

**ASSESING PREDICTIVE VALIDITY OF GRADE EIGHT REGIONAL
EXAMINATION IN HARARI REGION**

BY

MUJIBURAHMAN ABDULAH

**SCHOOL OF GRADUATE STUDIES
ADDIS ABABA UNIVERSITY**

September 2011

**ASSESSING PREDICTIVE VALIDITY OF GRADE EIGHT REGIONAL
EXAMINATION IN HARARI REGION**

**A THESIS PRESENTED TO
THE SCHOOL OF GRADUATE STUDIES
ADDIS ABABA UNIVERSITY**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR
THE DEGREE OF MASTER OF ARTS IN
EDUCATIONAL PLANNING & MANAGMENT**

BY

MUJIBURAHMAN ABDULAH AHMED

September 2011

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

ASSESSING PREDICTIVE VALIDITY OF GRADE EIGHT REGIONAL
EXAMINATION IN HARARI REGION

By

MUJIBURAHMAN ABDULAH

Approval of Board of Examiners

Yekunoamlak Alemu (PhD) Yekuno

Chairman, Department

Signature

Graduate Committee

Selebach Felleke Selebach

Advisor

Signature

Yalew Ingelayan

Examiner

Yalew
Signature

Table of Contents

Title	page
Table of Contents	i
List of Figures	iii
ACRONYMS AND ABBREVIATION	v
CHAPTER ONE	
1.INTRODUCTION.....	1
1.1 Back ground and of the problem	2
1.2 Statement of the Problem.....	5
1.3 Objectives of the study	8
1.4 Significance of the study	8
1.5 Delimitation of the study	9
1.6 Limitation of The Study.....	10
1.7 Operational Definitions of Terms	10
1.8 Organization of the Study	11
CHAPTER TWO	
2. REVIEW OF THE RELATED LITRATURE	12
2.1 Definitions and concepts.....	12
2.2 Benefits of a Predictive Validity Study	16
2.3 Designing a predictive validity study using regionally administered PSLCRE	17
2.4 Whom to include in the study of predictive validity	17
CHAPTER THREE	
3. RESEARCH DESIGN AND METHODOLOGY	22
3.1 Research Design	22
3.2 Study Area	23
3.3 Sampling technique	23
3.4 Instruments of the study.....	23
3.5 Procedure of Data Collection.....	24
3.6 Variables of the study	24

3.6.1 Independent Variables of the study (predictive variable) which include -PSLCRE mean score (grade 8 mean)	25
3.6.2 Criterion (Dependent) Variable of the Study.....	25
3.7 Methods of Data Analysis	26
 CHAPTER FOUR	
4. DATA ANALYSIS AND INTERPRETATION OF THE RESULT.....	27
4.1 Descriptive Statistics	27
4.1 Correlation and Regression Aanalysis of the Vvariables	31
4.1.1 Correlations between Grades 8 and 10 Scores.....	31
4.1.2 The Outcome of grade 8 score on grade10 GPA	32
 CHAPTER FIVE	
5. DISCUSSION, CONCLUSION AND RECOMENDATION.....	37
5.1 Discussion.....	37
5.2 Conclusion.....	39
5.3 Recommendations.....	41
References	43

List of Tables

Title	Page
Table 1. Summary of descriptive statistics of independent (predictive) variable.....	27
Table 2. Summary of Descriptive Statistics of Grade 10 GPA dependent (criterion) variable	27
Table 3. Frequency of Letter Grades in Grade 10	28
Table 4. Grade 10 GPA by Language.....	28
Table 5. Descriptive statistics of scores of the variables (N=400)	29
Table 6. Grade 8 Student by Ethnic Group.....	30
Table 7. Grade 10 GPA by Sex	30
Table 8. Grade 10 GPA by Location	30
Table 9. Correlations between Grades 8 and 10 Scores	31
Table 10. Regression Model of G10 GPA on grade 8 Score	32
Table 11. ANOVA of the Regression Model	33
Table 12. Summary Regression Model of grade 10 GPA on grade 8Score	33
Table 13. ANOVA Result of the Regression Model	33
Table 14. Coefficients of Grade 8 Subject and Average Scores.....	34
Table 15. Summary of the Regression Model Based on Grades 8 and 10 Subjects	34
Table 16. ANOVA Result of the Regression Model	35
Table 17. Coefficients of Grades 8 and 10 Subjects and the Constant	35
Table 18. The Regression Model Summary	36
Table 19. ANOVA of the Regression Model	36
Table 20. Coefficients of Grade 10 English and Math	36

List of Figures

Figure 1. Scatter plot of Grade 8 average score and grade 10 GPA	32
--	----

Acknowledgements

First of all I would like to thank for my creator ALLAH to gave me power to complete, Alhamdu Lilah, I would also like to extend my sincerest gratitude to my thesis advisor Asst Professor Befikadu Zeleke not only for his much valued support and guidance throughout the entire thesis process, but also for his encouragement during the difficult times. I would also like to thank Tamire Andualem Statistic course he taught, without which I would not have been able to develop a thesis topic, much less complete this dissertation. My thanks are extended to Bedri Limay and Zewdu for their invaluable advice.

I would like to thank Italian Project Office for financial support it rendered me to complete the study. I am also grateful to my organization, Harari Education Bureau, for sponsoring my study. I would also like to thank Ato Saeed Redwan & Ato Suleiman Gamachu who shared me their valuable time for editing the final draft.

Finally, I would like to extend my deepest gratitude to my parents & my families for teaching me by example to strive to achieve and for giving me the courage to attain my goals.

ACRONYMS AND ABBREVIATION

ACT - American College Test

MOE – Ministry of Education

REB – Regional Education Bureau

ESLCE- Ethiopia School Leaving Certificate Exam

EGSECE - Ethiopian General Secondary Education Certificate Examination

SAT - Scholastic Aptitude test.

HREB - Harari Region Education Bureau.

MAT - Miller Analogies Test

QUASAR – used it to monitor student outcomes and growth (1993)

PSLCRE :The Primary School Leaving Certificate Regional Examination

AAU- Addis Ababa University

TGE – Transitional Government of Ethiopia

HSIU: Haile Selassie I University

WASSCE: West African Senior Secondary Certificate Exam

CGPA: Cumulative Grade Point Average

RCMS: Regional Composite Mean Score

Abstract

The main purpose of this study was to investigate whether the predictive validity of grade eight Primary School Leaving Certificate Regional Examination (PSLSRE) conducted by Harari Education Bureau(HEB) scores as a whole and English language and Mathematics scores individually predict future academic achievement of students in Ethiopian General Secondary Education Certificate Examination (EGSECE) administered at a national level .So this quantitative study used primary data ,out of 1646 student who joined the secondary school ,400 students were randomly selected from 4 government secondary schools that satisfied certain predetermined criteria .Statistical tools such as descriptive statistic, Pearson's correlation analysis and multiple linear regression analysis were used to study the relationship between variables to analysis these data and postulated hypothesis tested at 0.05 significant level. Generally the study revealed that PSLCRE mean score is a high predictor($r=0.602, p<0.1$) of students' performance in the EGSECE GPA . When compared individually grade 8 Mathematics and grade 8 English with EGSECE GPA were found to have a poor predictor (but positive relationship). PSLCR.E mean score (.248 and .360 respectively.. A multiple regression analysis method was also used to test how much predictor variables contribute in predicting the criterion measure ,in this model summary revealed that the predictor variable were able to explain 51.4% of the variation in EGSECE GPA. Thus, the study indicates that there is strong positive relationship between student academic achievement of PSLCRE and EGSECE GPA and PSLCRE is a valid instrument to measure Harari Region student's academic success

CHAPTER ONE

1 Introduction

This study deals with the *associations between Primary School Leaving Certificate Regional Examination mean score as a whole and PSLCRE compulsory subjects individually (Grade 8 Maths & Grade 8 English) as a predictor and grade 10 national examination (EGSECE GPA)score as a criterion .Or the predictive validity of PSLCRE total score in forecasting performances of students in high school studies .In many countries there is a public examination at three points in the education system (Greany and Thomas: 1995).).The first public examination held in Ethiopia at regional level in grade 8. Thesecond public(external) examination held 2 years after entry to secondary school and the final examination take place at the end of preparatory school at which stage students compete for university entrance. It is clear that before education policy was formulated earlier Primary school examination (Ministry) which was prepared nationally concentrated on selection of students for admission in to secondary school and the exam result has been used as screening tools for secondary level , and various studies have been conducted in ESLCE for predicting academic achievement at higher level, however there is no indication of studies on grade 8 examination .*

Grade 8 Regional examinations are conducted in many regions of Ethiopia have been considered to play a significant role in determining what goes on classroom and ‘how’ teachers teach and students learn, and can have an impact on both teaching and learning. In Harari, the first regional examinations are prepared and held at Grade 8 in 2006 which are called Primary School Leaving Certificate Regional Examinations (PSLCRE) which is also administered (invigilation, paper marking, tabulation and

publishing of results), controlled and managed by an external authority not in school leaders.

1.1 Back ground of the problem

Examinations are varied in their construction, forms of their objectives and functions (for placement, selection, etc.) but they are used primarily to provide information on individual performances, teachers and schools to monitoring students' progress and to get feedback which indicate or elaborate the significance of feedback. For example, judging the effectiveness and its efficiency and to reinforce decision .So, an examination is an instrument used for finding out the presence or absence of a particular phenomenon or trait possessed by an individual or group of individuals(Grounlund,1981).

Before Ethiopian Education and Training Policy was formulated in 1994, Ethiopian School Leaving Certificate Examination (ESLCE), junior school examination (Grade 8 Examination and primary school Grade 6 Examination were used nationally. But In 1994 the Federal government of Ethiopia formulated and implemented a new Education Policy (MOE, 1994). According to the Policy, National examination will be Conducted at (Secondary level 1st cycle (Grade10), Ethiopian General Secondary Education Certificate Examination (EGSECE), Ethiopian Higher Education Entrance Certificate Examination (EHEEC) and Regional Examination (primary school Leaving) at Grade 8. (TGE, 1994).

The Primary School Leaving Certificate Regional Examination (PSLCRE) is a public examination conducted by each National Regional States and the two City Administrations (Addis Ababa and Diredawa) through their respective REB for the final year student of the upper primary school (Grade5- Grade 8)at the end of Grade 8

and each regional states develop ,administers ,marks, and awards the grades and prepare certificates to students .While the EGCESE on the other hand is a national examination for lower secondary school (Grade 9- Grade 10) at the end of grade 10 conducted by MOE.

One of the landmarks of the education policy was to improve the quality of education through the medium of curriculum re- organization, language policy and decentralization of education system (MOE, 1994). In Harari Region for the last 4 years starting preparation and administration of regional examination (Grade 8) was started since 2006. The former E.S.L.C.E has served as an instrument for selection and placement of student and this examination is replaced by EGSECE. Since 2000 many research works were conducted to know and determine the reliability and validity of E.S.L.C.E (Legese, 2006).

Many researchers conducted predictive validity study on the ESLCE and made different suggestions and conclusions .Among those who have conducted that the ESLCE is efficient in predicting future success (Belay, 1990 ;Tameru ,1992, Kassim ,1999) while others contradict with their findings (Tibebe, 1992, Fantu et al ,1996).

Regarding the role of ESLCE GPA as a selection criteria for college admission ,various studies were carried out (King 1969, Lakew 1972 ,Langmuir 1971,Mekonnen et al, Melaku 1975,Mitman,1971 and 1972, Tracy,1969) .However the result of these studies were not in agreement ,where some indicate that the ESLCE GPA is found to be a valid predictor of college performance (King 1969,Mekonnen et al ,1991, Mitmann ,1971;Tracy ,1995), while others found that it is not (Lakew,1972; Langmuir,1971;Melaku,1975;Mitman 1972).

Primary School Leaving Certificate Regional Examination (PSLCRE) is the only instrument used to improve the teaching and learning process for basic education due to its relevance to three domains of reading, writing, and basic mathematics was administered.

Ultimately further education of students depends upon their exam results. According to Rahmlow and Woodley (1979) if students are tested on trivia, they will study trivia, if students are tested on valid, reliable test related to many few objectives, they will strive to achieve these objectives.

In Harari region there is no study that show the predictability of PSLCRE or how this examination is related with G10 national examination score so far all students who sit for PSLCRE are required to take Amharic, English, Mathematics, Biology, Physics, Chemistry, Social Studies and Civics. In addition some students sit for mother tongue examination (Afan Oromo and Harari are optional). Each examination contains 60 items. Except Mathematics and Physics which contains 40 and 45 items respectively and can be answered using calculation and the problem-solving ability and thinking abilities should be measured. This regional examination serves in selecting students to secondary school education. It also serves for the purpose of certification.

Tests are generally used to provide information in making better decision. Also tests appear to be good in their use for decisions making before the tests are used in making decisions it is necessary to know if they provide useful information. To maximize the accuracy of the decision, the test which leads to the best decision should be selected than how the best test should be selected? The decision mainly depends on the validity, reliability and other test characteristics (Desalegn: 1991)

Now, after the change in the education system of the country, regional examinations are conducted, developed and administered in standard way regionally at the end of

grade 8 and national examinations are conducted at grade 10 and grade 12(preparatory) centrally.

Generally, until recently no research works were conducted on predictive validity of grade 8 Regional examinations at the regional level or at national level. On the other hand as basic education is critical issue and widely speeded, its access is very high in the region and the demand for secondary education has increased. The issue of quality which influences what students learn, what benefits they draw from their education has become the subject of debate in the region.

Previous studies on predictive validity were conducted in secondary school leaving examinations generally at the national level and the studies were failed to answer regional problems due to disparity among regions, sex and location (urban and rural area). doing study on PSLCRE Examinations as one of the urgent need of our educational issues, helps to determine whether the exam is efficient or not .Hence ,the researcher takes the essence as a problem and tries to conduct predictive validity study of PSLCRE .Hence , this paper, attempts to find out the relationship between primary school regional examination and secondary school national examination results in Harari region.

1.2 Statement of the Problem

A good examination can help both the learner and teacher to focus on important aspects of education at any level. Examination should also be used for purposes other than assigning grades. Gronlund (1981) stresses that educational measurement and evaluation in teaching and learning plays a great role in fostering the process of teaching and learning. Significantly, tests should be used for diagnosing learning

problems and for providing remediation other than for assigning grades (Shenkute, 1995)

With regard to this validity study in one of the most important instrument in judging the adequacy or inadequacy of the tests for making decision. Before a test is ready for decision its validity must be determined (Desalagn, 1991). Validity studies particularly predictive validity study on tests deals with the extent to which results on a test accurately predicts subsequent performance. Moreover, predictive validity shows how well a future trait such as academic achievement or performance attainment is forecasted, (i.e.) predictive validity tells us the relationship between measures over an extended period of time.

Obviously, on this kind of study in Harari Region, the stress among others is studying the extent to which scores in Grade 8 (eight) regional examination conducted by Harari Education Bureau (HREB) predicts future academic achievement of students in EGSECE.

Unfortunately, no predictive validity study on grade 8 regional examination was held. In addition to this prior, study on predictive validity which was conducted at the National level regarding secondary school leaving examination did not answer regional problems due to variations that exist among regions, sex, urban and rural locations and other related factors.

To meet this requirement ,validity study particularly predictive validity is educationally necessary ,because predictive validity study specially of grade 8 regional examination is not a simple issue ,instead it is an expression of active trait constantly organizing and reorganizing and evolving a system of values bearing the stamp of learners performance need and requirement ,in this context the Harari Region

Education Bureau is demanding and re-demanding research activities to know if the educational activities at present meet the required future value. Similarly, the development of educational activities using research findings are highly influenced by those committed educational leaders. According to Andrew (2002), findings from predictive validity study brings about modifications of attitude cultivated in learning communities at large and reinforced by doing research in schools. (Nattel, 1992) thus according to above views the extent to which PSLCRE examination predicts future tenth grade National examination needs investigation.

To guide the course of investigation in this study seek to answer the following basic questions:

1. To what extent does performance in grade 8 regional examination predicts the academic achievement of students in EGSECE in Harari region?
2. What Regional examination will best predict the academic achievement in Secondary school examinations?
3. To what extent Math achievement predict success of student in secondary schools of Harari region?
4. To what extent PSLCRE English achievement predict success of student in secondary schools oh Harari region?
5. To what extent EGSECE Mathematics and English Predict EGSECE GPA in Harari region?

The following Hypothesis will be tested in this study

PSLCRE mathematics and English scores don't significantly predict the EGSECE exam

1.3 Objectives of the study

The purpose of this study was to determine the extent to which scores in regional examination conducted by Harari Education Bureau could be a predictor of future academic achievement of students in General Secondary Education Examination in Harari region . Specifically the objectives of the study are:

1. To examine the extent to which scores in PSLEC held in HEB (Harari Education Bureau and tenth grade national examination could forecast future student performance
2. To develop viable recommendation for prediction of the school achievement in preparatory school examination based on performance in grade 8 regional examination.
3. To indicate the predictive validity of PSLCRE score in predicting the performance of students in secondary school studies of Harari region
4. To show the predictive power of the English language and Mathematics.

1.4 Significance of the study

This study is expected to produce to test developers and evaluation experts understanding of predictive validity power of grade 8 regional examination subjects and improve their knowledge and skill of student performance. and the study is also significant to:-

- Inform the concerned body about the predictive validity of grade 8 regional examinations for further study of secondary school national examination.
- Help regional curriculum experts, test constructors; subject instructors and other educational experts, educational bodies at various levels (Regional, Wereda and School) to what extent does student perform in regional examination predict academic achievement in secondary school.
- Help Mathematics and English subject teachers both in primary and secondary school teachers to initiate further research in the area.

1.5 Delimitation of the study

The study is conducted on Harari region PSLCRE score of rural and urban schools from the government school for the reason that community ,religious and private students seem to be similar in terms of their socioeconomic status .Hence the study delimited the scope of the study in to the government junior secondary school both in urban (Aboker, Awmujahidin, Deker, ,Fmodel, Geymadrassa, Hamaressa, Jegnoch, Kaladamba, Kundudo , Menfesawi, Miay, Rasmokonnen, Shenkor, Yeshimebet) and rural area (Amuti, Awbarkhadle, Burka, Erer, Galmashira, Sigicha, Sofi, Sukul, Ulanula, Diretayara) .

Sax (1997) reported that prediction tend to be less accurate over longer periods, because many chance factor can affect both predictor and criteria, producing low correlation. Over short periods of time chance effects are reduced, predictive validity coefficients are increased.

The grade 9 and grade10 teacher made examination will not be included in this study because the examination is not standardized so the study is therefore limited only to

student who took PSLCRE in the year 2000 E.C and completed their grade 10 educations or sat for EGSECE national examination in 2002 E.C.

1.6 Limitation of The Study

The data are subject to certain limitation number of secondary school in Harari region are small so, the researcher took all governmental secondary school (Hamaressa, Abadir and Harar Secondary schools). The sample also doesn't include students who sit for grade eight examination before and after 2000 E.C (April 2008). The study used only one year of data of student with PSLCRE achievement score in (2000 E.C) and EGSECE GPA score in 2002 E.C, this may limit the generalization of the PSLCRE's predictive validity, therefore we encourage further studies with multiple year of data for all regions to comprehensively investigate the predictive power of PSLCRE

1.7 Operational Definitions of Terms

Independent variable

The variable under this category are considered as predictor variable

Dependent Variable

The dependent variable of this study is **EGSECE GPA**

Correlation: The tendency for certain values or levels of one variable to occur with particular values or levels of another variable (Brown: 2007)

Correlation coefficient: A measure of association between two variables that can range from -1.00 (perfect negative relationship) to 0 (no relationship) to $+1.00$ (perfect positive relationship) (Brown: 2007)

PSLCRE: in this study refers to an examination prepared, administered and corrected by Harari region at the end of grade 8 Examination which includes Amharic, English

,Mother Tongue (Harari or Oromiffa),Physics,Chemistry,Biology,Social Study and Civics (HEB, 2006)

Predictive validity: in this context the degree in which a student's score in grade 8 scale or test predicts future performance in EGSECE

Criterion: refers to dependent variable used to judgment according to this study EGSECE GPA scores will be criterion variable.

Predictor: refer to independent variable used to forecast the future performance of student. According to this context, the PSLCRE total score, English, Mathematics scores will be considered as predictor variable.

Academic Achievement: students academic performance in EGSECE and PSLCE in Harari region

Ethiopian General Secondary Education Certificate Exam (EGSECE) GPA: mean score (average) of best 7 subjects with Mathematics and English language compulsory uses letter grading system (A,B,C,D and F)

1.8 Organization of the Study

The main objective of the study was to investigate the predictive validity of grade eight regional examination predict future academic achievement of the study in EGSECE GPA. In this regard, the study is organized in to 5 major chapters .Chapter one deals with the problem of the study and its approach; the second chapter treats the review of related literature; the third chapter deals with the research design and methodology; the fourth chapter presents data analysis and interpretation of the results. Finally, the last chapter deals with the summary of major findings, conclusions and recommendations of the study are included.

CHAPTER TWO

2. REVIEW OF THE RELATED LITRATURE

Predictive validity is assessed when one wants to know whether test scores can be used to forecast future performance of candidates, Under this section, I have discussed various literature related to predictive validity of exam. The section has dealt with different types of validity, benefit of a predictive validity study, designing a predictive validity study, whom to include in the study of predictive validity and studies of predictive study.

2.1 Definitions and concepts

A test is a measuring tool or instrument in education. a test is measurement used to find out something about a person's knowledge. Test is given by the teacher in order to obtain data on which students are judged. It also provides a feedback to the teacher and the student and thus estimating teaching success. Ebel & Frisbie D.A(1991), showed that a test is a set of question, each of which has a correct answer, the examinees usually answer orally or in writing. A test is a continuous task of an educational system. it as a continuum deals with those important dimensions and issues which have links with the intended goals of an educational programmes and performance activities Osuju & Okonkwo(2006).

Many researchers (Aggarwal,1996,Bloom, 1954,Hilgard,1948 and Copper 1996) share a common concept with the definition of a test as a tool employed to get adequate information regarding the performance of a candidate who accomplished a given educational programme. Jamb (2002), Nunnally (2006) and Mills (2003) also believe that the term test is a systematic determination of outcomes or characteristic by means of some sort of test devices. Moreover, a test is a systematic basis for

making inferences about learning and development of students. It also helps to determine the process of defining, selecting, designing, collecting, analysing, interpreting and using information to correct, give remedy or encourage. Relationships between assessment outcomes and future performance are expressed as correlation coefficients (r), where $r = 1$ represents a perfect relationship, and $r = 0$ signifies that no relationship whatsoever exists. A correlation of, say, $r = 0.4$ is regarded as comparatively good in assessment and selection (Torrington et al, 1991),

validity

validity is the most important criteria for judging the adequacy of a measurement instrument and its types is different, namely content, criterion and construct validity. Validity is the most important quality must be considered when constructing or selecting a test. A test by itself does not provide information that is supposed to be obtained from it. It refers to the meaningfulness or appropriateness of the interpretations to be made from test scores and other evaluation results. Validity is therefore, a measure or the degree to which a test measures what it is intended to measure (Anastasi and Urbina, 2003). In connection to this (Gronlund, 1981) indicated that in qualitative data the subjectivity of respondents, their opinions, attitudes and perspectives together contribute to a degree of bias. Validity, then, should be seen as a matter of degree rather than as an absolute state. The validity of an evaluation device is established by the degree to which it measures what it is intended to measure and in general validity is classified into content validity, construct validity, Criterion related validity and predictive validity (Thorndike 1977).

The four approaches to test validation are:-

1. Content Validity

To demonstrate this form of validity the instrument must show that it fairly and comprehensively covers the domain or items that it purports (plan) to cover which is important for achievement tests. If one wishes to make inferences about students' degree of attainment of the universe of situation and/or subject matter domain, content validity is an appropriate means (Mehrens and Lehmann, 1991).

2. Construct Validity

Construct validity deals with the logic of items, which comprise measure of social concept (Gronlund, 1976). Operationalization of the specific questions addresses construct validity, or In what senses are the test questions valid. Determining the extent to which performance on a test represents the amount of what was being measured possessed by the examinee

3. Criterion Related Validity

When test scores are used to predict certain future performance it is called predictive validity. The validity of such tests are typically measured statistically by correlating a grouped tests scores with measure of the subsequent performance of individual in criterion situation. (Kebede: 1991)

The criterion related validity strategy refers to the empirical technique of studying the relationship between the test scores or other measures (predictors) and some independent external measures (criteria) (Mehrens and Lehmann, 1984).

The concept of validity and reliability is concurrently associated. The validity is commonly defined as whether a measurement operation can really measure what it intends to measure, while reliability designates that the same results of the research should be derived if the measurement is repeated (Meister, 2004; Suter, 2006).

However, a test should be valid, relevant and reliable, based on actual performance but not upon more opinions of what a standard should be. With respect to this Nunnally (2003), argues that a test's validity must be assessed relative to constructs it is intended to measure the population for which it is intended, and the application for which it is intended. What is most important to be conceived of is that the concerns of validity are related to the determination on cognition of the subject matter the interrelation or the correlation between scores on the test and the performance on the other task or test that accurately represents the actual behaviour (i.e.) what can be inferred from test scores.

Another aspect of test validation is related to content validation, criterion validation and predictive validity. Airasian (2003) elaborates content validity as an association of matches between what is taught and what is tested and criterion validity as dealing with comparing test scores with another measures of performance obtained on some valued measures other than the test itself and predictive validity as the extent to which score from the test can be used to determine or predict level of future performance or criterion. Generally the purpose of a test according to Nitko (1988) as cited in Desalegn (1991) includes selection, placement, classification, counselling and guidance, educational diagnosis and remediation, programme improvement and evaluation decision which adds reinforcement or enrichment or both.

The common method of expressing predictive validity studies are the Pearson product moment correlation, the simple and multiple regression analysis and the expectancy table (Nitko, 1983).

Predictive validity is expressed in terms of the correlation coefficient between the predictor variable and the criterion. Such a coefficient is called a validity coefficient (Lindeman and Merenda: 1979). Among these methods the Pearson product moment

correlation coefficient(r) is probably the most common method used in reporting validity study (Mehrens and Lehmann, 1984)

In many instances, the hypothesis to be tested or the questions to be asked about the validation of test concern how well the scores on the test are related to score in another variable called a Criterion such criterion related validation is described in an objective and quantitative fashion using the Pearsonian correlation coefficient or its variants (Belay, 1990).

4. Predictive Validity

The validity of an evaluation device is established by the degree to which it measures what it is intended to measure (Thorndike 1971). A typical example is how well students' performance on EGSECE relates to their performance in the PSLCRE is an indication of the predictive validity of the EGSECE, So Predictive Validity tells us the relationship between measures over an extended period of time and predictive test scores used to predict future student performance.

2.2 Benefits of a Predictive Validity Study

A predictive validity study will help to translate a student's test score into the probability that a student will succeed in a specific course at institutions. Making appropriate course placements for students benefit institutions and the individual student. Appropriate course placement ensures that valuable course time, student time, and other resources are not wasted because students are not prepared to benefit from a course, or because their level of preparation is such that they would benefit from a higher-level course.

2.3 Designing a predictive validity study using regionally administered PSLCRE

There are several decisions needed to make when designing a predictive validity study. The information below will help us design our predictive validity study. Choosing a criterion, the criterion used for placement validity study will be used to determine whether or not students are correctly succeeded in grade 10 national exam. Determining whether or not a test is valid for placement purposes depends on choosing the correct criterion against which to evaluate the test. To choose criterion for a predictive placement validity study EGSECE GPA scores use end-of-course grades as the criterion in predictive validity studies.

Selecting predictor variables for both predictive and concurrent placement validity studies, predicting success on the criterion (end-of-course grade) using the predictor variables. In a predictive validity study, the predictor information is typically gathered at some point before a student enters the course of interest. It is important that the predictor is current and that little or no instructional intervention has occurred between the predictor and the start of the course.

2.4 Whom to include in the study of predictive validity

To be included in the sample for a validity study, students must have scores on the predictor variables and on the criterion. To predict the probability of success of future students, data derived from the sample of students are used to generate the validity study results. Predictions are more likely to be accurate if the sample of students used for the study is similar to the group of students whose success you want to predict in both ways that are and are not measured by the predictors. Characteristics of the

population, such as gender, location (urban and rural), age, should be represented in the sample.

For the study to be accurate, the predictor and criterion need to be collected from all students at the same point in the course sequence. The intervention of the remedial course changes the relationship between the predictor and the criterion, making the two sets of data incompatible.

Students with Pass grades should be taken in PSLCRE .In order to effectively evaluate how well a predictor is working, PSLCRE requires a range of at least minimum pass mark (cut off) points on a scale for the criterion. Students with Fail grades, with an Incomplete, or Withdraw should not be included in the study however the weakness of predictive validity.

This side of predictive validity study shows the concept of validity and reliability is concurrently associated .According to Meister(2004),Sutter (2006) validity is defined as whether a measurement operation can really measure what it intends to measure ,while reliability designates that the same results of the research should be derived if the measurement is repeated .In seeking validity the requirement is that what a formula provides should in reality have strong connection with test difficulty as measured by some other criterion .

This strong connection is measured in terms of a correlation coefficient between formula scores and later result rating of a group experienced teachers or student will suggest that a formula is doing an effective job in predicting the difficult of the examination in question.

2.5 STUDIES OF PREDICTIVE VALIDITY

Many researchers have conducted different study in predictive validity of public examinations and test for different purpose, but the researcher has chose relevant study to the present study . For instance, Meagher (2008) found MAT score to be the best predictor of the graduate course grade and scientific contribution past research has found to be substantially associated for predictive validity with well-established measurement. Jencks (1998) found that test scores have a moderate correlation with the grades and that test scores predict a little for white students than for black students. Fleming and Garcia (1998) also found that the variability in correlation was substantially greater for black students, where correlation ranged from .01 to 0.48.

Studding the validity and generalizability of mathematics performance assessment QUASAR cognitive assessment instrument (QCAI) Lane, Liu, Ankenmann, & Stone, (1996) reported modest to moderately high correlations ($r = .48$ to $.72$) between QCAI scores and the Mathematics Problem Solving and Concepts subtests of the Iowa Test of Basic Skills, Grade 4 (ITBS-4).

Noble (2003) found that the combination of ACT Composite score and high school GPA on provided greater accuracy of college admission decisions for African American, Hispanic, and White students than using either measure alone. ACT Composite score and high school GPA were slightly more accurate for predicting success of African American students than of Caucasian students, and slightly more accurate for predicting success of Caucasian students than of Hispanic .

Warwick and Ellay(1980) found even higher correlation (0.83) between Fiji junior certificate examination and New Zealand School Certificate(NZSC) and suggested that both examinations were highly reliable and were assessing very similar qualities.

Further more modest correlation coefficient (0.3) have also been revealed between GPA and SAT-9 score in (Jiawang and et al., 2007) from the findings of Warwick and Ellay (1980) one should also underline the fact that the findings was assumed to have possible estimation with considerable accuracy, the chance of success any individual student in Newzealand school certificate once someone new his Fiji junior certificate total examination marks. Furthermore modest correlation coefficient (0.3) have also been revealed between GPA and SAT-9 SCORE from predictive validity studies done by Wang, Niemi and Halwenwang (2007).

G. Obioma & M. Salau (2007) have also observed similar trends in their findings that public examinations poorly predicted students' university academic achievement, when compared individually with other predictors, WASSCE was the best single predictor of the students' Cumulative Grade Point Average (CGPA).

From the observation of local experience one consequence of predictive validity study conducted here in Ethiopia, predictive variables including ESLCE GPA have shown strong predictors Tamiru (1992), Kassim (1999), Belay (1990) in (Legese, 2006).

Similarly, Mohamed Alewi (2004) in (Legese, 2006) has found that ESLCE GPA together with other predictive variable as best predictor of success in the kiremt program of the Awasa college of teacher education.

Unlike the observed finding indicated above, researchers like Mittman (1972) which covered four years studies (1961, 1962, 1963, 1964 E.C) in (Legese, 2006) found that the ESLCE score does not determine significantly first year grade point average for the variable of English and Mathematics.

In order to find out the validity of predictors King and King (1970) in Mulugeta (1997) used 1213 freshman of 1968 E.C entry as data and examined whether the

relationship between first semester university performance and language background and educational background and scores of some achievement and aptitude tests show positive result and at the end found that ESLCE GPA and English language to be valid predictor of students first year academic performance in HSIU now (AAU). With regard to predictive validity that was studied in Nigeria, poor predictor of SSCE on JSCF across six subjects has been found. Faley and Afolabi (2005).

Other Nigerian scholar Hakkinen(2004) found that initial entry points based on past performance in senior secondary school was a good predictor of study credits at University in all field. The author conclude that grade point average from previous schools and aptitude test scores provide the best forecast of success .

Kim(2007)in the study on predicting students' first semester achievement in Graduate Entry Dental School in Korea found that under graduate grade point average(GPAs) and science scores from standardized aptitude tests were highly correlated with academic performance in preclinical years of students.

Legese (2006) has also found that the entrance examination as a whole (EHEECE) was not much effective ($R^2=.015$, $F_{(1,986)}=15.308$, $P<0.05$) in forecasting the future academic success of student in college and revealed that EHEECE IS NOT A standardized test. This implies that the predictive validity study does not test all of the available data and individual.

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

One of the aim of this study was to assess the PSLCRE examination that conducted by HEB on the predictive validity of grade8 regional examination in Harari region that attempt to find relationship between Primary School Leaving Certificate Regional Exam and the EGSECE grade point average(GPAs) and the degree of PSLCRE effectiveness in predicting the success of the student in high school.

This chapter describes the sample and the sampling method used, instruments, the procedures of data collection and the methods of data analysis.

Correlation design was employed to investigate the relationship that exists between the performance in PSLCR (predictive) examinations, and EGSEC Exam (criterion variable). The latter design was used because both the cause and the effect had already occurred while the data Involved in the study were as they were collected from the source.

Academic records of 2000 E.C were evaluated for 400 grade 8 PSLCRE takers (students) who enrolled in secondary school programs. The sample comprises of 92 students in rural school areas among whom 63 were male students 308 students in urban school on whom 192 were males. Course grades were assigned on a percentile using Norm referenced method. Validity coefficients were computed for the relationship between PSLCRE scores and EGECES grades.

3.2 Study Area

This study was conducted in Harari region. This region is one of the 9 regions of Ethiopia, which is located in the eastern part of Ethiopia at about 526 km away from Addis Ababa. There are 26 elementary and junior secondary schools (Grade 1-Grade 8) and 3 government secondary schools. All governmental secondary schools are selected for the study.

3.3 Sampling technique

In the study expected sample are 400 students of grade 8 who sat for PSLCRE in 2000 E.C and took EGSECE (G10 National Examination) in 2002 E.C. These 400 students of grade 8 were selected using systematic sampling method from three government high schools in the region namely Harar comprehensive secondary school, Abadir comprehensive secondary schools, Hamaressa comprehensive secondary school were selected for the study because the number of secondary schools in Harari region are limited (only 3 schools), in fact these schools represent the whole population in the region.

All government schools were selected (among the eight government and non-government high schools). The total number of students enrolled in secondary schools was 1646 from governmental schools. Thus in this study the sample consists of 24.3 % of the target population in these three schools.

3.4 Instruments of the study

The measuring instruments used in the study were EGSECE GPA and grade 8 regional examination. To analyze the predictive validity of the study, it is important to develop a researcher-designed format for data collection has been developed. This instrument was used to take information on students' academic records; subjects

offered with grades in measuring instruments used in the study were PSLCRE examination results, and EGSECE (G10 national examination score). A list of syllabus objectives of grade seven and eight was prepared and test items was constructed by specialists and test experts in HEB so that they can easily categorize or correspond the test items to the contents and learning outcomes .

3.5 Procedure of Data Collection

Data was collected from sample secondary schools with the help of field research assistants. The data collected on the basis of the subgroups involved in the Study. The subgroups were male and female candidates who promoted to G9 basis of a minimum cut off point on eight subjects in grade8 regional examination. The first activity was to select sample student from the total population based on their school and the data was obtained from 3 secondary schools record section .At this stage special care has been taken by data collector not to include students who have no complete information about their score not sat for PSLCRE in 2000 E.C and the score of sampled students filled on the data gathering format (see appendix 1B & 1C).

The students' scores in grade 8and EGSECE GPA were converted into standard score (Z-score) to bring the scores in the same scale. The candidate's composite scores, as used in this study, was the sum of the 8 subject row score divided by 8.

The criterion was the Grade Point Average (GPA) of EGSECE at the end of final years of the students' high school education.

3.6 Variables of the study

The following variables were considered in the study.

3.6.1 Independent Variables of the study (predictive variable) which include -

PSLCRE mean score (grade 8 mean)

PSLCRE is the examination developed and administered by Harari Education Bureau (HEB) 8 subjects were included in the examination namely *Math's, Biology, Chemistry, Amharic, English, physics, Social Study and Civic and Ethical study*. The examines are grade 8 student who have completed 4 years of the second cycle of primary education. Those student who scored passing mark based on Criterion referenced method promoted to high secondary school

-PSLCRE English score

English subjects is basic subject to be taken by all regional students and the medium of instruction for most subjects are English except civics and ethical education and social study which are in mother tongue.

-PSLCRE Mathematics score

Mathematics plays an important role in assigning students for high school study and help them to understand other subjects.

3.6.2 Criterion (Dependent) Variable of the Study

The criterion (Dependent) variable of this study is *EGSECE GPA*. This variable measures academic performance of students in grade 10 National Examination which uses criterion referenced method for grading system and uses letter A,B,C,D,F with value 4,3,2,1, and 0 respectively for the best 7 (seven) subjects grade including compulsory subject (Mathematics and English)

-EGSECE English (G10 English)

English is a compulsory subject in secondary level and medium of instruction and all subjects are given in English

-EGSECE Math's (G10 Math's)

Mathematics is also compulsory subject in high school level and it uses for assigning student to different field of study.

3.7 Methods of Data Analysis

In order to know whether the Primary School Leaving Certificate Examination could predict future success of the student performance in Ethiopian General Secondary Education Certificate Examination or not. Such descriptive value as the mean, standard deviation, minimum and maximum scores determine for all variables to show general picture of the data and the analysis were involved Multiple regression and Pearson Correlation tests were used to study the relationship between variables to analyze the data. In the multiple regression analysis the independent variables were grade 8 regional exam mean score, English row Score and Mathematics row score. The dependent variables were G10 national examination result.

Records on performance in the grade 8Regional examinations of a random sample of 400 candidates were obtained from 28 Junior Secondary School that satisfied certain predetermined criteria. The correlation were used to analyze these data and the postulated hypotheses tested at 0.05 significance level.

To guide the course of investigation in this study data were analyzed using the Pearson Product Moment correlation coefficient. The correlation between variables was tested separately by applying correlation analysis. In this study a validity coefficient was represented by the symbol r_{xy} which stands for the correlation between predictor(x) and criterion (y).

4. DATA ANALYSIS AND INTERPRETATION OF THE RESULT

4.1 Descriptive Statistics

In this section a descriptive statistic which consists of data concerning the independent and dependent variable, the means and standard deviation, maximum and minimum scores for each variable treated in the study were presented

Table 1 below presents the mean, standard error and standard deviations of the independent Variables discussed in the study were computed and its distribution is frequented in detail in appendices 1, 2, 3, and 4.

Table 1. Summary of descriptive statistics of independent (predictive) variable

Subject	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation
English	400	10	59	32.80	.422	8.436
Math	400	9	48	25.66	.364	7.273
Average	400	35.0	88.0	49.204	.4840	9.6809

Table 2 below shows the summary of the descriptive statistics for EGSECS (G10 GPA) examined minimum and maximum scores, composite mean for the region was above the minimum requirement of 50% of the education policy.

Table 2. Summary of Descriptive Statistics of Grade 10 GPA dependent (criterion) variable

N	Minimum	Maximum	Mean	Std. Error	Std. Deviation
396	2.00	4.00	2.7384	.02566	0.3229

Table 3 shows the EGSECE scores of English and Mathematics (Compulsory subject) frequency distribution and it reveals that students performed better in English

191(47.9) student scored B grade and above whereas 90 students (22.6%) scored B grade and above in Mathematics .Generally above 50% of student both in English (52.2 %) and Mathematics (77.4 %) scored Grade C and below.

Table 3. Frequency of Letter Grades in Grade 10

Subject	D		C		B		A	
English	9	2.3%	199	49.9%	104	26.1%	87	21.8%
Math	21	5.3%	287	72.1%	59	14.8%	31	7.8%

Table 4 below shows summary of the descriptive statistics for EGSECE GPA score which represents the ethnic characteristics of the students score used in the analysis revealed different score and the relative performances of students whose mother tongue is Amharic is better(2.8304) and above the regional mean score ,but Harari (2.6739) and Afan Oromo (2.6451) students performed less than regional mean score(2.7384).

Table 4. Grade 10 GPA by Language

Ethnic identification	N	Mean	Std. Deviation
Afan Oromo	173	2.6451	.47890
Amharic	195	2.8304	.52398
Harari	28	2.6739	.51012
Total	396	2.7384	.51066

Table 5 below reveals the deceptive statistics of the score on the predictive and criterion variable considered in the research noted that observed mean scores of student for all variables (except grade 8Mathematics) are above expected mean ,while the observed mean for grade 8Mathematics is below expected mean which shows the students performed below the average.

Table 5. Descriptive statistics of scores of the variables (N=400)

Variable	Observed minimum	Observed maximum	Observed mean	S D	Expected maximum	Expected mean
English Score GRADE 8	10	59	32.79	8.43	60	30
Maths Score GRADE 8	9	48	25.66	7.27	60	30
Mean Score	35	88	49.2	9.68	60	30
EGSECS GPA	2	4	2.738	0.51	4	2
EGSECS English	1	4	2.66	0.85	4	2
EGSECS Maths	1	4	2.24	0.69	4	2

Table 6 presents the demographic characteristics of the students used in the analysis. Amharic language students (49%) made up the majority of students and 43.75% of the students were Afan Oromo language learner and the rests are Harari language learners (7.25 %).

Table 6 also presents the composite mean score of 2000 E.C. PSLCRE Mathematics and English scores and the table shows some preliminary comparisons among sub-groups. Harari speakers performed better mean (34.07) in English followed by Amharic speakers (33.32) and the least was Afan Oromo student (31.99) which is below regional mean.

Table 6 also shows the composite mean scores (average of average) varying from 47.85 Afan Oromo students to 50.347 for Amharic students. Similarly, there was a significant amount of variation among ethnic -groups in the Mathematics scores, varying from 25.08(below RCMS) Afan Oromo students to 26.23 Amharic student

Table 6. Grade 8 Student by Ethnic Group

Language	Statistics	Sample	English	Math	Average
Afan Oromo	N	175	175	175	175
	Mean		31.99	25.08	47.855
	SD		8.441	6.725	8.5660
Amharic	N	196	196	196	196
	Mean		33.32	26.23	50.347
	SD		8.588	7.815	10.3786
Harari	N	29	29	29	29
	Mean		34.07	25.38	49.621
	SD		7.081	6.549	10.4246
Total	N	400	400	400	400
	Mean		32.80	25.66	49.204
	SD		8.436	7.273	9.6809

Table 7 shows the mean difference between male and female (0.3229) at regional level for grade 10(EGSECE) and it reveals that male students (2.8550)performed better than female(2.5321) student .The table also indicates that the total of 396 examined of which 36.1% females were involved in this study.

Table 7. Grade 10 GPA by Sex

Sex	N	Mean	Std. Deviation	Mean Difference
F	143	2.5321	.46085	0.3229
M	253	2.8550	.50129	
Total	396	2.7384	.51066	

Table 8 reveals information about descriptive statistics of the score of urban and rural schools EGSECE GPA difference at regional level and Urban schools(2.7992) performed better than Rural schools which is below the average and this shows that the student performed below average.

Table 8. Grade 10 GPA by Location

Location	N	Mean	SD
Rural	92	2.5374	.36562
Urban	304	2.7992	.53276
Total	396	2.7384	.51066

4.1 Correlation and Regression Aanalysis of the Variables

Correlations

Correlation analysis is a commonly used measure of the strength and direction of the relationship between two sets of variables and is often used as an indication of predictive validity. A correlation coefficient (r) is a statistic ranging between 0 and 1 that indicates the degree and direction of relationship between two variables. The strength of the relationship is indicated by the values of the coefficients, with greater values indicating stronger relationships. The direction of the relationship is indicated as either positive, in which variables tend to increase or decrease together, or negative, representing an inverse relationship between variables. (Don Meagher, 2008)

4.1.1 Correlations between Grades 8 and 10 Scores

Table 9 shows a result of Pearson Product Moment Correlation between Grades 8 and grade 10 scores. There is statistically significant positive relationship between the two scores. The correlation between Grade 8 Average Score and Grade 10 ($r = .602$, $p < .01$) was found strongest when compared with individual subjects relationships and this shows that student who is performing in PSLCRE will earn a good result in EGSECE .

Table 9. Correlations between Grades 8 and 10 Scores

	Grade 10 English	Grade 10 Math	Grade 10 GPA
Grade 8 English	.219**	.150**	.360**
Grade 8 Math	.131**	.191**	.248**
Grade 8 Average	.494**	.287**	.602**

** . Correlation is significant at the 0.01 level (2-tailed).

4.1.2 The Outcome of grade 8 score on grade10 GPA

A regression analysis method was used in the study to test how much a predictor variable contributes in predicting the criterion measure. In this model the predictor variable was Grade 8 Average Score. Table 10 and Figure 1 show the regression model summary that Grade 8 average score was able to explain 36.2 % of the variation ($r^2 = .362$) in G10 GPA. So grade 8 mean score has prediction power.

Table 10. Regression Model of G10 GPA on grade 8 Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.602 ^a	.362	.360	.408

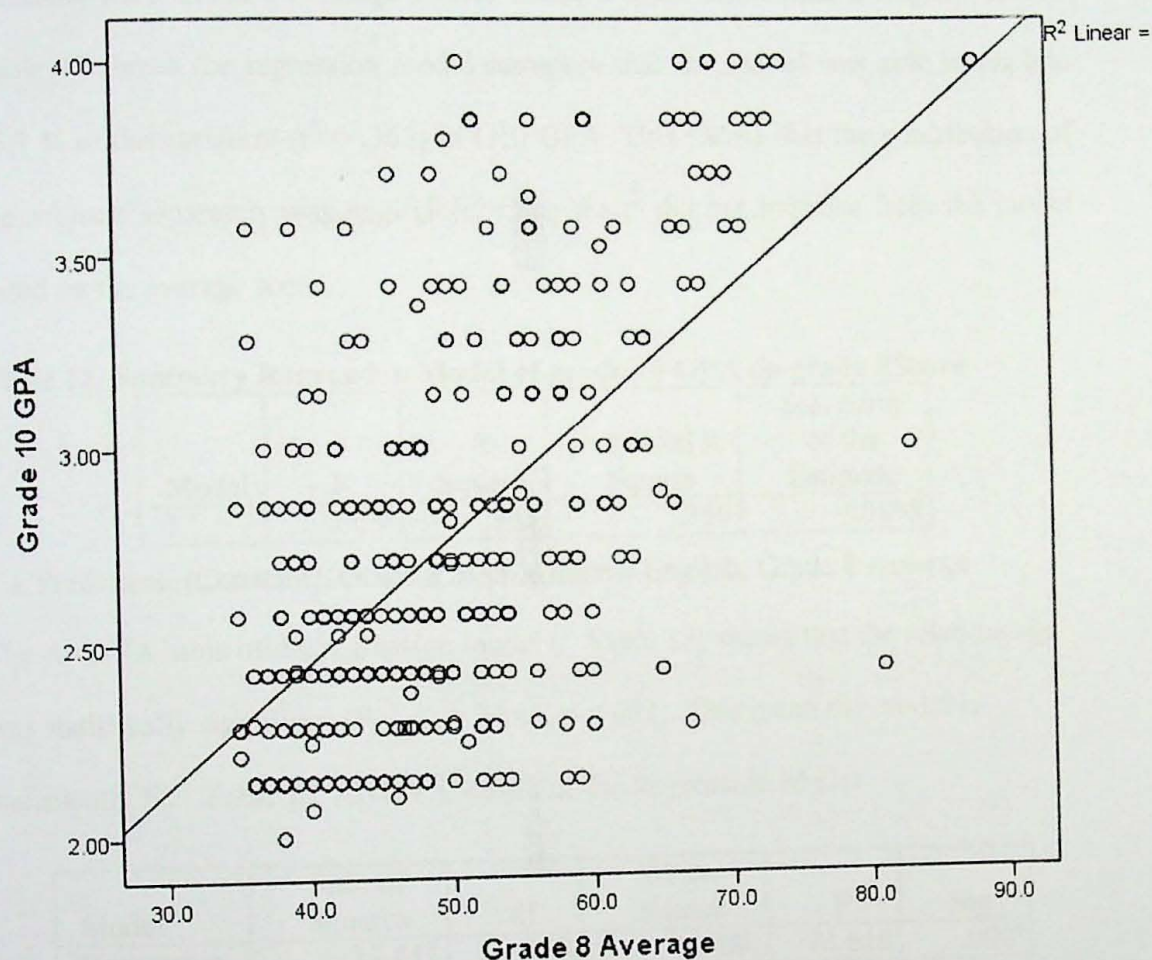


Figure 1. Scatter plot of Grade 8 average score and grade 10 GPA

The ANOVA table of the regression model (Table 11) shows that the relationship was statistically significant ($F_{(1, 394)} = 223.48, p < .001$). This means the model is statistically fit and was able to predict the criterion variable.

Table 11. ANOVA of the Regression Model

	Sum of Squares	df	Mean Square	F	Sig.
Regression	37.281	1	37.281	223.483	.000 ^a
Residual	65.726	394	.167		
Total	103.007	395			

A multiple regression analysis method was also used to test how much predictor variables contribute in predicting the criterion measure. In this model the predictor variables were Grade 8 Average Score, Grade 8 Math and Grade 8 English scores. Table 12 shows the regression model summary that the model was able to explain 36.3 % of the variation ($r^2 = .363$) in G10 GPA. This shows that the contribution of the subjects separately was negligible, since the r^2 did not increase from the model based on the average score.

Table 12. Summary Regression Model of grade 10 GPA on grade 8Score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.603 ^a	.363	.359	.40898

a. Predictors: (Constant), Grade 8 Math, Grade 8 English, Grade 8 Average

The ANOVA table of the regression model (Table 13) shows that the relationship was statistically significant ($F_{(3, 392)} = 74.62, p < .001$). This mean the model is statistically fit. Table 13. ANOVA Result of the Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	37.441	3	12.480	74.616	.000 ^a
Residual	65.566	392	.167		
Total	103.007	395			

a. Predictors: (Constant), Grade 8 Math, Grade 8 English, Grade 8 Average

b. Dependent Variable: Grade 10 GPA

Looking at the coefficients (Table 14) the contribution of the grade 8 Math and grade 8 English was not statistically significant. This shows that the subjects were not able to predict the Grade 10 GPA. .003 is negative so, there is an inverse relationship between grade 8 Mathematics and EGSECE GPA.

Table 14. Coefficients of Grade 8 Subject and Average Scores

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.183	.114		10.362	.000
Grade 8 Average	.032	.003	.607	10.952	.000
Grade 8 English	.001	.003	.021	.419	.675
Grade 8 Math	-.003	.003	-.037	-.803	.423

a. Dependent Variable: Grade 10 GPA

A multiple regression analysis method was also used to test how much predictor variables contribute in predicting the criterion measure. In this model the predictor variables were Grade 8 Average Score, Grade 8 Math, Grade 8 English, Grade 10 Math, and Grade 10 English. shows the regression model summary that the predictor variables were able to explain 58.9% of the variation ($r^2 = .589$) in G10 GPA. This shows that the contribution of the subjects separately from Grade 10 was very high, since the r^2 increased substantially from 36.3% to 58.9% the model based on the Grade 8 scores.

Table 15. Summary of the Regression Model Based on Grades 8 and 10 Subjects

Error! Reference source not found. Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767 ^a	.589	.583	.32913

a. Predictors: (Constant), Grade 10 Math, Grade 8 English, Grade 8 Math, Grade 10 English, Grade 8 Average

The ANOVA table of the regression model (Table 16) below shows that the relationship was statistically significant ($F_{(5, 394)} = 111.37, p < .001$).

Table 16. ANOVA Result of the Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	60.322	5	12.064	111.373	.000 ^a
Residual	42.138	389	.108		
Total	102.461	394			

a. Predictors: (Constant), Grade 10 Math, Grade 8 English, Grade 8 Math, Grade 10 English, Grade 8 Average

b. Dependent Variable: Grade 10 GPA

Looking at the coefficients (Table 17) the contributions of the G10 Math ($t = 9.10, p < .001$) and G10 English ($t = 10.89, p < .001$) were statistically significant. This shows that the Grade 10 Math and English were able to predict the G10 GPA as opposed to grade 8 Math and English. In other words the predictive validity of Grade 8 English and Math were very poor as compared to that of Grade 10 scores. On the other hand the average score of Grade 8 is capable of predicting the Grade 10 GPA this might be due the contributions of the other subjects of Grade 8.

Table 17. Coefficients of Grades 8 and 10 Subjects and the Constant

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.692	.099		6.996	.000
Grade 8 Average	.014	.003	.271	5.317	.000
Grade 8 English	.004	.002	.072	1.794	.074
Grade 8 Math	.000	.003	-.003	-.072	.943
Grade 10 English	.252	.023	.412	10.893	.000
Grade 10 Math	.236	.026	.310	9.102	.000

a. Dependent Variable: Grade 10 GPA

A multiple regression analysis method was also used to test how much predictor variables contribute in predicting the criterion measure. In this model the predictor variables were Grade 10 Math and Grade 10 English. Table 18 shows the regression

model summary that the predictor variables were able to explain 51.4% of the variation ($r^2 = .514$) in G10 GPA. This shows that the contribution of the subjects by themselves was very high since the r^2 dropped from 58.9% to 51.4% with a small difference.

Table 18. The Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717 ^a	.514	.512	.35639

a. Predictors: (Constant), Grade 10 Math, Grade 10 English

The ANOVA table of the regression model (Table 19) shows that the relationship was statistically significant ($F_{(2, 394)} = 207.35, p < .001$). This means the model is statistically fit.

Table 19. ANOVA of the Regression Model

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	52.671	2	26.336	207.345	.000 ^a
Residual	49.789	392	.127		
Total	102.461	394			

Looking at the coefficients (Table 20) the contributions of the G10 Math ($t = 10.425, p < .001$) and G10 English ($t = 15.27, p < .001$) were statistically significant. This shows that the Grade 10 Math and English were able to predict the G10 GPA as opposed to grade 8 Math and English.

Table 20. Coefficients of Grade 10 English and Math

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.207	.079		15.334	.000
Grade 10 English	.334	.022	.547	15.270	.000
Grade 10 Math	.284	.027	.373	10.425	.000

a. Dependent Variable: Grade 10 GPA

5. DISCUSSION, CONCLUSION AND RECOMENDATION

5.1 Discussion

In this part of the study, four research questions and one hypothesis study in the form of question has been mentioned in chapter one .The study sets out to evaluate the predictive capacity of grade 8 regional examination achievement score obtained by students who took PSLCRE in 2000E.C. on their EGCESE GPA performance. Its main purpose was to investigate the predictive validity of PSLSRE mean score , PSLSRE English and PSLSRE Mathematics . Statistical method such as descriptive statistics, correlation analysis and multiple regression analysis have been employed and discussion on the finding of the result s are presented as follows:-

According to the researcher most important issue for a test is to show predictive validity and the main function of such study is to find out the degree of relationship that exists between the predictor variable and criterion measure .to find out the degree of relationship between the two variables .This study employed correlation analysis method and calculated the relationship between the variable.

The first question is concentrated on assessing the PSLCRE as a whole wheather there is a relationship between EGCESE GPA. These section of the study deals with examining statistical result that are directed to provide solution to above question .Data collected on a total of 400 student from 3 governmental schools were analyzed to arrive at certain result that may either confirm or invalidate the questions raised .as

to analysis ,commonly employed statistical tools such as correlation and regression analysis have been used.

The computation of correlation on coefficient demands for a test of statistical significant to determine whether there exists correlation between the two variables for data are shown in table 9 , a 2 tailed and correlation is significant at 0.01 level ,that is statistical significant positive relationship between the two scores. The correlation between grade 8 (PSLCRE) as a whole and grade 10(EGCESE GPA) was found strongest ($r=.602, P< 0.01$) when compared with individual subjects relationship or overall performance in PSLCRE mean score tends to have a high capacity to predict performance in EGCESE GPA than PSLCRE English and Mathematics .Table 11 revealed that PSLCRE average score significantly predicted EGSECE GPA ($F_{(1,394)}=223.48, p<001$) .The coefficient of association (r^2) attributed to PSLCRE mean score was 36.2% and this indicates that PSLCRE mean score were found to be relatively better predictors of future performance(see table 10).

Concerning research question number 3 and question number 4 to answer question it has been tried to answer them by using Pearson correlation coefficient in determining index of individual relationship of PSLCRE English and PSLCRE Mathematics with EGCESE GPA .Correlation between PSLCRE Mathematics score and EGCESE GPA was $r= 0.248$.This is weak and lowest correlation obtained when compared to English (Table 9) and the degree of association (r^2) of the Mathematics score obtained by the candidates of PSLCRE was as low as 6.15% and the correlation value of this variables shows that ,even if exhibited significant relationship between the variables , its ability to predict future performance was found to be lesser than that of the English scores.

The relationship between PSLCRE English score and EGSECE GPA was also low and relatively better than prediction power in future performance of students. This result was actually found to be consistent with the finding of Legese (2006) who suggest that English test in the EHEECE GPA is relatively better prediction power in future performance of students . It is concluded from ANOVA of the regression model that (Table 11) all of the three independent variables (PSLCRE English , Mathematics and average score)jointly contribute 36.3% of the total variance in the students' performance on dependent variable (EGSECE GPA) based on R^2 value .as can be seen from Table 14 however, the PSLCRE English and Mathematics individually contribute very low betta value (B) .For instance PSLCRE English account for only 2.1% while PSLCRE Mathematics could explain 3.7 % which is negative.

The result of the present study doesn't agree with past similar study dealing with predictive validity of Osun State (Nigeria) finding of Faley and Afolabi(2005) which suggesstes that JSCE is a poor predictor of student s' performance in the SSCE and JSCE English language and mathematics have a greater capacity to predict performance in SSCE. On the other hand this finding is consistent with the finding of Legese(2006) which suggesstes that EHEECE Mathematics and English scores have weak predictive quality in predicting colleague CGPA.

5.2 Conclusion

In the light of the absence of past studies on the Predictive validity of PSLCRE, the finding of this study is highly tentative, therefore , exploration can be done by using the same or different criterion measures .In general the main purpose of this paper is to find out whether the achievement scores of PSLCRE average ,including some grade 8 English and grade 8 mathematics predict further performance of EGSECE GPA or

not. The study involved 400 sample students who sat for PSLCRE in the 2008/2009 academic year and took EGSECE in 2010/2011 academic year.

To evaluate and interpret the data statistical method such as descriptive statistic was used to analyze the feature of the data, correlation analysis employed to determine whether there exists correlation between dependent and independent variables, and a multiple regression analysis to examine further analysis of variables using a model that can accommodate more than two predictor or to examine independent variables individually or jointly in predicting the dependent variables.

Based on the key finding and discussion, conclusions from the results were presented:-

1- PSLCRE Mathematics and PSLCRE English language has relatively low but significant correlation between PSLCRE and EGSECE GPA score.

2- PSLCRE mean score has a greater capacity to predict performance in EGSECE GPA than PSLCRE English language and Mathematics.

3- The study indicates that there is strong positive relationship between student academic achievement of PSLCRE and EGSECE GPA. The Correlation coefficient between them is $r=0.602$, which tells us PSLCRE mean score as a whole is a valid instrument to measure Harari Region student's academic success.

4- The inclusion of EGSECE Mathematics and English language raises the prediction from 36.3% to 58.9% which is highly significant when their individual proportion variance is taken. Grade 8 English language and Mathematics shows $r=0.36$ and $r=0.248$ but when they are taken together they contribute 58.9%

5.3 Recommendations

- This study has shown that PSLCRE mean score as a whole (not individual subject) provide evidence for its prediction power, it is advisable to give more weight for the validity of each subject exam specially assigning some weight to compulsory subject (English and Mathematics) for improving to better achievement.
- According to prediction power of Mathematics and English subjects of PSLCRE may have high cognitive complexity that may be higher than the candidate's level of comprehension, so to improve the predictive validity of these two subjects it needs conducting pretest and post test for the items.
- Teachers who teach English language and Mathematics must be encouraged in order to increase the student's achievement by using different strategy i.e. using different teaching methodology, upgrading and building their capacity
- The validity of these two compulsory subjects (English and Mathematics) examinations must be revised using item analysis (item discrimination power)
- It may be useful to conduct a similar study using the PSLCRE in all regions of the country.
- To improve the validity of the PSLCRE it is useful to develop test developer's skill.
- Further investigation would be needed on the quality of English language and Mathematics items of PSLCRE being conducted by Harari region.

- Further research should be done to determine why the PSLCRE English and Mathematics did not predict EGSECE GPA
- Weight should be given to PSLCRE English and Mathematics subjects
- Further research should be done with respect to item analysis of PSLCRE to improve its predictive power

- Afolabi, B. A., Faleye, B.A (2007) The predictive validity of Osun state junior secondary certificate examination (Educational journal of research in educational psychology, no-5), Nigeria
- Aggrawal, (1996), principle, method and technique of teaching (Vikas, Publishing house PVT .LTD) India
- Airasian, (2003), Testing and Evaluation candidates (Mc master University), Canada Educational Research
- Anastasi and Urbina. S (2003). Psychological Testing (7th ed.) Prentice Hall of India Private Limited, New Delhi, India
- Approach*. Thousand Oaks, CA: Sage.
- Bloom, (1954). Taxonomy of Educational Objectives, (The Classification of educational goals, Hand book 1: Cognitive Domain) David , McKay Company, New York
- Blooms, B.S, (1954), The Thought Processes of Students in Discussion, (Harper and Brown) New York
- Brown , F.G (1983). Principle of Educational & Psychological Testing (3rd ed.) N.Y CBS College Publishing
- Desalegn Chalchisa (1991) predictive validity of secretarial test given by the institute of educational research in AAU Master Thesis unpublished , AAU
- Don Meagher (2008) *Miller Analogies Test* Predictive Validity Study General Report
- Ebel & Frisbie, D.A (1991). Essential of Education Measurement.
- Elley. W.B (1972) External Examination And Internal Assessment (NZCER) Wellington
- Faloye, E.K. (1987) Factor Affecting Candidates Performance in WAEC , May-June GCE(01) English Language Examination (WAEC Seminar paper vol.5, October 1987) Yaba Lagos WAEC
- Fantu Meles, Zelalem Fikadu, Belay Tefera, Dec. 1996: Some Alternative Predictors of Freshman GPA along With the ESLCE in Ethiopia Institution of Higher Learning. Ethiopian Journal of Education. Vol, XVI, No 2

- Gronlund N.E (1985) *Measurement and Evaluation in teaching* , Newyork: Macmilan publishing company and Thomas Kellghon (1995) "Equity Issue in Public Examination in Developing Country "World Bank Technical Paper No.272 Washington D.C(unpublished)
- Gronlund, N.E. (1981) *Measurement and Evaluation in Teaching* (fourth edition). New York: Collier Macmillan
- Hakkinen L (2004). Do university entrance examination predict academic achievement ?Labour institute of Econ. Res. Discussion paper 205.
- Halwen, (2007), Predictive Validity of an English Language Arts Performance Assessment (CRUSSI University of California) Losangeles.
- Harari Education Bureau(2006). Measurment & Evaluation Guideline.Harar unpublished
- Harold F. Rahmlow and Katheryn K. Woodley (1979). *Objectives-Based Testing: A Guide to Effective Test Development*. Educational Technology Publications. Englewood Cliffs, N.J .
- Hilgard,E.R,(1948),Theories of learning ,(Applon,century-crofts) Newyork
- Institute of education research AAU 1998
- JAMB (2002), I identification and Appraisal of Academic Skill that are essential for good performance at university level in Nigeria.(research report No-5)Abuja
- Kebede Adera, (1991). The prediction of the academic achievement of student from high school Grade Point Average (GPA),ESLCE and selected aptitude test in junior college of commerce , Master Thesis unpublished, AAU
- Kim MBS(2007). Variables predicting students'first semester achievement in a Gradute- entry Dental School in Korea.J.Den.Educ.,71(4):550-556.
- Lane, S., Liu, M., Ankenmann, R. D., & Stone, C. A. (1996). Generalizability and validity of a mathematics performance assessment. *Journal of Educational Measurement*, 33(1),71-92

- Legese Getachew, (2006). The Predictive Validity of EHEECE total score forecasting casting performance of students in their college study, Master Thesis unpublished, AAU.
- Lindeman, R.H and Merenda, P.F Educational measurement (2nd Edition, 1979)
- Meagher .D, (2008). MAT predictive study report, (NCS), Pearson. Inc
- Mehrens W.A, and Lehmann, I.U Measurement and evaluation in education and psychology (3rd edition) N.Y:Holt Rinehart and Winston ,1984
- Mehrens W.A, and Lehmann, I.J(1991) Measurement and evaluation in education and psychology (4th edition)N.Y Harcourt Brace College Publishers.
- Meister, D. (2004). *Conceptual foundations of human factors measurement: Human Factors and ergonomics*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Mills G.E (2006) Handbook of Psychology Vol.7 (Educational Psychology) U.S.A
- Ministry of Education, (1994). Education & Training Policy. Adis Ababa: EMPDA
- Netteles, M.T, Thoeny, A.R, and Gosman E.J.(1986) Comparative and Predictive Analysis of Black and White Student College Achievement Experience (Journal of education 57) p, 287-318) Newjericy,prentice Hall Inc., Englewood Cliffs.
- Nitko(1983),A.J Educational Test and Measurement :An introduction N.Y Hart Court Brace Jovanovich, Inc ,1983
- Noble, J. (2003). *The effects of using ACT Composite score and high school average on college decisions for racial/ethnic groups*. (ACT Research Report 2003-1). Iowa City, IA: ACT
- Obioma G.& Salau M.,(2007),The predictive Validity of Public Examination (A case study of Nigeria) Abuja Nigeria
- Osuju & Okonkwo. C.A. (2006), Mesurment & Evaluation
- Richar S.Brown(2007),the predictive validity of selected benchmark assessment used in the Mid –Atlantic region (university of southern university),USA dep.of Education

- Salami .A .(1990) Test Development Process The WAEC experience in Test Development and Administration Process .in Nigeria .Problem and solution
- Sax.G .(1997) Principles of Educational & Psychological Measurement & Evaluation (4th edition).Wabswortx Publishing , Com.
- Shenkute Mamo (1995) Assessment of Teacher Made Tests in Grade1-8 in the southern nations nationalities and people regional government, quality of education in Ethiopia, vision for 21st century
- Suter, W. N. (2006). *Introduction to educational research: A critical thinking*
- Tamiru Gelete (1992) The Predictive Validity of The Selection Criteria of Catering and Tourism Training Institution , Master Thesis unpublished ,AAU
- TGE, (1994). *Education and Training policy*. Addis Ababa: EMPDA
- Thorndike R.L and Hagen, E.P (1977). Measurement and Evaluation in Psychology and Education 4e. New York: John Wiley & Sons.
- Tibebe Alemayehu (1992).The Predictive Validity of the Ethiopian School Leaving Certificate Examination's English and the Integrative Tests:Comparative Study.Ethiopian Journal of Education ,Vol.13(1) 69-86
- Torrington, D. & Hall, L. (1991). Personnel Management – A New Approach (2nd Edn.) Hemel Hempstead: Prentice Hall
- Wang.D and Wang J. and Neams J. (2007) Predictive Validity of an English Language Arts Performance Assessment /UCLA/ (University of California), Losangles. Yaba (Lagos) WAEC

Appendix-1A

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
1	Abadir	47	27	35	1	2	2.21
2	HSSS	44	41	63	2	2	2.71
3	HSSS	48	14	52	2	2	2.42
4	Abadir	26	15	41	4	2	3.14
5	Abadir	32	12	39	3	3	2.52
6	HSSS	30	27	44	3	2	2.52
7	HSSS	33	33	54	2	2	3.14
8	Abadir	33	20	45	2	2	2.14
9	HSSS	18	18	36	2	2	2.14
10	HSSS	26	29	51	4	4	4.00
11	Abadir	21	18	43	2	3	2.85
12	Abadir	42	32	68	4	3	3.85
13	Abadir	35	17	49	4	2	3.71
14	HSSS	48	30	54	3	2	2.42
15	HSSS	30	26	42	3	3	2.42
16	Abadir	35	27	50	2	4	2.28
17	Abadir	39	30	47	2	2	2.14
18	Abadir	35	26	41	4	3	3.42
19	HSSS	20	27	49	2	2	3.42
20	Abadir	31	18	41	2	2	2.14
21	Abadir	41	27	63	4	2	3.28
22	HSSS	30	29	60	3	2	2.42
23	HSSS	40	18	57	2	2	2.57
24	HSSS	34	23	52	3	2	2.28
25	HAMARESSA	29	32	43	2	4	2.42
26	HSSS	41	32	60	4	3	3.85
27	HSSS	33	24	45	2	2	2.14
28	Abadir	21	35	43	2	2	2.57
29	HSSS	36	29	53	4	2	2.71
30	Abadir	34	18	49	3	1	2.85
31	HSSS	39	24	49	3	2	2.28
32	HSSS	28	20	40	2	4	2.85
33	HSSS	42	21	42	4	2	3.00
34	HSSS	37	27	59	4	2	3.57
35	HSSS	25	38	50	3	2	2.42
36	HSSS	32	30	45	4	2	2.57
37	HSSS	35	14	37	2	2	2.14
38	HAMARESSA	26	21	38	2	2	2.14
39	HAMARESSA	29	30	38	2	2	2.28
40	HAMARESSA	21	23	40	2	2	2.07

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
41	HSSS	22	23	48	2	2	2.57
42	HSSS	36	26	48	2	2	2.14
43	HSSS	36	21	42	2	3	2.28
44	HSSS	47	14	53	2	2	2.57
45	HSSS	31	32	59	2	2	2.85
46	HSSS	28	24	56	3	2	2.29
47	HSSS	44	14	49	3	2	2.71
48	HSSS	48	38	71	3	4	3.85
49	HSSS	29	33	40	1	2	2.28
50	HSSS	35	30	54	2	2	2.85
51	HSSS	37	26	54	4	2	3.71
52	HSSS	45	26	35	1	2	2.28
53	HSSS	24	26	38	2	2	2.14
54	HSSS	30	33	59	2	1	2.85
55	HSSS	35	24	48	3	2	2.57
56	HSSS	41	29	50	2	2	3.80
57	HSSS	44	41	73	4	4	4.00
58	HSSS	45	41	70	4	3	3.71
59	HSSS	32	26	41	2	2	2.14
60	HSSS	32	33	35	2	2	2.57
61	Abadir	34	41	67	4	4	4.00
62	HAMARESSA	41	26	60	2	2	2.57
63	HAMARESSA	28	30	48	4	2	2.42
64	HSSS	47	29	46	2	2	2.28
65	HSSS	48	38	68	2	4	3.71
66	HAMARESSA	18	20	37	2	1	2.42
67	Abadir	34	23	49	2	2	2.41
68	HSSS	34	21	48	3	3	3.37
69	HSSS	19	27	39	2	2	2.14
70	HSSS	49	36	67	4	3	3.42
71	HAMARESSA	20	42	36	2	2	2.14
72	HAMARESSA	34	29	58	2	1	2.28
73	HSSS	46	35	63	2	3	3.00
74	HSSS	42	26	58	4	2	3.28
75	HSSS	41	21	59	2	2	2.14
76	HSSS	23	23	37	2	3	2.42
77	HSSS	37	23	40	4	2	3.14
78	HSSS	23	36	48	2	2	2.14
79	HSSS	29	20	44	2	1	2.14
80	HSSS	37	17	50	3	2	2.81
81	HSSS	41	23	48	2	2	2.14
82	HAMARESSA	28	26	46	2	2	2.42

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
83	Abadir	31	26	52	3	3	3.28
84	Abadir	33	24	46.5	2	2	2.28
85	Abadir	28	24	45	2	3	2.42
86	HSSS	36	26	62	4	2	2.71
87	HSSS	47	36	74	4	4	4.00
88	HSSS	30	21	44	3	2	2.42
89	HSSS	24	15	41	1	2	2.28
90	HSSS	38	33	59	2	3	3.00
91	HAMARESSA	34	26	50	2	2	2.29
92	HSSS	37	17	38	2	2	2.57
93	HSSS	34	38	56	3	4	3.85
94	HSSS	30	18	46	3	2	3.00
95	HSSS	46	29	48	3	2	2.42
96	HSSS	24	32	50	3	2	2.71
97	HSSS	26	20	43	2	2	2.14
98	HSSS	44	27	63	4	2	3.00
99	Abadir	25	35	51	2	2	2.24
100	Abadir	21	14	36	2	2	2.42
101	HSSS	25	48	41	2	2	2.57
102	HSSS	29	20	47	2	2	2.37
103	HSSS	19	29	44	4	3	3.28
104	HSSS	27	24	45	3	2	2.71
105	Abadir	35	20	36	2	2	2.14
106	Abadir	41	24	40	2	2	2.57
107	HSSS	41	27	39	2	2	2.28
108	HSSS	30	44	54	4	2	3.14
109	Abadir	35	27	39	2	2	3.00
110	Abadir	30	33	70	4	3	3.57
111	Abadir	30	23	40	3	3	2.85
112	HSSS	10	39	35	3	1	2.85
113	HSSS	34	12	35	2	2	2.28
114	HSSS	33	17	40	4	2	3.00
115	HSSS	27	32	42	2	2	2.52
116	HSSS	22	18	38	3	2	2.71
117	Abadir	22	41	47	2	3	2.42
118	HSSS	20	17	38	2	2	2.28
119	HSSS	24	36	49	3	3	2.71
120	HSSS	24	32	45	3	2	2.42
121	HSSS	38	32	67	4	4	4.00
122	HSSS	29	21	47	2	2	2.28
123	HSSS	23	32	48	3	3	2.42
124	HSSS	27	23	36	2	4	3.57

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
125	HAMARESSA	21	35	40	2	2	2.71
126	HSSS	41	12	37	2	2	2.14
127	HSSS	43	30	63	4	2	3.42
128	Abadir	14	24	38	2	2	2.14
129	Abadir	27	21	42	2	2	2.28
130	Abadir	35	15	41	2	2	2.28
131	HSSS	34	33	44	2	2	2.42
132	HSSS	22	18	49	4	2	2.71
133	HSSS	24	33	52	3	2	2.57
134	HSSS	33	14	43	3	2	2.71
135	HSSS	28	33	52	2	2	2.71
136	HSSS	32	26	56	3	4	3.28
137	HSSS	52	27	66	3	2	2.85
138	Abadir	43	30	58	2	1	2.14
139	HSSS	46	23	62	4	2	3.57
140	HSSS	30	33	42	4	2	3.00
141	HSSS	30	17	42	2	2	2.42
142	Abadir	37	23	38	2	2	2.42
143	Abadir	24	11	40	2	2	2.42
144	Abadir	35	23	43	3	2	2.71
145	HSSS	28	39	48	2	2	2.57
146	HSSS	37	27	48	4	2	3.00
147	HSSS	28	21	45	3	2	2.28
148	HSSS	34	15	43	2	3	3.57
149	HSSS	48	29	67	2	2	2.28
150	Abadir	20	29	51	2	2	2.57
151	Abadir	35	17	49	3	2	2.85
152	HSSS	35	17	48	3	2	2.42
153	HAMARESSA	32	26	50	2	2	3.42
154	HSSS	24	23	44	3	4	2.57
155	HSSS	34	26	52	3	4	3.85
156	HAMARESSA	24	24	42	2	3	3.00
157	HSSS	47	30	64	3	2	3.28
158	HSSS	40	20	42	2	3	2.57
159	HSSS	40	17	39	2	2	2.71
160	Abadir	17	29	46	2	2	2.57
161	HSSS	22	15	46	4	2	3.00
162	HSSS	30	33	54	3	1	2.57
163	HSSS	46	29	47	3	1	3.00
164	HSSS	31	19	46	2	2	2.71
165	Abadir	27	24	43	2	3	2.57
166	HSSS	32	32	56	4	3	3.57

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
167	HSSS	28	12	37	3	2	3.00
168	HSSS	45	27	47	2	2	2.57
169	HSSS	20	26	54	3	3	2.57
170	HSSS	46	26	41	2	2	2.57
171	HSSS	42	29	54	3	2	2.85
172	HSSS	46	24	42	1	2	2.42
173	HSSS	38	26	61	4	2	2.85
174	HSSS	47	41	81	4	2	2.42
175	HSSS	24	36	47	2	2	2.28
176	Abadir	39	38	60	2	2	2.28
177	HSSS	39	29	59	2	2	2.71
178	HSSS	41	27	60	3	4	3.85
179	HSSS	27	44	52	2	3	2.57
180	HSSS	19	18	38	2	2	2.14
181	HSSS	27	26	48	4	2	3.00
182	HSSS	20	21	45	2	2	2.42
183	Abadir	34	11	46	3	3	3.00
184	HAMARESSA	35	21	52	2	2	2.14
185	HAMARESSA	28	41	43	2	2	2.14
186	HAMARESSA	45	32	66	4	2	2.85
187	Abadir	23	20	39	2	2	2.42
188	HSSS	37	26	56	2	3	3.14
189	Abadir	32	21	46	2	2	2.14
190	Abadir	29	20	59	4	2	3.42
191	HSSS	30	20	46	2	2	2.71
192	Abadir	21	24	41	2	2	2.57
193	HSSS	31	20	44	2	2	2.14
194	HSSS	41	27	50	2	2	2.14
195	HSSS	29	23	39	3	3	2.14
196	HAMARESSA	30	45	49	2	2	2.57
197	HSSS	32	17	42	2	2	2.42
198	HSSS	30	32	45	2	2	2.14
199	Abadir	36	21	49	3	2	2.85
200	HSSS	28	15	48	3	2	2.42
201	HAMARESSA	38	17	50	2	2	2.42
202	HSSS	27	32	44	3	4	2.57
203	HSSS	41	18	52	3	4	3.85
204	HAMARESSA	27	20	42	2	3	3.00
205	HSSS	33	30	64	3	2	3.28
206	HSSS	28	33	49	2	3	2.57
207	HSSS	36	11	39	2	2	2.71
208	Abadir	33	20	46	2	2	2.57

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
209	HSSS	42	38	83	4	2	3.00
210	HSSS	50	30	54	3	1	2.57
211	HSSS	27	35	47	3	1	3.00
212	HSSS	26	26	46	2	2	2.71
213	Abadir	29	23	43	2	3	2.57
214	HSSS	42	29	56	4	3	3.57
215	HSSS	32	20	48	3	2	3.00
216	HSSS	40	21	47	2	2	2.57
217	HSSS	30	17	54	3	2	2.57
218	HSSS	34	20	41	2	2	2.57
219	HSSS	47	18	54	3	2	2.85
220	Abadir	25	17	42	2	1	2.42
221	HSSS	34	27	61	4	2	2.85
222	HSSS	22	14	45	4	2	2.42
223	HSSS	36	14	47	2	2	2.28
224	Abadir	30	29	60	2	2	2.28
225	HSSS	24	45	59	2	2	2.71
226	HSSS	38	24	60	4	3	3.85
227	HSSS	32	27	52	2	3	2.57
228	HSSS	33	24	38	2	2	2.14
229	HSSS	35	39	48	4	2	3.00
230	HSSS	31	29	45	2	2	2.42
231	HSSS	20	30	38			
232	Abadir	39	20	45	4	3	2.85
233	HAMARESSA	33	35	45	3	2	2.85
234	Abadir	33	32	71	3	2	3.57
235	HSSS	44	26	57	3	2	2.71
236	HSSS	38	17	44	2	3	2.57
237	HAMARESSA	23	35	48	2	2	2.57
238	HSSS	36	20	44	2	4	2.57
239	HSSS	28	18	35	2	2	2.28
240	Abadir	33	18	53	2	1	2.85
241	HSSS	31	27	47	2	2	2.28
242	HSSS	34	21	42	2	2	2.14
243	HSSS	29	9	43	3	1	2.42
244	Abadir	49	35	68	3	3	3.42
245	Abadir	45	32	58	2	2	3.42
246	Abadir	30	23	56	4	4	3.57
247	HSSS	45	36	53	2	2	3.57
248	HSSS	59	35	69	4	4	4.00
249	HSSS	33	23	39	2	2	2.28
250	HSSS	33	23	56	4	2	3.14

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
251	HSSS	43	42	69	4	2	3.71
252	HSSS	41	26	46	2	1	2.42
253	HSSS	32	29	46	3	2	2.28
254	HSSS	47	29	49	4	2	2.71
255	HSSS	26	18	49	2	2	3.14
256	HSSS	27	23	53	3	2	
257	HSSS	36	23	53	4	2	2.28
258	HSSS	15	27	40	3	2	2.24
259	Abadir	31	29	36	2	1	2.29
260	HSSS	26	33	50	3	2	2.70
261	HSSS	32	29	37	3	2	2.28
262	HSSS	23	24	37	2	2	2.42
263	HSSS	40	18	50	4	2	3.28
264	HSSS	27	26	54	2	2	2.14
265	HSSS	19	26	40	2	2	2.14
266	Abadir	26	29	39	1	3	2.43
267	HSSS	34	21	42	2	2	2.42
268	HSSS	26	24	42	2	2	2.42
269	HSSS	33	32	50	2	2	2.85
270	HSSS	14	30	40	2	2	2.14
271	Abadir	39	23	46	2	2	2.14
272	Abadir	37	17	51	3	2	3.14
273	HSSS	43	29	40	2	3	2.71
274	HSSS	55	33	73	4	3	3.85
275	HSSS	20	14	38	2	2	2.42
276	Abadir	27	29	54	4	2	2.85
277	HSSS	43	33	60	3	4	3.14
278	HSSS	30	21	46	3	4	3.71
279	HSSS	22	21	37	2	2	2.14
280	HSSS	27	27	47	4	2	2.85
281	HSSS	19	27	54	4	2	3.42
282	HSSS	30	18	46	2	2	2.42
283	HSSS	36	39	59	3	2	3.28
284	HSSS	24	17	39	3	1	3.57
285	HSSS	39	26	61	4	2	3.42
286	HSSS	45	30	46	2	2	2.10
287	HSSS	40	20	54	4	2	3.42
288	HSSS	47	36	71	4	4	4.00
289	HSSS	34	20	46	3	2	2.85
290	HSSS	46	21	48	2	2	2.28
291	HSSS	26	33	49	2	2	2.42
292	HSSS	40	26	58	4	2	3.14

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
293	HSSS	25	33	39	2	2	2.71
294	HSSS	27	33	37	2	2	2.14
295	HSSS	58	48	88	4	4	4.00
296	HSSS	23	35	43	2	2	2.42
297	Abadir	44	26	55	3	2	2.88
298	HSSS	32	20	55	4	1	3.28
299	HSSS	44	23	40	2	2	2.42
300	HSSS	18	26	38	4	2	2.57
301	HSSS	26	23	42	2	2	2.14
302	HSSS	40	26	65	3	2	2.42
303	HSSS	28	32	52	4	3	3.85
304	HSSS	17	20	43	4	2	3.28
305	HSSS	38	17	51	3	2	3.42
306	HSSS	24	33	56	2	2	2.42
307	HSSS	39	29	67	3	2	3.57
308	HSSS	35	21	58	2	3	2.71
309	HSSS	32	32	45	2	2	2.14
310	HSSS	32	27	56	3	2	2.85
311	HSSS	26	27	49	2	2	2.42
312	HSSS	38	33	58	4	2	3.14
313	HSSS	28	14	39	2	2	2.71
314	HSSS	31	23	37	2	2	2.14
315	HSSS	52	44	88	4	4	4.00
316	HSSS	31	21	43	2	2	2.42
317	Abadir	37	29	55	3	2	3.00
318	HSSS	44	24	55	4	1	3.28
319	Abadir	45	32	65	3	2	2.88
320	Abadir	20	26	44	4	2	2.42
321	HSSS	28	17	41	2	2	2.28
322	HSSS	27	20	39	3	2	2.85
323	HSSS	21	27	51	3	3	2.57
324	HSSS	20	23	42	3	2	2.85
325	HSSS	26	21	46	4	2	2.71
326	HSSS	24	23	41	2	2	2.42
327	Abadir	34	21	46	1	2	2.28
328	Abadir	37	26	53	2	2	2.28
329	HSSS	21	23	44	3	2	2.42
330	HSSS	31	27	54	2	2	2.71
331	HSSS	42	24	57	3	2	3.42
332	HSSS	40	18	58	4	2	3.14
333	HSSS	22	20	38	2	2	2.14
334	HSSS	35	24	54	3	2	2.57

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
335	HSSS	24	27	40	2		
336	Abadir	26	20	41	2	2	2.14
337	HSSS	29	17	38	2	3	2.14
338	HSSS	45	26	42	2	2	2.85
339	Abadir	24	18	46	3	4	3.42
340	HSSS	30	23	43	2	2	2.57
341	HSSS	35	21	51	3	2	2.71
342	HSSS	27	23	45	3	3	2.85
343	HSSS	24	20	52	2	3	2.85
344	Abadir	32	27	54	2	2	2.57
345	HSSS	29	30	39	2	2	2.42
346	Abadir	27	23	44	4	2	2.42
347	Abadir	35	32	64	1	2	3.00
348	HSSS	34	15	36	2	3	2.42
349	Abadir	29	33	40	2	2	2.57
350	HSSS	50	21	67	4	3	3.85
351	Abadir	24	23	56	3	4	3.65
352	HSSS	35	15	49	2	2	2.71
353	HSSS	34	23	58	3	2	3.14
354	HSSS	37	33	66	4	2	3.57
355	HSSS	41	39	72	4	3	3.85
356	HSSS	36	38	52	2	2	2.85
357	HSSS	47	27	48	3	2	3.00
358	HSSS	27	23	44	3	2	2.42
359	HSSS	52	17	61	4	2	3.52
360	HSSS	33	18	53	3	2	2.42
361	HSSS	39	21	66	4	3	3.85
362	HSSS	19	27	36	2	2	2.14
363	HSSS	30	24	44	4	2	2.85
364	HSSS	30	21	43	4	2	2.57
365	HSSS	31	21	58	4	2	2.57
366	HSSS	21	21	40	2	2	2.28
367	HSSS	39	17	47	2	2	2.28
368	Abadir	47	33	63	3	4	3.00
369	HSSS	26	20	47	2	2	2.71
370	Abadir	43	45	69	4	4	4.00
371	Abadir	27	21	38	1		2.00
372	HSSS	17	20	41	3	2	2.14
373	HSSS	25	27	41	2	2	2.14
374	HSSS	35	29	50	2	2	2.42
375	HSSS	27	21	42	3	2	2.57
376	HSSS	37	26	59	2	2	2.42

CODE	School Name	GRADE 8 Eng	GRADE 8 Math	GRADE 8 Mean	G10 Eng	G10 Math	G10 Gpa
377	HSSS	29	23	42	3	2	2.42
378	HSSS	24	18	36	2	3	2.14
379	HSSS	46	29	72	4	3	
380	Abadir	35	33	55	3	1	
381	HSSS	39	21	48	2	2	2.28
382	HSSS	34	20	62	4	2	2.85
383	HSSS	28	20	41	2	3	2.42
384	HSSS	29	29	56	3	2	2.85
385	HSSS	41	26	43	2	2	2.28
386	HSSS	40	21	43	3	1	2.85
387	HSSS	33	27	58	4	3	3.28
388	HSSS	32	17	50	3	3	3.28
389	HSSS	27	24	36	3	2	3.28
390	HSSS	34	17	46	3	2	2.42
391	HSSS	36	24	43	2	2	2.57
392	HSSS	26	15	40	2	2	2.71
393	HSSS	42	36	69	4	4	4.00
394	HSSS	25	36	52	2	2	2.28
395	HSSS	25	20	51	4	2	2.57
396	HSSS	24	24	47	2	2	2.42
397	HSSS	44	30	61	2	3	3.00
398	HAMARESSA	24	18	37	2	2	2.85
399	HSSS	28	32	40	2	2	2.14
400	HSSS	44	15	43	2	2	2.42

APPENDIX 1B: 2000 E.C PSLC EXAMINATION SCORE

Reg.no	School Name	Student Name	Total score	English	Maths

2002 E.C EGSC ESE EXAMINATION SCORE

APPENDIXE 2A

Frequency distribution of English Score

Score	Frequency	%age
10-20	26	6.5
21-30	147	36.75
31-40	145	36.25
41-50	76	19
>50	6	1.5
Total	400	100

APPENDIXE 2B

Frequency distribution of Mathematic Score

Score	Frequency	%age
9-19	73	18.25
20-30	234	58.5
32-41	83	20.75
42-48	10	2.5
>50	0	0
Total	400	100

APPENDIXE2C

Frequency distribution of GRADE 8mean Score

Score	Frequency	%age
35-45	164	41
46-50	89	22.25
51-60	97	24.25
61-70	38	9.5
71-88	12	3
Total	400	100

APPENDIXE 2D

Frequency distribution of EGSECE GPA

Score	Frequency	%age
2.0-2.29	96	24
2.37-2.70	120	30
2.71-3.0	95	23.75
3.14-3.71	64	16
3.8-4.0	25	6.25
Total	400	100

DECLARATION

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in any other university and that all sources of materials used for the thesis have been duly acknowledged.

Name: _____

Signature: _____

Date of Submission: _____

This thesis has been submitted for examination with my approval as a university advisor.

Name: _____

Signature: _____

Date: _____