



STUDENT ENGAGEMENT ACTIVITIES

AS A PREDICTOR ON

ACADEMIC PERFORMANCE OF STUDENTS IN PUBLIC SECONDARY SCHOOLS IN HARGEISA, SOMALILAND

*Exploring the role of engagement in enhancing
student achievement in secondary education*



Authors:
Ismail A. Ahmed



Hargeisa, Somailland



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Abstract

The purpose of this study was to determine the influence of student engagement activities on academic performance of students in public secondary schools in Hargeisa, Somaliland. The study was used simple random method of sampling. It was conducted from 322 students in grade form four from 10 public secondary schools in Hargeisa city using questionnaire of data collection. The data was analyzed through descriptive and linear regression analysis. The had three objectives including to Determine the influence of miscellaneous tasks on academic performance of students in public secondary schools in Hargeisa city; to Determine the influence of mental activities on academic performance of students in public secondary schools in Hargeisa city; and Determine the influence of reading and writing activities on academic performance of students in public secondary schools in Hargeisa city. The study found that miscellaneous tasks has a significant influence on academic performance of students in public secondary schools in Hargeisa city. In addition, the study determined that mental activities has no significance influence on academic performance of students in public secondary schools. Moreover, the study depicted that reading and writing has a significant influence on academic performance of students in public secondary schools in Hargeisa, Somaliland.

Key words: Miscellaneous tasks, mental activities, Reading and Writing, Academic performance

INTRODUCTION

1.1 Background of the Study

Student engagement refers to a meaningful engagement throughout the learning environment. It is best understood as a relationship between the student and the school, teachers, peers, instruction and curriculum (Martin and Torres, 2016). The term has its historic roots in a body of work concerned with student involvement, enjoying widespread currency particularly in North America and Australasia, where it has been firmly entrenched through annual large scale national surveys (Trowler, 2010). Student engagement is a term used to describe an individual's interest and enthusiasm for school, which impacts their academic performance and behavior (Olson & Peterson, 2015). Student engagement involves positive student behaviors, such as attendance, paying attention, and participation in class, as well as the psychological experience of identification with school and feeling that one is cared for, respected, and part of the school environment (Anderson et al, 2004).

Student activity engagement refers to pupils focusing their attention energy on a specific and miscellaneous tasks or activity during studying (Vicki, 2019). Having the opportunity to work with classmates, share ideas, and discuss topics, can provide students with engaging experiences in the classroom. Think-pair-share involves the use of students pairing up and sharing their ideas on the prompt given by the teacher. The prompt can be as simple as a question or as complex as solving an algebraic equation. Think-pair-share activities can be utilized at any point of a lesson to ensure that students have the opportunity to construct their own learning about topics presented in the classroom (study.com, 2015).

The goal is to engage students in meaningful discourse about the topic with one another to help them become more involved in the learning process. The collaboration among peers can aid students in developing ideas that they may have never explored on their own. The study operationalize student engagement into miscellaneous tasks, mental activities and reading and writing. Miscellaneous tasks refers as the student's work with classmates, share ideas, discuss topics, participation of class activities including presentations and answering questions (study.com, 2015). Mental activities are the processes which are used by a human being to learn to acquire this or that competency understanding and conceptualizing a problem situation, working out a general and specific hypothesis on how to solve the problem, controlling and correcting the

problem solving process, etc. These process are including memorizing, applying, analyzing, systemizing and making judgment (Podolskiy, 2012). In addition, reading and writing are skills that improves the student's knowledge. The more the student read and write, the more the student achieve more in knowledge (Joyce at el, 2013).

Academic performance refers to what a student has learned (Santrock, 2006), and how well a student is accomplishing his or her tasks and studies (Carter, 1989). It is the measurable behavior in a standardized series of tests (Simpson & Weiner, 1989). Performance defines how well is a student has prepared and mastered a material (Fuchs & Wobmann, 2008). Fuchs and Wobmann (2008) points out that the main indicators of student's performance include class participation, scores in standardized exam, attitudes and group interaction, as well as reading literacy and oral presentation. In this study, academic performance is the extent to which a student has achieved the short or long-term educational goals. There are various indicators of performance. It indicates by scores obtained from teacher-made test, or national exams (Van, 2013).

The status of the performance of the students in secondary schools in Somaliland declined the recent years. The performance of students in science, mathematics, languages and art at GCSE examination is poor throughout the country. For the period between 2013 and 2017 a majority (57.62%) of students in secondary schools in Somaliland scored grades C and D, which is regarded as fail, in science. Similarly, between 2013 and 2017, 74.25% of the students in secondary schools in Somaliland failed. In Art; 54.52% failed while language; 59.33% failed, the percentage failure rates increased each year. The same trend reflected in secondary schools in Hargeisa district. Between 2013 and 2017, the average percentages fail in language was 72.5, in science was 34.9, in art, was 76%, in math's was 59.9% .There was a total average fail of 64.3% between 2013-2017 Somaliland National Examination Center (SNEC, 2020). The status of poor academic performance of students in secondary schools raises the question of the student engagement on academic performance. Without this information, the causes of poor academic performance of students will remain unknown.

Eventually, this study will investigates the influence of student activity engagement on academic performance of public secondary school students in Hargeisa, Somaliland. The study will empirically investigate the influence of miscellaneous tasks, mental activities and reading/writing of on academic performance of students.

1.2. Rationale of the Study

The link between the student engagement and academic performance has not investigated in the context of public secondary schools in Somaliland. Most available studies have not examined the relationship of student engagement and academic performance. A study by Yasmin (2015) focused on teacher characteristics and performance, while Mustafa (2017) investigated institutional factors and performance of students in secondary schools in Hargeisa. Hussein (2007) investigated language problems among student's secondary schools and Abdi (2015) studied teaching facilities and performance of students in secondary schools in Hargeisa. While these studies investigated performance, they did not delve into student engagement and academic performance relationship. Yet academic performance in public secondary schools has remained largely low in the recent past.

This study will be very important to various groups of people like students, teachers and the ministry of education in Somaliland. This study draws attention to the current situation on the student engagement and its influence on academic performance of students in public secondary schools in Hargeisa. The study will provide the fact of student engagement in public secondary schools. The study will also recommend a strategic way of improving student engagement including behavioral engagement, emotional engagement and reading/writing of students. These recommendations will help teachers and policy makers to set a policy to improve student engagement.

1.3. Objectives of the Study

The objectives of this study is to:

- a) Determine the influence of miscellaneous tasks on academic performance of students in public secondary schools in Hargeisa city;
- b) Determine the influence of mental activities on academic performance of students in public secondary schools in Hargeisa city;
- c) Determine the influence of reading and writing activities on academic performance of students in public secondary schools in Hargeisa city.

LITERATURE REVIEW

2.1 Conceptual Review

A. *Student Engagement*

Student engagement activities are participation in routine school activities, such as attending class, submitting required work, and following teachers' directions in class (Chapman, 2003). Student engage activities through meaningful involvement throughout the learning environment, including students participating in curriculum design, classroom management and school building climate (Fletcher, 2005). Moreover student engage activities by the involvement in extra-curricular activities in the campus life of a school/college/university which are thought to have educational benefits as it is to student focus on their curricular studies (Markwell, 2007).

Student engagement is one of the important constructs that is used to understand the behavior of the student towards the teaching-learning process. Understanding the behavior of students in the academic institutions will provide a glimpse of how the instructions and academic practices are going on in the school. As such, it could be used as a powerful tool by the teachers and academic supervisors to design an effective pedagogical techniques to maximize the learning experiences of the students (Coates, 2005).

B. *Academic Performance*

Academic performance is the extent to which a student, teacher or institution has attained their short or long-term educational goals. Completion of educational benchmarks such as secondary school diplomas and bachelor's degrees represent academic achievement. Academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important procedural knowledge such as skills or declarative knowledge such as facts (Annie, 1996). Furthermore, there are inconclusive results over which individual factors successfully predict academic performance, elements such as test anxiety, environment, motivation, and emotions require consideration when developing models of school achievement (Ziedner & Mosche, 1998).

Individual differences in academic performance have been linked to differences in intelligence and personality. Students with higher mental ability as demonstrated by IQ tests and

those who are higher in conscientiousness linked to effort and achievement motivation tend to achieve highly in academic settings (Tomas, 2011).

2.2 Empirical Review

There are several studies examined the relationship between student engagement and academic performance. Zhu (2010) investigated the association between student engagement and academic performance of students. Zhu found that there was a significant and relatively strong correlation between student engagement and academic achievement. In addition, King (2015) investigated the relationship between behavioral and emotional engagement and academic performance of students. King concluded that academic achievement was positively correlated with behavioral and emotional engagement. Moreover, Pietarinen, Soini, and Pyhältö (2014) found a positive correlation between cognitive engagement and academic achievement. Although Crossan, Field, Gallacher, and Merrill (2003) proposed mechanism underlying these relationships is that student engagement promotes academic success.

Another study investigated the impact of motivation on students' school academic achievement in mathematics in secondary schools using motivation for academic preference scale ($\alpha = 0.82$) as a measuring instrument and achievement test in mathematics (ATM) Two hypotheses were tested for significant at 0.05 margin of error using t-test and analysis of variance (ANOVA) Results showed that gender difference were significant when impact of motivation on academic achievements was compared in male and female students'. Also other result indicates significant difference when extent of motivation was taken as a variable of interest in academic achievement in mathematics based on the degree of their motivation. Implications, suggestions and recommendations for students, parents, government, counselors, educational stakeholders, etc. were discussed (Tella, 2007).

A study by Abubakar at el (2017) investigated students' engagement in relationship to academic performance found that students show a decrease in theses aspects as they grow older. This may be due to the increase in activities and engagement outside the school. Students' may find that schooling is less interesting as compared to those at school. The finding reflects that Malaysian school boys and girls differ in terms of feeling, the fact that thinking and behaving towards school activities.

2.3 Research Methodology

The study will use cross-sectional survey design to determine the influence of student engagement on academic performance. The study will use a simple random sampling method. The respondents of the study will be 322 students from 10 public secondary schools in Hargeisa city. The number of sample size of the study has been determined using Krejcie & Morgan table of sample size. The study will employ questionnaire method of data collection. The conducted data will be treated using Statistical Package for the Social Sciences (SPSS). Specifically, the following statistical tools were used: frequency analysis and simple linear regression.

STUDY RESULTS AND FINDINGS

3.1 Background Information

This study collected data from background of the respondents on factors age and gender. Results was reported the following subsection.

3.1.1 Gender of the Respondents

The respondents were asked to state their gender. Gender was used to determine the representative of the sample. The results was summarized in Figure 1.

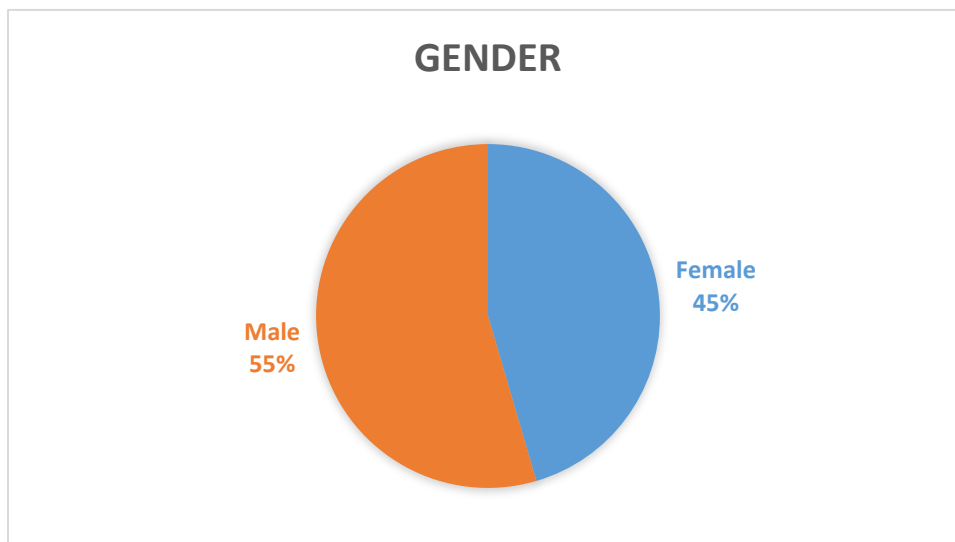


Figure 1. Gender of the respondents.

Figure 1 shows the distribution of the respondents by gender. 55% were male and 45% were female. The results shows that there more male students than female pupils in the sample.

3.1.2 Age of the Respondents

The respondents were also asked their age. The age factor is necessary in terms of measure of pupils' performance since average age sign how the performance of that particular age is. The results are shown in the Figure 2.

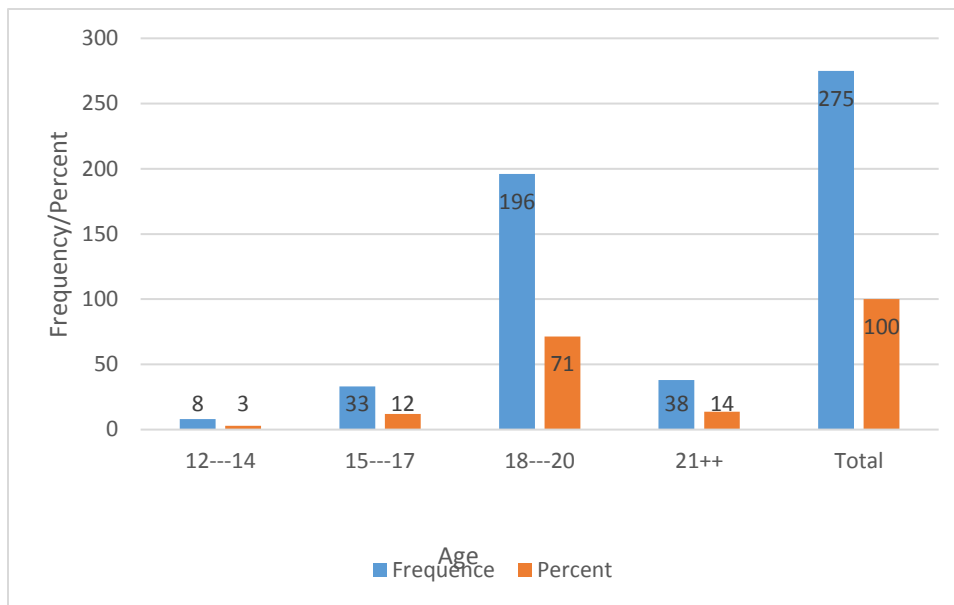


Figure 2. Age of the Respondents

From Figure 2 of age of respondent 71% are in the age interval between 18yrs old and 20yrs old, while only 3% of respondents are in the aged between 12yrs old and 14yrs old. These results shows that in most of students in class four of public secondary schools in Hargeisa are in the age interval between 18yrs old and 20yrs old.

3.2 Student Engagement Activities and Academic Performance

This section presents the results and findings on the specific objectives of the study. The results were analyzed through descriptive analyzes and simple linear regression.

3.2.1 Results of Descriptive Analysis

3.2.1.1 Miscellaneous tasks

The first objective of this study was to determine the influence of miscellaneous tasks on academic performance of students in public secondary schools in Hargeisa, city. The students were asked to demonstrate their experience of being a secondary school student, about how often have

they done of each the following of miscellaneous tasks. The results were summarized in table 1 below.

Table 1. Summary of Descriptive Results of Miscellaneous tasks

No	In your experience of being a secondary school student, about how often have you done of each the following tasks	Never	Sometimes	Moderately	Often	Very Often
1	Asked questions in class or contributed to class discussion	14%	47%	12%	10%	17%
2	Made class presentation in groups or individuals	28 %	33%	13%	11%	15%
3	Worked on assignments given by your teacher at end or during chapter	12%	27 %	9%	17%	35%
4	Completing tasks, assignment and readings are followed up	12%	31%	13%	15%	29%
5	Worked on past papers e.g. Somaliland national exam papers	25%	32%	16%	11%	15%
6	Worked with classmates outside of class to prepare assignment e.g. in Mosque, Library and among others	32%	24%	17%	15%	12%
7	Tutored or taught other students e.g. home teaching or peer teaching	47%	22%	13%	8%	10%
8	Use e-mail, WhatsApp or others to communicate with teachers and students for completing tasks	27%	22%	12%	16%	23%
9	Discussed grades or assignments with an instructor	22%	29%	14%	13%	21%

Table 1 show that 47% of the students in public secondary schools were sometimes asked questions in class or contributed to class discussion and 17% of the students in public secondary schools were very often asked questions in class or contributed to class discussion while only 10%

of the students in public secondary schools were often asked questions in class or contributed to class discussion. This means that majority of the students in public secondary schools were sometimes asked questions in class or contributed to class discussion.

In addition, the results in Table 1 shows that 33% of the students in public secondary schools sometimes made class presentation in groups or individuals and 15% of the students in public secondary schools were very often made class presentation in groups or individuals while only 11% of the students in public secondary schools were often made class presentation in groups or individuals. The finding indicated that majority of the students in public secondary schools sometimes made class presentation in groups or individuals.

Moreover, the findings in the above Table 1 indicated that 35% of the students in public secondary schools were very often worked on assignments given by your teacher at end or during chapter and 27% of the students in public secondary schools were sometimes worked on assignments given by your teacher at end or during chapter while only 9% of the students in public secondary schools were moderately worked on assignments given by your teacher at end or during chapter. This findings show that majority of the students in public secondary schools were very often worked on assignments given by your teacher at end or during chapter.

Furthermore, the results in Table 1 shows that 31% of the students in public secondary schools were sometimes completing tasks, assignment and readings are followed up and 15% of the students in public secondary schools were often completing tasks, assignment and readings are followed up while only 12% of the students in public secondary schools were never completing tasks, assignment and readings are followed up. This means that of the students in public secondary schools were sometimes completing tasks, assignment and readings are followed up.

The above Table 1 show revealed that 32% of the students in public secondary schools were sometimes worked on past papers e.g. Somaliland national exam papers and 15% of the students in public secondary schools were very often worked on past papers e.g. Somaliland national exam papers while only 11% of the students in public secondary schools were often worked on past papers e.g. Somaliland national exam papers. This indicates that majority of the students in public secondary schools were sometimes worked on past papers e.g. Somaliland national exam papers.

Additionally, the results in Table 1 shows that 32% of the students in public secondary schools were never worked with classmates outside of class to prepare assignment e.g. in Mosque,

library and among others and 17% of the students in public secondary schools were moderately worked with classmates outside of class to prepare assignment e.g. in Mosque, library and among others while only 12% of the students in public secondary schools were very often worked with classmates outside of class to prepare assignment e.g. in Mosque, library and among others. This means that majority of the students in public secondary schools were never worked with classmates outside of class to prepare assignment e.g. in Mosque, library and among others.

Besides, the findings in Table 1 indicates that 47% of the students in public secondary schools were never tutored or taught other students e.g. home teaching or peer teaching and 13% of the students in public secondary schools were moderately tutored or taught other students e.g. home teaching or peer teaching while only 8% of the students in public secondary schools were often tutored or taught other students e.g. home teaching or peer teaching. This means that majority of the students in public secondary schools were never tutored or taught other students e.g. home teaching or peer teaching

As well, the results in Table 1 revealed that 25% of the students in public secondary schools were never use e-mail, WhatsApp or others to communicate with teachers and students for completing tasks and 23% of the students in public secondary schools were very often use e-mail, WhatsApp or others to communicate with teachers and students for completing tasks while only 12% of the students in public secondary schools were moderately use e-mail, WhatsApp or others to communicate with teachers and students for completing tasks. This means that majority of the students in public secondary schools were never use e-mail, WhatsApp or others to communicate with teachers and students for completing tasks.

Finally, the results of Table 1 shows that 29% of the students in public secondary schools were sometimes discussed grades or assignments with an instructor and 21% of the students in public secondary schools were very often discussed grades or assignments with an instructor while only 13% of the students in public secondary schools were often discussed grades or assignments with an instructor. This means that majority of the students in public secondary schools were sometimes discussed grades or assignments with an instructor.

3.2.1.2 Mental Activities

The second objective of this study was to determine the influence of mental activities on academic performance of students in public secondary schools in Hargeisa, city. The students were

asked to demonstrate during teaching and learning in class, to what extent has their lessons emphasized the following mental activities. The results were summarized in Table 2 below.

Table 2. Summary of Descriptive Results of Mental activities

No	During teaching and learning in class, to what extent has your lessons emphasized the following mental activities	Never	Sometimes	Moderately	Often	Very Often
1	Memorizing facts, ideas or methods from the lesson so as to repeat as same as your taught.	17%	28%	16%	16%	22%
2	Applying theories, formulas and graph to solve a particular problem.	20%	29%	14%	18%	20%
3	Analyzing the basic relationship between elements of an idea or theory taught in a particular lesson.	20%	31%	14%	15%	20%
4	Synthesizing and organizing ideas or information of lessons taught by your teacher into more complex relationship	19%	31%	18%	12%	20%
5	Making judgment about the value of information or arguments by assessing the soundness of the story e.g Moral of read story	29%	30%	13%	9%	19%

The above Table 2 shows that 28% of the students in public secondary schools were sometimes memorizing facts, ideas or methods from the lesson so as to repeat as same as your taught and 17% of the students in public secondary schools were never memorizing facts, ideas or methods from the lesson so as to repeat as same as your taught while 16% of the students in public secondary schools were often and moderately memorizing facts, ideas or methods from the lesson so as to repeat as same as your taught. This means that majority of the students in public secondary schools were sometimes memorizing facts, ideas or methods from the lesson so as to repeat as same as your taught.

In addition, the results in Table 2 indicates that 29% of the students in public secondary schools were sometimes applying theories, formulas and graph to solve a particular problem and 18% of the students in public secondary schools were often applying theories, formulas and graph

to solve a particular problem while only 14% of the students in public secondary schools were moderately applying theories, formulas and graph to solve a particular problem. This means that majority of the students in public secondary schools were sometimes applying theories, formulas and graph to solve a particular problem.

Moreover, the above Table 2 shows that 31% of the students in public secondary schools were sometimes analyzing the basic relationship between elements of an idea or theory taught in a particular lesson and 15% of the students in public secondary schools were often analyzing the basic relationship between elements of an idea or theory taught in a particular lesson while only 14% of the students in public secondary schools were moderately analyzing the basic relationship between elements of an idea or theory taught in a particular lesson. This means that majority of the students in public secondary schools were sometimes analyzing the basic relationship between elements of an idea or theory taught in a particular lesson.

Furthermore, the results in Table 2 shows that 31% of the students in public secondary schools were sometimes synthesizing and organizing ideas or information of lessons taught by your teacher into more complex relationship and 19% of the students in public secondary schools were never synthesizing and organizing ideas or information of lessons taught by your teacher into more complex relationship while only 12% of the students in public secondary schools were often synthesizing and organizing ideas or information of lessons taught by your teacher into more complex relationship. This means that majority of the students in public secondary schools were sometimes synthesizing and organizing ideas or information of lessons taught by your teacher into more complex relationship.

Finally, the above Table 2 shows that 30% of the students in public secondary schools were sometimes making judgment about the value of information or arguments by assessing the soundness of the story e.g. Moral of read story and 19% of the students in public secondary schools were very often making judgment about the value of information or arguments by assessing the soundness of the story e.g. Moral of read story while only 9% of the students in public secondary schools were often making judgment about the value of information or arguments by assessing the soundness of the story e.g. Moral of read story. This means that majority of the students in public secondary schools were sometimes making judgment about the value of information or arguments by assessing the soundness of the story e.g. Moral of read story.

3.1.2.3 Reading and Writing

The third objective of this study was determine the influence of reading and writing on academic performance of students in public secondary schools in Hargeisa city. The students were asked to demonstrate their experience of being a secondary school student, about how much reading and writing have they done. The results were summarized in Table 3 below.

Table 3. Summary of Descriptive Results of Reading and Writing

No	In your experience of being a secondary school student, about how much reading and writing have you done	Never	Sometimes	Moderately	Often	Very Often
1	Read assigned textbooks, novels during this term	23%	35%	15%	11%	17%
2	Read books by your own (not assigned by a teacher)	18%	31%	17%	14%	20%
3	Write stories in English or Somali	25%	31%	15%	10%	20%
4	Write papers or reports of fewer than 4 pages.	36%	27%	13%	9%	15%
5	Take notes from textbook or other reading materials	16%	27%	20%	12%	25%

The above Table 3 shows that 35% of the students were sometimes read assigned textbooks, novels during this term and 17% of the students were very often read assigned textbooks, novels during this term while only 11% of the students were often read assigned textbooks, novels during this term. This means that majority of the students were sometimes read assigned textbooks, novels during this term.

In addition, the results in Table 3 show that 31% of the students in public secondary schools sometimes read books by your own (not assigned by a teacher) and 18% of the students in public secondary schools never read books by your own (not assigned by a teacher) while only 14% of the students in public secondary schools often read books by your own (not assigned by a teacher). This means that of the students in public secondary schools sometimes read books by your own (not assigned by a teacher).

Moreover, the findings in Table 3 indicates that 31% of the students in public secondary schools were sometimes write stories in English or Somali and 20% of the students in public secondary schools were very write stories in English or Somali while only 10% of the students in public secondary schools were often write stories in English or Somali. This means that majority of the students in public secondary schools were sometimes write stories in English or Somali.

Furthermore, the results in Table 3 revealed that 36% of the students in public secondary schools were never write papers or reports of fewer than 4 pages and 15% of the students in public secondary schools were very often write papers or reports of fewer than 4 pages while only 9% of the students in public secondary schools were often write papers or reports of fewer than 4 pages. This means that majority of the students in public secondary schools were never write papers or reports of fewer than 4 pages.

Finally, the finding in Table 3 shows that 27% of the students in public secondary schools were sometimes take notes from textbook or other reading materials and 16% of the students in public secondary schools were never take notes from textbook or other reading materials while only 12% of the students in public secondary schools were often take notes from textbook or other reading materials. This means that majority of the students in public secondary schools were sometimes take notes from textbook or other reading materials.

3.2.2 Results of Simple Linear Regression

3.2.2.1 Miscellaneous Tasks and Academic Performance of Students

The first objective of this study was to determine the influence of miscellaneous tasks on academic performance of students in public secondary schools in Hargeisa city. Miscellaneous tasks was operationalized as class presentation, assignment works, student's discussions, class contributions including answering questions. The students were asked were asked to react to statements on each of these items. Data on miscellaneous tasks was compared their academic performance which is the total score of their final examination. The data was analyzed using simple linear regression technique to determine if there were significant differences between miscellaneous tasks and academic performance of students in public secondary schools in Hargeisa city, under hypothesis that:

Ho₁: There is no significant difference in miscellaneous tasks by students due to Academic performance.

Ho: $R_{AP,MT} = 0$, where AP is Academic Performance and MT is Miscellaneous Tasks.

The results were summarized in Table 4 were obtained.

Table 4

Simple Regression of Academic Performance on Miscellaneous Tasks

Model	B	R	R ²	R ² adj.	Std.ε	F	Sig.
Constant	566						.000
Miscellaneous Tasks	2.175	.136	.190	.15	.957	5.169	.024

Note. F (1, 322) = 3.87.; R² adj = R² adjusted.

In Table 4, R shows simple correlation between miscellaneous tasks and academic performance. R = .136, indicates that there is very low positive association between miscellaneous tasks and academic performance, and that increase of participation of miscellaneous tasks is accompanied with increase of academic performance of students.

R² is .190, shows that miscellaneous tasks can account for 19% of the variation in academic performance. Adjusted R-square (R² adj. = .15), this shows 15% of variation in academic performance can be explained by miscellaneous tasks. F is the probability that null hypothesis is true. F (1, 275) = 5.169, $p = .024$. Therefore this results led to reject null hypothesis. Hence, miscellaneous tasks has relationship with academic performance of students in public secondary schools in Hargeisa city. Hence the study determined that miscellaneous tasks is significant predictor of academic performance of students in public secondary schools in Hargeisa city.

B (566), is the unstandardized regression coefficient, indicating the weight of miscellaneous tasks and its strength in the regression model. From the value of B and constant term, a regression equation was developed as:

$$AP = 566 + 2.175MT \text{--- Eq- 2}$$

Where AP is academic performance and MT is miscellaneous tasks. This shows that if the miscellaneous tasks was increased by a unit then the model predicted that performance increased. Hence, miscellaneous tasks makes a significant contribution to predicting academic performance.

3.2.2.2 Mental Activities and Academic Performance of Students

The second objective of this study was to determine the influence of mental activities on academic performance of students in public secondary schools in Hargeisa city. Mental activities was operationalized as memorizing, applying, analyzing, systemizing and making judgment. The students were asked were asked to react to statements on each of these items. Data on mental activities was compared their academic performance which is the total score of their final examination. The data was analyzed using simple linear regression technique to determine if there were significant differences between mental activities and academic performance of students in public secondary schools in Hargeisa city, under hypothesis that:

Ho₁: There is no significant difference in mental activities by students due to Academic performance.

Ho: $R_{AP.MT} = 0$, where AP is Academic Performance and MA is Mental Activities.

The results were summarized in Table 5 were obtained.

Table 5

Simple Regression of Academic Performance on Mental Activities

Model	B	R	R ²	R ² adj.	Std.ε	F	Sig.
Constant	628						.000
Mental Activities	-171	.071	.003	.000	1.39	1.55	.902

Note. F (1, 322) = 3.87.; R² adj = R² adjusted.

In Table 5, R shows the correlation between student's academic performance and mental activities. R = .071, indicates that there is very low positive association between mental activities and academic performance, and that different mental activities increase with increase of academic performance.

R² is the proportion of the variance in academic performance that is explained from mental activities. R² = .003, shows that 0.3% of the variance in academic performance can be explained from mental activities. Adjusted R-square (R² adj. = .000) shows that the variance of academic performance of students in public secondary schools in Hargeisa city cannot be explained from

different mental activities. Hence academic performance of students cannot be improved by concentrating mental activities. F is the probability that null hypothesis is true. $F(1, 275) = 1.55$, $p = .902$, led to acceptance of the null hypothesis. Therefore, the mental activities has no specific relationship with academic performance. The study determined that mental activities is not significant predictor of academic performance of students in public secondary schools in Hargeisa city.

3.2.2.3 Reading and Writing on Academic Performance of Students

The third objective of this study was to determine the influence of reading and writing on academic performance of students in public secondary schools in Hargeisa city. Reading and writing was operationalized as number of assigned books read during term, number of books read by students own, number of stories written, number of papers/reports fewer than four pages and number of taken notes from textbook or other reading materials. The students were asked were asked to react to statements on each of these items. Data on reading and writing was compared their academic performance which is the total score of their final examination. The data was analyzed using simple linear regression technique to determine if there were significant differences between reading/writing and academic performance of students in public secondary schools in Hargeisa city, under hypothesis that:

H_{01} : There is no significant difference in reading and writing by students due to Academic performance.

H_0 : $R_{AP,RW} = 0$, where AP is Academic Performance and RW is Reading and Writing.

The results were summarized in Table 6 were obtained.

Table 6

Simple Regression of Academic Performance on Reading and Writing

Model	B	R	R ²	R ² adj.	Std.ε	F	Sig.
Constant	606						.000
Reading and Writing	1.44	.63	.40	.959	1.39	19.5	.029

Note. $F(1, 275) = 3.87$.; R^2 adj = R^2 adjusted.

Table 6, R shows simple correlation between reading and writing of students and academic performance. $R = .63$, indicates that there is very high positive association between reading and writing of students and academic performance, and that increase of participation of reading and writing is accompanied with increase of academic performance of students.

R^2 is .40, shows that reading and writing can account for 40% of the variation in academic performance. Adjusted R-square ($R^2 \text{ adj.} = .959$), this shows 95.5% of variation in academic performance can be explained by reading and writing. F is the probability that null hypothesis is true. $F(1, 275) = 19.5, p = .029$. Therefore this results led to reject null hypothesis. Hence, reading and writing has relationship with academic performance of students in public secondary schools in Hargeisa city. Hence the study determined that reading and writing is significant predictor of academic performance of students in public secondary schools in Hargeisa city.

B (606), is the unstandardized regression coefficient, indicating the weight of reading and writing and its strength in the regression model. From the value of B and constant term, a regression equation was developed as:

$$AP = 606 + 1.44RW \text{--- Eq- 3}$$

Where AP is academic performance and RW is reading and writing. This shows that if the reading and writing was increased by a unit then the model predicted that performance increased. Hence, reading and writing makes a significant contribution to predicting academic performance.

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