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Motivation and Academic Performance among Students in Some Selected Secondary Schools of Addis Ababa

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Abstract: Educators and psychologists had established the vital impact of motivation on acquiring learning outcomes and exhibiting good performance on learning tasks. Yet these scholars showed that students' motivation to learn declined over time. This study, therefore, aimed to investigate the level of student motivation in the selected secondary schools of Addis Ababa City Administration and to examine the role of students' motivation in their academic performance. To meet these purposes two secondary schools, namely Bethlehem and Entoto Amba secondary schools were selected. From these two schools, 115 students were randomly selected from grades nine and ten. The sample students were asked to complete a questionnaire that comprised two parts. The first part was about their background information and the second was about the level of their motivation on educational activities. The academic performance of the selected students was obtained from the record offices of the respective schools. The data were analyzed through both descriptive and inferential statistics such as frequency distribution, mean, correlation and linear regression analysis. The results showed that about two-third (67%) of the students exhibited low to moderate level of motivation and the remaining one-third showed high level of motivation. The students' level of motivation and their average score for the first semester of the academic year (2009 EC) correlated 0.547 ($p<.001$). Entry of academic motivation and age in the regression model produced a multiple R of 0.551 and a coefficient of determination, R2 of 0.286. This means that 28.6% of the variation in the students' academic performance was accounted for by level of motivation and age. The contribution of these two variables was statistically significant. Because motivation is crucial for success in academic endeavor, intervention programs should be devised for those students who scored low in their academic motivation.

***Keywords**: Students' Motivation, Engagement, Academic Performance, Academic Achievement*

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Introduction

Students' performance on learning tasks is highly influenced by their motivation and engagement on their learning tasks. Researchers indicated that when students do not have academic motivation and desire to learn that may hinder their engagement on their academic tasks and studies (Hidi & Harackiewicz, 2000). In this line of investigation studies showed that adolescents' motivation to learn decreased over time (Anderman & Maehr, 1994; Harter, 1981). Similarly, researches also showed that as younger children get older their interest and outlook towards schooling in general and towards some specific subjects in particular tend to decline (Eccles & Wigfield, 1992; Eccles, Wigfield & Schiefele, 1998; Epistein & McPartland, 1976; Haladyna & Thomas, 1979; Hoffman & Haussler 1998). Specifically, researchers observed the decline in young adolescents' motivation to learn when these adolescents enter middle schools and the factors contribute to this decline include the school and classroom environments (Eccles, et al., 1993). Subsequent studies by other writers also confirmed that various environmental constraints in the middle schools adversely affect students' motivation to learn and the situation called forth reform that did not happen well in the settings where the studies were conducted (Anderman & Maehr, 1994). In a study that was conducted some four decades ago it was seen that there was a concern among the public that students in secondary schools had exhibited lack of motivation to learn which required intervention through instigating vocational desire in learners and by focusing more on students' social and personal development one can enhance students' motivation to learn (Entwistle, 1987).

In the same way some years back in the US a researcher alluded that the major challenge in education was not low achievement but it was the disengagement of students in the learning process. The students who are disengaged show behaviors such as disturbing classes, skipping classes and not completing learning activities given to them. They may behave well in schools and do tasks and assignments but with low commitment, low pride in mastering learning materials and with low excitement (Newman, 1992). In connection with this some anecdotal experiences from school teachers working in Ethiopia showed that the level of students' motivation to learn got deteriorated over time and some teachers indicated that it has been difficult to find five or six students in a class who are highly motivated to learn.

From the foregoing discussion the reader can see that motivation and engagement is crucial for learning and performance though there was a great concern among educators and psychologists that students' motivation and engagement is declining over time. As repeatedly mentioned it is a well-established fact

that motivation is a crucial factor that guides students' actions yet one researcher from Kenya pointed that it is the most ignored aspect in classroom instruction in Kenyan schools (Odera, 2011). In another research carried out in Nigeria it has been found that the level of motivation students had significantly contributed to their achievement in mathematics and the researcher also found significant difference between the sexes in their motivation and achievement (Tella, 2007). In a similar study researchers investigated the role of motivation, interest and engagement in students' achievement of mathematics and science. The results showed that the variables employed in the investigation such as motivation, interest and engagement especially academic time invested in doing homework contributed significantly to students' achievement in mathematics and science (Singh, Granville & Dika, 2002). Similarly, most recent findings in this line of inquiry showed that generally the relationship between motivation and academic achievement is positive and moderate (Gustafsson & Nilsen, 2016; Scherer & Nilsen, 2016; Karadag, 2017; Lee & Stankov, 2018).

Motivation being a key element in students' learning and performance researchers devote time to investigate factors that contribute to motivation to learn. It is generally accepted that various factors contribute to students' motivation to learn. One factor that researchers investigated was learners peer relationship quality. In a research that assessed students' academic motivation and peer climate it was found that students who had valued relationship with peers and who gained respect for their good performance by their friends showed adaptive motivation to learn and achieve whereas those who had poor quality relationship with friends and who had friends who showed resistance to school values and norms exhibited maladaptive motivation to learn and perform learning tasks (Nelson & DeBacker, 2008). Besides, students' peer relationship, parental involvement in students' learning was found to contribute to students' motivation to learn. In this regard studies showed that various motivation related constructs such as competence, mastery, self-regulation, intrinsic/extrinsic motivation, and school engagement all seem to be affected by parental involvement (Gonzalez-DeHass, Willems, & Holbein, 2005). Moreover, teachers that inspire students, students' career related interest and classroom environments that foster collaborative learning all seem contributing to students' motivation to learn (Bryan, Glynn & Kittleson, 2011).

The studies that were reviewed above showed that there was a decline in student motivation to learn though motivation is a key factor that moves students to engage in different learning activities. It has been showed that motivation contributes to the academic achievement of different subjects such as mathematics and science and there are different factors that contribute to motivation to learn. All the studies

reviewed above are studies from other countries and the current study has aimed to investigate the role of students' motivation and engagement on students' performance in the selected secondary schools of Addis Ababa City Administration. Specifically, the study aims to answer the following three questions:

- What is the level of the students' academic motivation in the selected secondary schools (Bethlehem and Entoto Amba secondary schools)?
- Is there statistically significant correlation between the students' academic motivation and their academic achievement?
- Do academic motivation and age make significant contributions to the prediction of the criterion variable which is academic performance?

Methods

Research Design: Descriptive survey design was employed in this study. This was because the intention of the study was to determine the level of students' academic motivation and to examine the role of this variable (academic motivation) and students' age in their academic performance.

Participants

To conduct the research two secondary schools were selected from Addis Ababa City Administration. The selected schools were Bethlehem and Entoto Amba Secondary School. From these two schools one hundred fifteen students were randomly selected. This sample size was determined based on sample size determination formula involving 95% confidence level, 10% confidence interval and the student population of 2470. By entering these figures into the formula the sample size of 92 results and adding 25% for non-response rate the sample size became 115. To select these students 10 sections were randomly selected from Bethlehem secondary school. Based on the number of sections each grade has, 6 sections were selected from grade 10 and 4 sections were selected from grade nine. Five students were selected from each section and the total number of students selected from this school was 50. On the other hand, from Entoto Amba Secondary School one section from grade nine and one section from grade 10 were randomly selected and 65 students from these two sections were involved in the study.

Instruments

Data were collected from the students through structured questionnaire. The questionnaire used to gather the required information comprised two parts. The first part was about the background information of the students. In this first part of the questionnaire students were asked to give information concerning their age, with whom they live and their future life goal or goals. The second part of the questionnaire comprised 14 items with four options each and the students were asked to select one option from the four options given to them. The items were about their motivation and

engagement in different learning activities that reflect how far they are motivated and engaged in activities such as attentively following lessons in classes, the level of effort they exert in working assignments, classwork, and homework. In addition to these, the students were asked about the degree of their preparation for tests, quizzes, mid and final exams. They were also asked about their involvement in cooperative and competitive learning and how they view the role of education in meeting their future life goals. Furthermore, they were asked about their use of school time and their overall view regarding their motivation and engagement in the learning activities. The four options that were followed each item reflect the degree of effort students exert in all those activities mentioned. The options served as indicators of levels of motivation and engagement students exhibit to the learning activities. For instance if students response indicates that he/she does not pay attention while teachers are teaching most of the time the score of 0 is given to that response; if he/she pays attention to some extent to the classroom lessons most of the time, the score of 1 is given; if he/she pays much attention to the classroom lessons the score of 2 is given; and if the student pays very much attention to the classroom lessons most of the time the score of 3 is given. The same procedure was followed for all 14 items that were intended to measure the students' level of motivation and engagement to learn.

The validity and reliability of this Academic Motivation Scale were determined using different techniques. The face validity of the scale was determined with close supervision of one of the School of Psychology senior faculty and the suggestion forwarded by this senior faculty was strictly followed to enhance the degree of face validity of the Scale. The reliability of the Scale was determined by using Cronbach alpha procedure. This procedure yielded the reliability of 0.91, which is very good. In other words, all the items in the scale measure the construct motivation to learn and engage in educational activities consistently or the Scale has very high internal consistency, which is an indicator of reliability.

Data on students' academic performance were based on the students' achievement on their academic subjects during the first semester of 2016/17 or 2009 E.C. academic year. To obtain the data the record offices of the two secondary schools were contacted with the help of the schools respective vice directors. To access the score of each participant student the questionnaires that were distributed to each participant were coded and using that code the student who filled the questionnaire was identified as the name of the student was attached to the code given to a given questionnaire by a separate data recording sheet. As the students learned many subjects considering the scores in all the subjects would become difficult and not as such practically wise. Because of this the average scores that students obtained

during the first semester of the academic year (2009 E.C.) were used and believed to indicate the level of academic achievement of the students who took part in this study.

Data Analysis

After the data on both predicator and criterion measures were obtained descriptive and inferential statistics were employed to analyze the data. To determine the level of students' academic motivation the frequency distribution of students' scores on academic motivation was evaluated. Besides, to examine the degree of association between the predictor and criterion variables Pearson's r was computed. Moreover, to determine the contribution of the predictor variables on criterion variable linear regression analysis was performed.

Findings

As indicated earlier, 115 students participated in this study. However, complete data were obtained for most variables from 110 of the students. Thus, data analysis was carried out using the information obtained from these 110 students.

Students' Background Characteristics

The data on background information of the students who took part in this study are shown in Table 1 below. Table 1 depicts that the number of male and female students who took part in this study were relatively the same or at least very close. The percentages of male students and female students were 49.1% and 50.9% respectively. Age wise, the majority (69.4%) of the students were in the age range of 15 to 16 years of age. Also, equal number of students participated from grade nine and grade ten.

Table-1: Background Characteristics of Sample Students

Characteristics	Category	Frequency	Percentage
Sex	Male	54	49.1
	Female	56	50.9
	Total	110	100
Age	13-14	4	4.0
	15-16	70	69.4
	17-18	26	25.6
	19-20	0	0
	21-22	1	1.0
	Total	101	100
Grade Level	9	55	50.0
	10	55	50.0
	Total	110	100

In the following table, the results of descriptive statistics such as mean and standard deviation of the predictor and criterion variables are presented.

Table 2: Mean and Standard Deviation of the Predictor and Criterion Variables

Variable	Mean	Standard Deviation
Age	16.08	1.172
Academic Motivation	23.37	8.442
Academic Performance	63.61	9.402

As presented in the table the mean age of the students who participated in this study was 16.08 with standard deviation of 1.172. Regarding the academic motivation the mean score of the students who were involved in this study was 23.37. The maximum score that students could get in the scale measuring academic motivation is 42 and the minimum is 0. The mean score was near half way to the possible maximum score. The mean for academic performance was 63.61 with the standard deviation of 9.402.

Students' Academic Motivation

Table 3 presents the scores reflecting the students' level of academic motivation. The scores were arranged in grouped frequency distribution. As one can see from the table the score of the majority of the respondents fall in the class interval 21 to 25 followed by 16 to 20. About two-third of the participants scored at or below the score of 25. In other words 66.4% of the participants scored at or below 25. Thus, the majority of the students' level of motivation is low or moderate.

Table 3: Level of Students' Academic Motivation

Class Interval	*Frequency*	*Percentage*
6-10	4	3.7
11-15	17	15.5
16-20	19	17.3
21-25	33	29.8
26-30	14	12.7
31-35	13	11.8
36-40	6	5.5
41-45	4	3.7

Relationships of the Study Variables

The reader can see from Table 4 that the correlation coefficients obtained between the variables were significant either at 0.05 or 0.01 levels. The correlation coefficients obtained between age and academic achievement (r = - 0.296) as well as age and academic motivation (r = - 0.218) were negative. Yet both were statistically significant. The correlation coefficient obtained between academic motivation and academic achievement was positive (r = 0.547) and statistically significant.

Table 4: Inter correlations (Pearson r) of Predictor and Criterion Measures

	Age	**Motivation**	**Achievement**
Age	1		
Motivation	- 0.218*	1	
Achievement	- 0.296**	0.547**	1

* P < .05. ** p < .01.

Predicting Academic Achievement from Age and Academic Motivation

The results of the regression analysis are presented in Table 5 below. In the regression analysis two predictor variables were used. The variables were academic motivation score and age of the participants. The criterion variable was the participants' academic performance. As shown in Table 5, the F value was 17.403 which was statistically significant (P < 0.01).

Table 5: The Results of Regression Analysis

Model	Sum of squares	Df	Mean square	F	Sig
Regression	2203.623	2	1101.812	17.403	.000
Residual	5064.862	80	63.311		
Total	7268.485	82			

When the regression model contains both predictor variables (age and academic performance), the resulting multiple R was 0.551 and the adjusted coefficient of determination obtained was 0.286. This shows that 28.6% of the variance on students' academic achievement was accounted for by the two predictor variables used in the analysis.

Discussion

The current study was carried out to answer three questions that were raised in the introduction section of this paper. One of the questions was about the level of students' motivation to learn and perform academic activities they are supposed to accomplish. To answer this question a locally developed Academic Motivation Scale was used. As put in detail in the methods section this scale put four options reflecting the level of effort students exert to various educational related tasks. As put in the results section the majority of the students who took part in this study exhibited low to moderate level of academic motivation. This appears to be consistent with the findings of other researchers who showed their concern that the students' academic motivation declined over time. For example, Anderman and Maehr, (1994), Eccles and Wigfield, (1992), Eccles, Wigfield and Schiefele, (1998), Epistein and McPartland, (1976), Haladyna and Thomas, (1979), Hoffman and Haussler (1998), all agreed that academic motivation of students declined over time and the school and classroom environments had some contribution to the decline of the academic motivation. In relation to this, these writers also put that as children get older their motivation appears to be deteriorating. Even if it is not conclusive at this point it seems that the age of students is inversely related with their academic motivation and academic achievement. One can see from the results section that these variables are negatively correlated. This implies that as the students age goes up their academic motivation and academic achievement goes down. *This finding is inconsistent with what other researchers have found. For instance Ogundokun and Adeyemo (2010) showed that when age interacts with emotional intelligence, intrinsic and extrinsic motivation it positively contributed to academic achievement. It has been also said that as age is the*

indicator of the level of maturity individuals have it was found positively and modestly correlated with academic achievement (Naderi, Abdullah, Aizan, Sharir, & Kumar, 2009).

The second research question that was intended to be answered in this study was examining the correlation of academic motivation and academic achievement. It was shown in the results section that there is statistically significant positive correlation between the academic motivation and academic achievement. This finding is consistent with those reported by Singh, Granville and Dika, (2002), Tella, (2007), Gustafsson and Nilsen, (2016), Scherer and Nilsen, (2016), Karadag, (2017), and Lee and Stankov, (2018). In these studies the researchers observed that students' motivation to learn played a significant role in their achievement of academic subjects such as mathematics and science.

The third question that was raised in the study was the contribution of academic motivation and age of the students to their academic performance. To answer this question regression analysis was carried out and the result revealed that these two variables significantly contributed in the predication of the academic achievement of the students involved in the study. Though about three fourth of the variance in academic performance was left unexplained by these two variables, the variance explained by these variables which was 28.6% is also substantial and statistically significant contribution was observed. This finding is consistent with findings of other studies such as Singh, Granville and Dika, (2002) and Tella, (2007).

Conclusions and Recommendations

Three conclusions can be drawn from the findings of this study. These are

- About two-third of the students involved in this study exhibited low to moderate level of academic motivation.
- There was statistically significant positive correlation between academic motivation and academic performance of the students who took part in this study.
- The two predictor variables evaluated in this study, namely academic motivation and age did significantly contribute in the prediction of the academic achievement of the students.

From the conclusions drawn it seems possible to recommend motivation enhancing interventions to promote the academic motivation of the students who exhibited low academic motivation. As this variable appeared salient in predicting the academic achievement of the students, the students who are highly motivated to learn and engage in the academic activities would benefit from what they have and to identify the students motivational level it is possible to use locally developed Academic Motivation Scale.

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