academic self- concept to academic achievement and concluded by making insightful suggestions and recommendations to stakeholders in education in helping students to enhance their motivation and self-concept to improve on their academic performance.

**Keywords:** Academic Achievement, Achievement Motivation, Academic Self-Concept, High School Students.

### INTRODUCTION

The High School education stage plays a significant role in the quest to develop the nation's future manpower for rapid development Quist (2003). As a result, successive governments of Ghana have made several efforts to improve the standards of learning through infrastructural development at the education sector among other policy initiatives Ankomah et-al (2005). Despite all these efforts, the standard still remains low at the high school level MOE (2008). This has prompted several research into more effective ways of improving academic standards and have found out that inadequate motivation for students of higher learning among other factors as a disincentives to learning and academic achievement Sikhwari(2014). Brown et al. (1998) have also acknowledged that stimulating motivation among students of higher learning still remains a challenge as some students' enthusiasm for learning is unpredictable. Zimmerman eta al. (1992) examined students' belief in their efficacy for self-regulated learning and their academic achievement. Ross et al (1999) found a strong

relationship between stress and high school students' performance. Research conducted by Marsh and Craven(1997) on the relationship between academic achievement and self-concept established a positive correlation, therefore, it is very imperative to investigate other factors such as motivation and self-concept which have positive relationship with academic performance of high school students (Achana & Chamundeswari 2013; Tella 2007; Raju 2013). This study would provide necessary information for stakeholders in education to formulate policies that will aid academic performance. The study would also provide important suggestion to students on self-concept and motivation and also serve as a guide for future research by potential researchers.

### Objective of the Study

1. To find out the level of High School Students' Achievement Motivation
2. To find out the profile of High School Students' Self-Concept
3. To ascertain the Academic Achievement of High School Student
4. To find out the relationship between Achievement motivation, Self-Concept and Academic Achievement of High School Students
5. To provide suggestions, recommendations and insights to students, parents, guardians, government, counsellors and other stakeholders in education.

### Research Questions

1. What are the levels of Achievement Motivation of High School Students?
2. What is the profile of High School Students' Self-Concept?
3. What is the Academic Achievement of High School Students?

### Hypothesis

**$H_0$ :** There is no significant relationship between High School Students' Achievement Motivation, Self-Concept, and Academic Achievement.

**$H_1$ :** There is significant relationship between High School Students' Achievement Motivation, Self-Concept Academic Achievement

## LITERATURE REVIEW

### Motivation

Psychologists believe that motivation is a necessary ingredient for learning (Biehler & Snowman, 1986). Satisfactory school learning is unlikely to take place in absence of sufficient motivation to learn (Fontana 1981). Denhardt (2008), defined motivation as "what causes people to behave as they do" Lawler (1994) said "motivation is goal directed". Motivation outlines the achievement and pursuit of goals (Denhardt 2008). Pettinger (1996) defined motivation as environmentally dependent. Campbell & Pritchard (1976) defined motivation as being the set of psychological processes that cause the initiation, direction, intensity, and persistence of behavior. Denhardt, Denhardt and Aristigueta (2008) outlined motivation is not: directly observable, the same as satisfaction, always conscious, and directly controllable.

Denhardt (2008) argued that motivation is not directly observable. Motivation is an internal state that causes people to behave in a particular way to accomplish particular goals and purposes (Denhardt, 2008). Motivation is not directly controllable: motivation is not

something that people do to others and motivation occurs within people's minds and hearts (Denhardt 2008). Motivation is not the same as satisfaction: satisfaction is past oriented, whereas motivation is future oriented (Denhardt 2008).

### **Intrinsic, Extrinsic Motivation and Amotivation**

The Self-determination theory distinguishes between different types of motivation on the different reasons or goals that give rise to an action (Ryan & Deci 2000). The Self-determination theory distinguishes between three types of motivation, which are intrinsic motivation, extrinsic motivation and amotivation (Ryan & Deci 2000).

#### **Intrinsic Motivation**

Intrinsic motivation, occurs when the activity is done out of the free choice of the individual (Ryan & Deci 2000). Intrinsically motivated behaviours are seen when there is no other apparent reward except the activity itself (Deci 1985). Malone & Lepper (1987) defined intrinsic motivation as what people will do without external inducement. Fincham & Cain, (1986) viewed intrinsic motivation as patterns that have been associated with high perceived ability and control, realistic task analysis and planning and the belief that effort increases one's ability and control.

#### **Extrinsic Motivation**

According to Ryan & Deci (2000), extrinsic motivation is a construct that is relevant whenever an activity is done in order to attain some reward. Extrinsically motivated behaviours are those where the controlling mechanism is easily seen (Deci 1985). An extrinsic orientation toward learning is characterized by a concern with external reasons for working, such as the judgment of others regarding one's performance, grades, or some anticipated reward (Goldberg, 1994).

#### **Amotivation**

In the Self-determination Theory, the researchers proposed motivation as one of the classification of motivation. A person is amotivated, when his/her behavior lacks intentionality (Ryan & Deci, 2000). Amotivation exists in many high school students and such students are not motivated in anyway.

### **Achievement Motivation and Academic Achievement**

In a research comprising several field studies and laboratory experiments, Boggiano (1992) revealed that achievement motivation positively influenced academic performance. It was found that motivational orientation predicted children's standardized achievement scores (Boggiano et- al 1992). Children with an intrinsic motivation orientation had higher reading and math scores and higher overall achievement scores compared to their extrinsic counterparts (Boggiano et-al 1992). There is a significant correlation between academic achievement and motivation (Sikwari 2014) and motivation has impact on academic achievement of secondary school students in mathematics with respect to gender (Tella 2007). Highly motivated students performed better academically than lowly motivated students (Tella 2007) and females are highly motivated compared to their male counterparts (Sikwari 2014). Surprisingly, a research conducted by Niebuhr (1995) to examined

relationships between several variables and students' academic achievement, found no significant effect on the relationship with academic achievement. Niebuhr (1995), suggested that the elements of both school climate and family environment have a stronger direct impact on academic achievement.

### **Self-Concept**

According to Hattie (1992), Self-concept has typically been defined in terms of the cognitive appraisal one makes of the expectations, descriptions, and prescriptions that one holds about one's self. Huitt (1998) also added that, self-concept is a person's perceptions of his or her own strengths and weaknesses. There are three aspects of self-concept which are; self-image (of what the person is), ideal self (what the person wants to be), and self-esteem (what the person feels about the discrepancy between what she/he is and what she/he would like to be) (Lawrence 1996).

### **Self-Concept and Academic Achievement**

Academic self-concept can be defined as student perception of self as learner and how she/he interacts with the learning environment. Studies of the relationship between self-concept and achievement in educational settings have been a major focus of research and theory for many years (House, 1996; Hattie 1992; Hamachek, 1995; Marsh 1987). Research has supported the belief that there is a persistent and significant relationship between self-concept and academic achievement, and the change in one seems to be associated with a change in other (Marsh 1992; Marsh and Craven, 1987).

However, some researchers discussed that they have not been able to resolve the issue of the causal predominance between self-concept and academic achievement (Bryne, 1996; Hattie, 1992). That is, to find out whether academic self-concept influences academic achievement or vice versa. Many self-concepts researches have reported positive self-concept to have causal predominance over academic achievement (Shavelson & Bolus, 1982, Marsh, 1987). Marsh (1992) showed that the relationship of self-concept to school achievement is very specific. Better self-concept is associated with better scholastic achievement test (Raju 2013) and has a significant relationship between self-concept and academic achievement (Sikhwara 2014; Archana & Chamudeswari 2013). Teachers must consider students' self-concept on a specific subject as an important factor for students' achievement (Koutsoulis 1995) because students who have good self-concept of themselves is performing well to please themselves, their parents and to get admission into higher institutions of their choice (Raju, 2013).

However, other researchers hold opposing views and their investigation have supported the view that academic achievement precedes a positive self-concept (Bachman & O' Mally, 1986). A research conducted on the effect of students' self-concept and gender on academic achievement in science by Rana & Iqbal (2005); showed that, the interaction between the students' gender and self-concept has significant effect on the science achievement of students in grades 11 and 12. Olantunde (2010) showed in a research conducted on students' self-concept and Mathematics achievement that, students who have positive self-concept of themselves performed well in mathematics.

## METHODOLOGY

### Research Design

The research was a descriptive survey. Descriptive research is a procedure for organizing and summarizing data in order to communicate and describe important characteristics of the data, it determines and reports the way things are (Gay, 1996). According to Gay (1996), a descriptive survey method is useful for investigating a variety of educational problems including assessment of attitudes, opinions, demographic information, conditions and procedures.

### Population

The population for the study comprised all Senior High School forms 1, 2, and 3 Students in the Western Region of Ghana. Four schools were selected from the Schools in the Region. Two schools were selected from urban area and two from the rural area.

### Sample and Sampling Procedures

The Senior High Schools of Western Region were listed and grouped into urban school and rural school and two schools were randomly selected from each category. The samples for the study were selected using the stratified random sampling technique. In all, four Senior High Schools were sampled. One hundred and twenty (120) students were selected from four schools. A total of 30 students were sampled from each selected senior high school.

### Research Instrument

The researchers adopted questionnaire as an instrument for the study. The research sought information on demographic issues of the respondents. Students responded to likert scale type of items selected from *The Self-Concept Scale* by Cambra & Silvestre (2003) where students were rated from “strongly disagree” to “strongly agree”. The self- concept instrument used in this study was originally developed by Cambra and Silvestre (2003). The adapted scale consists of 23 items (Yes /No), which are connected to three dimensions of self-concept (academic, social and physical). The instrument was given to two test-items analysts in order to establish its face and content validity. Over previous studies, the original scale Cronbach’s coefficient alpha was 0.81 and 0.75. The reliability of the original scale is ascertained with a Cronbach’s coefficient alpha of 0.73. Another part of the instrument elicited students’ response on achievement motivation. The students answered likert scale type of items. It is made up of twelve items selected from *The Inventory of School Motivation (ISM)* by McInerney & Sinclair (1991). The original instrument consist of 34 items measured on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Finally, students responded to mathematics achievement test. It consists of 30 multiple choice questions selected from past questions of the West African Examination Council (W.A.E.C). The WAEC is a body that organizes final examinations for high school students and the mathematics achievement test was adopted from one of its past questions administered in 2000.

### Data Analysis

The completed questionnaires were serially numbered for easy identification and were finally scored. Items on the four point likert scale was scored 1, 2, 3, and 4 for items with the response strongly disagree, disagree, agree and strongly agree respectively.

Percentages and the Pearson Product Moment Correlation Coefficient were used for the analysis. The range, mean, and the standard deviation were used to classify achievement motivation, academic self-concept, and academic achievement. The Pearson Product Moment Correlation was used to describe the relationship between academic self-concept, achievement motivation and Academic Achievement.

## RESULTS

### The Profile of Senior High Schools Students'

**Table 1: Sex of the Respondents**

Respondents	Frequency (N)	Percentage (%)
Males	78	65
Females	42	35
Total	120	100

Source: Field Data

Table 1 shows that out of the sample of 120 respondents, there were 78 (65%) males and 42 (32%) females.

**Table 2: Age range of respondents**

Age Range	Frequency (N)	Percentages (%)
12-14	2	1.7
15-17	32	26.9
18-20	77	64.7
Others	8	6.7
Total	120	100

Source: Field Data

Table 2 shows the age range of the respondents. Out of the 4 categories given, 2 (1.7%) fall within the age range of 12-14, 32 (26.9%) were within the age range of 15-17, 77 (64.7%) were within the age range of 18-20, 8 (6.7%) represent those who did not fall within the age range given.

**Table 3: Forms of the respondents**

Forms	Frequency (N)	Percentages (%)
One	40	33.3
Two	40	33.3
Three	40	33.3
Total	120	100

Source: Field Data

Table 3 shows the forms of the respondents. Forty (40) students representing 33.3% responded to the questionnaire in each form from the four schools. This shows that the questionnaire was distributed fairly to the students in their various forms or classes.

**Table 4: Courses of Study of the Sampled Students**

Courses	Frequency (N)	Percentages (%)
General Arts	32	26.7
Home Economics	5	4.2
Business	10	8.3
Visual Arts	1	0.8
Agricultural Science	3	2.5
Science	56	46.7
Others	11	9.2
Total	120	100

Source: Field Data

Table 4 shows the course of study of the respondents. There were 32 (26.7 %) General Arts students, 5 (4.2%) students in Home economics class, 10 (8.3%) Business and 1 (0.8%) was a Visual Arts student who responded to the questionnaire. There were 3 (2.5%) students who were reading Agric. Science, 56 (46.7%) were Science students and 11 (9.2%) were reading other courses. It must also be stated that, majority of the students read Science.

### Research Question 1

What are the levels of High School Students' Achievement Motivation? This research question sought to find out the level of achievement motivation of senior high school students.

**Table 5: Senior High School Students' Achievement Motivation**

Variables	Low N (%)	High N (%)	Total N (%)
Sex: Male:	7 (9.0)	71 (91)	78 (100)
Female:	5 (11.9)	37 (88.1)	42 (100)
Total	12 (10)	108 (90)	120 (100)
Age: 12-14	0 (0)	2 (100)	2 (100)
15-17	3 (9.4)	29 (90.6)	32 (100)
18-20	6 (7.8)	71 (92.2)	77(100)
Others	3 (37.5)	5 (62.5)	8 (100)
Total	12 (10.1)	107 (89.9)	119 (100)
Form: one	4 (10)	36 (90)	40 (100)
Two	3 (7.5)	37 (92)	40 (100)
Three	5 (12.5)	35 (87.5)	40 (100)
Total	12 (10.0)	108 (90.0)	120 (100)
Course: General Arts	4 (12.5)	28 (87.5)	32 (100)
Home Econs.	0 (0)	5 (100)	5 (100)
Business	1 (10)	9 (90)	10 (100)
Visual Arts	0 (0)	1 (100)	1 (100)
Agric Science	0 (0)	3 (100)	3 (100)
Science	4 (7.1)	52 (92.9)	56 (100)
Others	3 (27.3)	8 (72.7)	11 (100)
Total	12 (10.2)	106 (89.8)	118 (100)

Source: Field Data

Table 5 shows the level of motivation of the high school students. Out of 120 students, 12 (10%) had low motivation and 108 (90%) had high motivation. These findings show that majority of the students were highly motivated. Out of a total of 78 males, 7 (9.0%) had low motivation and 71 (91.0%) were highly motivated. Out of a total of 42 females, 5 (11.9%) had low motivation and 37 (88.1%) were highly motivated. Students within the age range of 12-14 years were 2 (100%) and they were highly motivated. Students within the age range of 15-17 years were 32 of which 3 (9.4%) had low motivation and 29 (90.6%) had high motivation. Students within the age range of 18-20 years were 77 out of which 6 (7.8%) had low motivation and 71 (92.2%) were highly motivated. Other age range was 8 and 3 (37.5%) had low motivation and 5 (62.5%) were highly motivated. Form one students were 40, out of these, 4 (10%) had low motivation and 36 (90%) had high motivation. Form two students were 40, of which 3 (7.5%) had low motivation and 37 (92.5%) had high motivation. Form three were also 40 students of which 5 (12.5%) had low motivation and 35 (87.5%) were highly motivated. General Arts students were 32 and of these 4 (12.5%) recorded low motivation while 28 (87.5%) were highly motivated. There were 5 Home Econs. Students and all were highly motivated. Out of 10 Business students, 1 (10%) had low motivation and

9 (90%) had high motivation. Visual Arts student was 1 (100%) and was highly motivated. There were 3 (100%) Agric Science students and they were all highly motivated. Out of 56 Science students 4 (7.1%) had low motivation and 52 (92.9%) were highly motivated. Other students who were reading other courses were 11 of which 3 (27.3%) had low motivation and 8 (72.7%) were highly motivated.

## Research Question 2

What is the Profile of Students' Self-concept? This research question sought to find out the profile of self-concept of high school students. The second part of the questionnaire elicited participants' responses.

**Table 6: Profile of Senior High School Students' Self-Concept**

Variable	Low N (%)	High N (%)	Total N (%)
Sex: Male:	3 (3.8)	75 (96.2)	78 (100)
Female:	5 (11.9)	37 (88.1)	42 (100)
Total	8 (6.7)	112 (93.3)	120 (100)
Age: 12-14	1 (5.0)	1(50)	2 (100)
15-17	5 (15.6)	27 (84.4)	32 (100)
18-20	1 (1.3)	76 (98.7)	77 (100)
Others	0 (0.0)	8 (100)	8 (100)
Total	7 (5.9)	112(94.1)	119 (100)
Form: one	3 (7.5)	37 (92.5)	40 (100)
Two	3 (7.5)	37 (92.5)	40 (100)
Three	2 (5.0)	38 (95.0)	40 (100)
Total	8 (6.7)	112 (93.3)	120 (100)
Course: General Arts	3 (9.4)	29 (90.6)	32 (100)
Home Econs.	1 (20)	4 (80)	5 (100)
Business	1 (10)	9 (90)	10 (100)
Visual Arts	0 (0)	1 (100)	1 (100)
Agric Science	0 (0)	3 (100)	3 (100)
Science	2 (3.6)	54 (96.4)	58 (100)
Others	0 (0)	11(100)	11(100)
Total	7 (5.9)	111 (94.1)	118 (100)

Source: Field Data

Table 6 shows the profile of high school students' Self-Concept. Out of a total of 120 students, 8 (6.7%) had low self-concept and 112 (93.3%) had high self-concept. This shows that majority of the students had high self-concept. From a total of 78 (65%) males, 3 (3.8%) recorded low self-concept and 75 (96.2%) had high self-concept. There were 42 (35%) females of which 5 (11.9%) had low self-concept and 37 (88.1%) had high self-concept. This shows that, majority of male students have recorded high self-concept compared to female students.

The ages ranging from 12-14 were 2 students and 1 (50%) had low self-concept while 1 (50%) had high self-concept. There were 32 within 15-17 years, of these 5 (15.6%) had low self-concept and 27 (84.4%) had high self-concept. There were 77 students within the ages of 18-20, out of which 1 (1.3%) had low self-concept and 76 (98.7%) had high self-concept. Other ages which did not fall within the age groups were 8, of which none had low self-concept and all the 8 (100%) had high self-concept.

Form one students were 40 of which 3 (7.5%) had low self-concept and 37 (92.5%) recorded high self-concept. Form two students were 40 and out of these 3 (7.5%) had low self-concept and 37 (92.5%) recorded high self-concept. Form three students were 40, 2 (5.0%) had low self-concept and 38 (95%) had high self-concept. The data show that, form three students recorded the highest self-concept followed by form one and two students. There were 32 students who read General Arts, out of these 3 (9.4%) had low self-concept and 29 (90.6%) had high self-concept. Home Econs. were 5, 1 (20%) had low self-concept and 4 (80%) had high self-concept. Business students were 10 and 1 (10%) had low self-concept and 9 (90%) had high self-concept. Only 1 (100%) student read Visual Arts and the student recorded high self-concept. In Agric Science, there were 3 students and all had high self-concept. There were

56 Science students of which 2 (3.6%) had low self-concept and 54 (96.4%) had high self-concept. Other students offering other courses were 11 all of which had high self-concept.

### Research Question 3

What is the Academic performance of High School Students? The students answered standard multiple choice mathematics achievement test to ascertain the level of academic performance.

**Table 7: Academic Performance of Senior High School Students**

Variable	Below Average N (%)	Average N (%)	Above Average N (%)	Total N (%)
Sex: Male:	15 (19.2)	29 (37.2)	34 (43.6)	78 (100)
Female:	25 (59.5)	16 (38.1)	1 (2.4)	42 (100)
Total	40 (33.3)	45 (37.5)	35 (29.2)	120 (100)
Age: 12-14	1 (50)	0 (0.0)	1 (50)	2 (100)
15-17	15 (46.9)	14 (43.8)	3 (9.4)	32 (100)
18-20	20 (26)	27 (35.0)	30 (39.0)	77 (100)
Others	3 (37.5)	4 (50)	1 (12.5)	8 (100)
Total	39 (32.8)	45 (37.8)	35 (29.4)	119 (100)
Form: one	19 (47.5)	12 (30)	9 (22.5)	40 (100)
Two	10 (25)	17 (42.5)	13 (32.5)	40 (100)
Three	11 (27.5)	16 (40)	13 (32.5)	40 (100)
Total	40 (33.3)	45 (37.5)	35 (29.2)	120 (100)

Source: Field Data

Table 7 shows the academic performance of the students. Out of a total of 78 males 15 (19.2%) were below average and 29 (37.2%) were average while 34 (43.6%) were above average. Out of a total of 42 female students 25 (59.2%) scored below average, 16 (38.1%) were average and 1 (2.4%) was above average.

Students within the age range of 12-14 years were 2, out of which 1 (50%) was below average and 1 (50%) scored above average. Students within the age range of 15-17 years were 32, out of which 15 (46.9%) scored below average, 14 (43.8%) of these students scored average and 3 (9.4%) scored above average. A total of 77 were in the 18-20 years group, out of which 20 (26.0%) were below average, 27 (35.0%) were average students and 30 (39.0%) were above average. There were 8 students who did not fall within the age categories provided on the questionnaire, out of these, 3 (37.5%) were below average and 4 (50%) were average students while 1 (12.5%) was above average. Out of 40 students in form one, 19 (47.5%) were below average, 12 (30.0%) were average students and 9 (22.5%) scored above average. Out of 40 form two students, 10 (25%) were below average, 17 (42.5%) were

average and 13 (32.5%) were above average. Out of 40 form three students, 11 (27.5%) were below average, 16 (40%) were average students and 13 (32.5%) were above average.

## Hypothesis

Specifically, the study provided answer to one research hypothesis. Table 7 shows the results in accordance to the research hypothesis. In this study, one null hypothesis was tested for the significant level at 0.01.

**$H_0: \mu_1 = \mu_2$ .** There is no significant relationship between Senior High School Students' Achievement Motivation, Academic Self-Concept, and Academic Achievement

**$H_1: \mu_1 \neq \mu_2$ .** There is a significant relationship between Senior High School students' Achievement Motivation, Academic Self-Concept, and Academic Achievement.

### Decision Rule:

Reject  $H_0$  but accept  $H_1$ , if calculated  $|p| < 0.01$

Accept  $H_0$ , but reject  $H_1$ , if calculate  $|p| > 0.01$

\*\* Given a significant level of 0.01 (2 tailed), when  $p$  is less than 0.01 there is a significant relationship.

The results of the above hypothesis are presented in Table 7.

**Table 8 Correlation Matrix for Self-Concept, Motivation and Academic Achievement**

Variables	Self-Concept	Achiev. Motivation	Achiev. in Mathematics
Self-concept	1		
Achiev. Motivation	.15	1	
Academic Achiev.	.72(**)	.03	1

\*\*correlation is significant at the 0.01 level (2-tailed)

Table 8 shows the correlation between self-concept, achievement motivation and academic achievement. The result clearly reveals that a very strong significant relation exists between students' self-concept and academic achievement ( $r = .72, p < 0.01$ ). This means that as students' self-concept increases the academic achievement also increases. The result also clearly reveals that, there is no significant relationship between students' achievement motivation and academic performance ( $r = .03, p > 0.01$ ). This indicates that, relationship exists but not significant to have any significant impact on students' performance. Again, there is no significant correlation between self-concept and achievement motivation ( $r = .15, p > 0.01$ ). This means that, there is an existed relationship between self-concept and achievement motivation but the relationship is not significant.

## DISCUSSION

The first research question sought to find out the level of motivation of high school students. The results showed that, 71 (91%) male students were highly motivated as compared to 5 (11.9%) female students who had low motivation. This result shows that male students were highly motivated. The result contrasted with the research result of Sikhwari (2014), who found that, female high school students were highly motivated compared to their male counterparts. This contrasted result may be due to environmental differences. In Ghana motivation of females to study mathematics related courses is low.

The second research question gathered the profile of students' self-concept. The results indicated that 75 (92.2%) males have higher self-concept compared to 37 (88.1%) females. This finding is consistent with a research conducted by Rana & Iqbal (2005), there is a

significant cause-effective relationship between students' self-concept and gender and that males have higher self-concept compared to females.

Form three students had the highest self-concept and form one and form two students had the lowest self-concept. This result may be due to the fact that, the form three students have already acclimatized with the school environment and they no longer experiencing the freshman phenomenon. This result is consistent with the findings of Ross, (1999) "students must adjust to being away from home for the first time, maintain a high level of academic achievement, and adjust to a new social environment"

The third research question ascertained the academic achievement of the high school Students. The results showed that male students performed better on the achievement test compared to their female counterparts. This result may be due to reason that male students were highly motivated compared to female students. The overall performance of students on the mathematics achievement test was averagely high.

The result of the hypothesis of the study showed that, there is no significant relationship between achievement motivation and academic performance ( $r=0.03$ ,  $p> 0.01$ ). Though relationship exists but the correlation is not significant. This result is consistent with a research by Niebuhr (1995), whose finding indicated that students' motivation showed no significant effect on the relationship with academic achievement. The result is also in contrast with study by Sikhwari, (2014); Tella (2007); Boggiano (1992), which showed that achievement motivation has significant and positive impact on academic performance.

Marsh and Craven, 1997; Marsh 1993; Felson 1984 have supported the belief that there is a persistent and significant relationship between self-concept and academic achievement, and the change in one seems to be associated with a change in the other. The present study results support this claim, that there is a positive significant relationship between the students' self-concept and their academic achievement ( $r=.72$ ,  $p<0.01$ ). This result is also consisted with research work by Sikhwari (2014), Archana et al (2013), which showed a significant relationship between self-concept and academic achievement of high school students. The students who have good self-concept of themselves is performing well in mathematics (Olantunde 2010); physical science and that they needed to do well in mathematics and physical science in order to please themselves their parents and to get admission into high institutions of their choice (Raju 2013). The present study showed evidence that, students with high self-concept performed better on the mathematics achievement test and are aiming to be admitted in higher institutions.

## RECOMMENDATIONS

Based on the results of the study the following recommendations have been outlined:

1. Academic counsellors should organise guidance programmes such as workshops, symposia, and public lectures periodically for high school students to equipped them with the needed skills to enhance their self-concept.
2. Counselling centres should be put in placed in all High Schools to help students build their positive self-concept since positive self-concept has a strong correlation with academic performance.
3. Teachers and educators must focus on intrinsic motivation which will have greater impact on students in achieving high academic performance in the absence of external rewards.

4. Parents should adopt parenting styles that will enhance motivation and instill high self-esteem in their children in order to help them perform well in school.
5. Curriculum developers should design programmes and courses that will motivate students to think critically and to enhance their self-concept.
6. Quiz competitions, class presentations and inter school debates should be organised for students in order to enhance their self-concept.

## REFERENCE

1. Ankomah, Y., Koomson, J., Bosu, R. & Oduro, G K.T. (2005). *Implementing Quality Education in Low Income Countries*. University of Cape Coast–Ghana. Institute for Educational Planning and Administration. p.14
2. Archana, K, & Chamundeswari, S.(2013). Self-Concept and Academic Achievement of Students at the High School. *Journal of Sociological Research*. Vol.4 pp. 105 -113.
3. Bachman J. G. & O' Mally P. M. (1986). Self-concept, Self-esteem and Educational Experiences: *Journal of Personal and Social Psychology*; 50, 1, 35-46
4. Biehler, R. F. and Snowman, J. (1986). *Psychology Applied to Teaching*. (5th Ed.) Boston: Houghton Mifflin Company.
5. Boggiano, A. K., Shields, A., Barrett, M., Kellam, T., Thompson, E., Simons, J., & Katz, P. (1992). Helpless deficits in students: The role of motivational orientation. *Motivation and Emotion*, 16, 3, 271-296.
6. Brown S, Armstrong S, Thompson I 1998. *Motivating Students*. London: Kogan Page Limited.
7. Bryne, B. 1996: *Academic self-concept: Its structure, measurement and relation to academic achievement*. In B. Bracken (ed.) *Handbook of self-concept: Developmental, social and clinical considerations*. 287-316. New York
8. Cambra, C., Silvestre, N. (2003) Students with special educational needs in the inclusive classroom: social integration and self-concept, *European Journal of Special Needs Education*, 18, 197-208.
9. Campbell, J.P., & Pritchard, R.D. (1976). *Motivation theory in industrial and organizational psychology*. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 63-130). Chicago: Rand McNally.
10. Deci, E. L., & Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior (Perspectives in Social Psychology)*. Plenum Press.
11. Denhardt, R. B., Denhardt, J. V., & Aristigueta, M. P. (2008). *Managing Human Behavior in Public and Nonprofit Organizations*. Sage Publications, Inc. *Journal of Personality and Social Psychology*, 47, 944-952.
12. Dörnyei, Z. (2009). The L2 motivational self-system. In Z. Dörnyei, & E. Ushioda (Eds.), *Motivation, language identity and the L2self* (pp. 9–42). Bristol: Multilingual Matters.
13. Fincham, F. D. & Cain, K. M. (1986). *Learned helplessness in humans: A developmental talanalysis*. *Developmental Review*, 6, 301-333.
14. Fontana, D. (1981). *Psychology for Teachers*. London: Macmillan Press Ltd.
15. Gay, R. L. (1996). *Educational Research: Competencies for analysis and Application* (3<sup>rd</sup> ed) New York

16. Goldberg, M. D. (1994). *A developmental investigation of intrinsic motivation: Correlates, causes, and consequences in high ability students* (Doctoral dissertation, University of Virginia, 1994). Dissertation Abstracts International, 55-04B, 1688.
17. Hattie, J.B. (1992). *Self-concept*. Hillsdale, NJ: Lawrence Erlbaum Associates
18. Helmke, A., & Van Aken, M. A. G. (1995). The causal ordering of academic achievement and self-concept of ability during elementary school: A longitudinal study. *Journal of Educational Psychology*, 87, 624 -637.
19. House, J. D. (1996). Student expectancies and academic self-concept as predictor of science achievement. *The Journal of Psychology*, 130, p. 679-687.
20. Huitt, W. (1998). Educational Psychology Interactive: Self-concept and self-esteem. Retrieved November 3, 2013 from a World Wide Web: <http://www.Chiron.valdosta.edu/whuitt/col/regsys/self.html>
21. Koutsoulis, M. K. (1995). *Environment and its relationship to self-concept, attitude toward school, educational aspirations, career expectations, and achievement of high school students in Cyprus*. Dissertation Abstract International, DAI\_A- 56/06A. p.2194.
22. Lawler, E. E. (1994). *Motivation in Work Organizations (Jossey Bass Business and Management Series)*. Jossey-Bass Inc Pub.
23. Lawrence, D. (1996) *Enhancing Self-esteem in the Classroom*. London: Paul Chapman.
24. Malone, T. W., & Lepper, M. R. (1987). *Making learning fun: A taxonomy of intrinsic motivations for learning*. Aptitude.
25. Marsh, H. (1992). *The content specificity of relations between academic self-concept and achievement: An extension of the Marsh/Shavelson model*.
26. Marsh, H. W., & Craven, R. G. (1997). *Academic self-concept: Beyond the dustbowl*. In G. Phye (Ed.), *Handbook of classroom assessment: Learning, achievement and adjustment*. US: Academic Press. (pp. 131–198). Orlando, FL: Academic Press
27. McInerney, D. M. and Sinclair, K. E. (1991). *Cross cultural model testing: Inventory of school motivation*. Educational and Psychological measurement, 51, 123-133.
28. Ministry of Education, Science and Sports 2008, *Preliminary Education Sector Performance Report*, Accra, MOESS
29. Niebuhr, K. (1995). *The effect of motivation on the relationship of school climate, family environment, and student characteristics to academic achievement* (Report No. EA 027467). East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED393202)
30. Olatunde P. (2010). Students Self Concept and Mathematics achievement in some secondary schools in Southwestern Nigeria. *European Journal of Social sciences*. Vol . 13, No. 1.
31. Pettinger, R. (1996). *An Introduction to Organizational Behaviour (Macmillan business)*. Palgrave Macmillan.
32. Quist H.O (2003), *Secondary Education –A” Tool for National Development in Ghana*. A Critical Appraisal of the Post-Colonial Context. African Development, vol. III, No 3 & 4, p.188 191
33. Raju S.S (2013). Impact of Self-Concept on Scholastic Achievement of 9<sup>th</sup> class students in physical sciences: *IOSR Journal of Humanities and*

- Social Science (IOSR-JHSS)* Volume 9, Issue 5 pp129-133
34. Rana, R.A. and Iqbal, Z.F. (2005). Effect of Students' Self-Concept and Gender on Academic Achievement in Science. *Bulletin of Education and Research*, 27(2), pp. 19-36.
  35. Ross, S. E., Niebling, B. C., & Heckert, T. M. (1999). Sources Boggiano, A. K., Shields, A., P. (1992). *Helpless deficits in students: The role of motivational orientation*. *Motivation and Emotion*, 16(3), 271-296.
  36. Ryan, R.M., & Deci, E.L. 2000. *Intrinsic and extrinsic motivations: classic definitions and new directions*. *Contemporary Educational Psychology*, 25:54-67.
  37. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78
  38. Shavelson R. J. & Bolus R. (1982). Self-concept: The Interplay of Theory and Method. *Journal of Educational Psychology* 74, 3-17
  39. Sikhwari T.D (2014): A study of the Relationship between Motivation Self-Concept and Academic Achievement of Students at a University of Limpopo Province, South Africa. *International Journal of Educational Science* 6(1) 19-25.
  40. Tella A. (2007). The impact of motivation on students' academic achievement and learning outcomes in mathematics among secondary school students in Nigeria. *Eurasia Journal of Mathematics, Science and Technology Education* 3(2), pp 149-55
  41. Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: the role of self- efficacy beliefs and personal goal-setting. *American Educational Research Journal*, 29, 663e676.