

**FACTORS AFFECTING EGSECE ACHIEVEMENT OF
STUDENTS IN EASTERN ZONE OF TIGRAY
NATIONAL REGIONAL STATE**

BY

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ABSTRACT

The main purpose of this study was to describe the factors affecting EGSECE achievement of students. The study was carried out with specific reference to six secondary schools and two TVET centers of Eastern Zone in Tigray region National State. To this end, the descriptive survey approach was employed as the study method. The total participants of the study were 514. A questionnaire was administrated among to 338 students and 82 teachers. Seven secondary school principals, and seven Woreda education office experts were interviewed; and focus group discussions held among ten students from each of the selected educational institutions. Sample secondary schools and respondents were selected using simple random stratified, purposive and availability sampling techniques. Document analysis, Likert 5-scale closed ended questionnaire, unstructured interview and focus group discussion were used as major tools of the data collection. The information gained through these data gathering tools were analyzed by frequency accounts, percentage distribution, mean and mean rank. Spearman rank correlation coefficient, weighted mean rank and descriptive statement were also employed. Chi-square was employed to test the degree of difference of two groups of respondents. Results indicated, the EGSECE achievement pass rate of students did not show series trend, that is inconsistency in consecutive five years in sample secondary schools. The major factors that affect the EGSECE result students were lack of interest students in learning, lack of commitment and interest of teachers in teaching, lack of parent involvement, support and awareness in school activities, shortage of instructional materials and school facilities; poor school management and overcrowded of classrooms ranked one to six respectively. School management, teachers and parents attempt less effort to overcome the low result of students' cooperatively. High achieving students were six times less than those who achieve low EGSECE results. Therefore, the researcher recommended for, students, teachers, school principals, parents, Woreda education office experts, Woreda administration, and Tigray state education bureau in collaboration with Ministry of Education and NGOs join hands and exert extra effort so that students could perform well on national exams by executing necessary school facilities and materials, training school management and laboratory technicians, and providing additional incentives to teachers like house allowance and stretching career structure.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Education is the key instrument for over all development of one country. It is a means of change and corner stone of economic, social, political and cultural development. The future development of any country is greatly determined by the degree of intellectual development of its young generation. Intellectual maturity is determined by skill, competence, knowledge and behavior that young people acquire in school. Learners' achievement is crucial to meeting the objectives of education.

Accordingly, the following objectives of general secondary education are stated in the Education and Training Policy document (TGE, 1994:14-15):

- 1) Providing a graded general education that will enable the students to identify their needs, interests, and potentials so that they can choose their field of study.
- 2) Enabling students to continue further education and training, preparing citizens who can be involved in the production sector with advanced vocational training.

To achieve educational objectivities , general secondary education is offered for two years namely, grade 9 and 10. Upon complete of the general secondary education, students sit for a national examination known as Ethiopian General Secondary Education Certificate Examination(EGSECE). The EGSECE include exams on nine academic subjects (i.e. Amharic, English, Math, Biology, Chemistry, Physics, Geography, History and Civics); four exams on regional languages (i.e. Tigrigna, Afan Oromo, Harari, and Agnuak); and two other language Geez and French (MoE, 2002: 15). This exam determines whether students can continue to higher education or join TVET institutions. This encourages competitiveness, which in turn contributes to the quality of education.

According to Frederic (1981:2) learning achievement is the knowledge, understanding and skills acquired as a result of specific educational objectives. To obtain these objectives in particular and the goals of education in general, necessarily to know the factors affecting the result. Many factors are believed to have a strong influence on student achievement, but the specific characteristics that affect student achievement are hard to identify. However, Some factors like the characteristics of teachers, competence of students adequate instructional materials and school facilities, relevant and appropriate curriculum, parent involvement, optimum class size and competency school management are very crucial. The absence or the inadequacy of the above conditions may impede EGSECE achievements. Looking into these factors thus is imperative.

1.2 Statement of the Problem

The Ethiopian General Secondary Education Certificate Examination (EGSECE) at grade 10 is a recent phenomenon which was introduced in 2001 to be used as selection criteria for grade 11 (World Bank, 2005). Based on the achievements attained in EGSECE students are streamed into academic (preparatory) and Technical Vocational and Education Training (TVET). Those who join the academic fields are expected to sit for Ethiopian Higher Education Entrance Certificate Examination (EHEECE) after two years of preparation while the others either join the labor market or be self employed. An examination tells students how well they have mastered the course content, and, in turn, indicates the teachers what students have and have not been taught (Frederic, 1981:3). The national EGSECE pass rate varies from year to year. MoE's (2009:53) documents shows that the average national EGSECE pass rate for the six years covering 2005 to 2010 was 32.5%. Similarly state level document (TSEB, 2001:155-170) show that the average regional achievement pass rate from 2005-2009 for Tigray regional state was 32.3%. EGSECE pass rate in Eastern zone indicate that on average 63.57% of the students were unable to get pass mark that could enable them join

preparatory schools. Similarly to national and regional results the zonal EGSECE achievement of students oscillates up and down.

Variations also exist among secondary schools in general and Government and Non-Government schools. Various in-school and external factors contribute to students' achievement at EGSECE and much research is not done in this area. Thus, this study intends to look into factors that affect students' preparation to and achievement at EGSECE and will try to answer the following basic questions:

1. What are the trends of students EGSECE achievement of different years of general secondary education?
2. What are the major factors that impede result of students' in general secondary education?
3. Do school principals, teachers and parents work to address those factors cooperatively?
4. Is there statistically significant difference between high achieving and low achieving students in EGSECE results?

1.3 Objectives

1.3.1 General Objectives

The aim of this study is to investigate factors affecting students' performance in General Secondary Education National Examinations and seek ways whereby they could be addressed properly.

1.3.2 Specific Objective

- To examine the major factors affecting students' achievement in EGSECE.
- To examine the predication of the GPA result with the factors affect EGSECE students' achievement.
- To rank order the factors and show their correlation with students' achievement.

1.4 Significance of the Study

This study is important because it examines the extent to which different factors influence on the academic achievement of secondary schools. Thus the finding on the study may help to:

1. Identify factor influencing student academic achievement.
2. Provide some information for students, teachers, parents, educators and other concerned governmental and non governmental organization regarding the extent to which the factors affect EGSECE students' achievement.
3. Correlate level of influence of each factor with EGSECE results and indicate prioritize areas for intervention.
4. Serve as a spring board for further studies in the area.

1.5 Delimitation of the Study

This study is designed to examine factors affecting EGSECE achievement of students in secondary schools of Eastern zone Tigray National Regional State . The factors that affect the EGSECE achievements of students could be many and all of the factors can not be treated by this study. Hence, the study delimited to parent involvement, class size, instructional materials and school facilities, characteristics of teachers and students and school management. The Tigray National Regional State is administratively divided into seven zones. Though national and regional document are assessed, to make it manageable and due to the student researcher's prior experience, the study primarily focuses on Eastern zone of Tigray National Regional State.

1.6 Limitation of the Study

There were certain constrains that affect the study. These were time factors, scarcity of finance and poor documentation and absence of the required information to study. However, the student researcher overcome these difficulties and could complete his work on time.

1.7 Organization of the Study

This research consists of five chapters. The first chapters deals with introduction, statement of the problem, objective of the study, significance of the study, delimitation, Limitation of the study and Organization of the Study. The second chapter deals with the review of related literature to the topic. The third chapter deals with research design and method, source of data, population, sampling techniques, data analysis and interpretation techniques.

Chapter four deal with the presentation, interpretations and analysis of the data. Finally Summary, conclusions and recommendations forwarded on the basis of the analysis have been treated in the fifth chapter. Besides, bibliography, sample questionnaires and other relevant documents will be attached at the end of the chapter.

CHAPTER TWO

Review of the Related Literature

2.1 An Over View of National Examination

National examinations are instruments where successful candidates are selected for advanced studies. They are important way of *quality control* within the education system. The prospect of national examination affects students motivation to achieve, influencing the quality of his/her work; the test paper itself legitimizes the school's course of the study and shapes what teachers do in the classroom and the result form part of parents' evaluation of their children's schooling (Eckstein, 1994:155).

Public (external) national examinations have played a major role throughout the history of modern education. Most countries operate major examinations which are administered by an agency outside the school. In public examinations, information on student performance is used to make decisions about certifications and selection with selection tending to be the more important function (Kellaghan and Greaney, 1992:62). National assessments may be defined as an exercise designed to describe the level of achievements, not of individual students, but of a whole education system, or a clearly defined part of it (Kellaghen and Greaney, 1996:151) while public examinations are long standing features of education systems.

Fuller (1986:76) notes that conducting national examinations may be one device for making the issue of school quality more visible and for providing benchmarks of progress. Thus exams could become useful tools for mapping changes in students' achievement and even in discovering what school factors appear to boost pupil performance. Frederic (1981:3) also notes that national examination tells students how well they have mastered the course content and, in turn, indicates to the teacher what students have and have not learned. Traditionally assessment, certainly in the mind of education policy makers, has

been synonymous with examination conceived of as a competitive device designed to distinguish the more academically able from the less able (Hilary, 1996:1).

2.2 National Examination in Ethiopia

In Ethiopia modern public Education begun in 1908 with the establishment of the Minilik II school. The ruling elite of the period saw a close link between in country independence and the presence of Ethiopia capable of communicating with the outside world. From mid 1940s and throughout the 1950s students were expected to sit for the general school leaving certificate examination from Great Britain. By the mid 1961's the Ethiopian school leaving certificate (ESLCE) had become the only valid diploma (Tekeste, 1990: 63).

The Ethiopian school leaving certificate examinations (ESLCE) was introduced experimentally in 1947. For some years the examination was taken together with external ordinary level general certificate examination (GCE) of London University and the result of both examinations were taken to account for college entrance requirement (AAU ,1991:1). By 1956 GCE was replaced by ESLCE and the Ministry of Education worked together with subject specialists and representatives of ESLCE to produce a new curriculum and an examination syllabus more in line with Ethiopian requirements (AAU,1991:1).The ESLCE served as an instrument for both selecting candidates' of higher learning education and awarding certificate for successful completion of secondary education at grade 12.

After the down fall of Derge in 1991, a new Education and Training Policy (ETP) was modified in 1994 which changed the structure of the education system from 6+2+4 into 8(4+4) + 4 (2+2) where both primary and secondary education have sub divided into lower and upper cycles. The Ethiopian education and training policy (TGE,1994:18) states that national examination will be conducted at grade eight and grade ten to certify completion of primary and general secondary education. This practically means the selection to secondary

schools is based on results of grade 8 regional examinations. After attending and completing the first cycle of secondary education students take another national examination.

World Bank (2005:34) also indicates that grade 8 examination was regionalized in 1999 but the results continue to be used for selection to grade 9. The examinations at grade 12 were replaced in 2003 by the college entrance examination as the mechanisms for selection into post secondary education. The EGSECE was administered for the first time at national level to regular students who completed grade 10 by the year 2001 on the basis of the new curriculum designed to general secondary education (MOE, 2002:23).

2.3 Academic Achievement

Academic achievement is the knowledge understanding, and skills acquired as a result of specified educational experience (Frederic,1981:2). Moreover Frederic notes that the most important function of an achievement is to provide feedback regarding the effectiveness of learning. Academic achievements are often used as indicators of school quality because they are easily measurable using standard tests, while other outcomes may be more complex and less tangible (UNICEF, 2000:20). As a result standardized achievement tests are developed by test publishers for use in wide variety of classes throughout the country (Frederic,1981:193).Furthermore, Psacharopoulos and Woodhall (1995:35) emphasize that academic achievements in educational institution that are expressed by knowledge, skills and attitude developed and measured by tests and examinations.

2.4 Factors Affecting EGSECE Achievement

The academic achievement of students in educational institutions are affected or determined by various factors. Different authors including (Fuller, 1986:1-77; Mathewos, 2000:25-43) identify the different factors that contribute to students' success or failure in national examinations. Some of the factors are

school management, parents involvement, class size, teachers characteristics, instructional materials and school facilities and characteristics of students summarized as follow.

2.4.1 School Management

The quality of school management can be conceptualized within a unilinear framework. Principal acquires a variable level of skills and credentials necessary in becoming a strong leader and supervisor to improve result of students. The school management includes principals, vice principals, department heads, unit leaders, PTA and kebele education board. Adesine (1990:7) indicates that school management can be precisely defined as the organization and the mobilization of all human, material and financial resources in any system for effective achievement of the identified objectives of the system. In any organizations including the school system, effective management is considered to be prerequisite for successful accomplishment of the organizational objectives. The quality of school management was matters in determining the motivation and quality of teaching learning which takes place in class room by establishing conducive school climate (Willower, 1984:35). Student academic achievement is positively related with good school climate and creating conducive environment is mainly the responsibility of school management (Fuller, 1986:69).

Educational leaders are faced with tremendous pressure to demonstrate that every child for whom they have responsibility (Shields, 2004:11). In achieving success after defined as performance to a designated standard on a single, standardized test. Moreover, school leaders are expected to be transformative, to attend to social justice as well as deeply democratic for academic achievement of students. Frase and Conley (1994:11) indicates that school principals must view teachers as their customer. They must continually improve the system that affects teacher's work. Further they must provide work settings where teachers can successfully teach their students and there by gain

their resulting satisfaction and motivation to improve their skills and enhance their career development.

In addition, Frase and Conley (1994:19); Willower (1984:37) note that the role of school management is to work with teachers, parents, students, and community members to achieve some consensus concerning the school's mission and priorities to unite every one in and around the school to achieve the mission and to orchestrate resources accordingly. Therefore using profound knowledge is the essence of the challenge to optimize schools, to create school environments where teachers can teach and students can learn. According to Fuller (1986:15) indicates that an effective school organization is the totality of the school management capability, a feeling of collegiality among teachers, norms of academic achievement set and school's legitimacy in the broader community.

The school principal is an important aspect of moving towards a learning community that in turn will restructure schools for improved students' academic achievement. In line with this Teddli, and others (1989:230) indicates that the principals in the effective school were described by one observer as "having her finger on the pulse of the school". Higher academic achievement gains in high schools were principals framed educational goals and held high academic goals. Solomon (2006:75) suggests that effective school principals regularly and frequently check on the teachers to solicit needs and inquire how things are going on. Moreover, visit classrooms often to tend their support, end to provide pressure as they are discovering what is happening in classrooms, facilitating change, helping teachers work together, assessing and furnishing school improvement.

Lashway (2003:42) notes that school managements are facing new roles communities are expecting more from schools and the demands for increased student achievement challenge the traditional assumptions and methods used

to prepare school leader. Fekede (2006:27) indicates that good governance in the school administration, smooth relationship between the teachers and school management is the key quality for academic achievement. It creates conducive or enabling environments for the teachers so that they can work harmony in the school management and others motivated them to develop feeling of belongingness and initiated teachers to make unreserved effort, make them to do things on his/her own interest to improve the student result.

A key focus of school management was the strategic driven to improve instruction and raise student achievement (Barnes, and others, 2010:243). However, Hallak (1990:15) has pointed out that principals or department heads frequent lack of training or resources results to ineffective supervisors, administrators or manager. Thus principals are tied to supervisory duties that they have neither the time nor the technical knowledge to carry out effectively, especially in large schools, and it difficult to see a considered campaign are succeed in raising standard of teaching under such circumstances.

According to Potter and Powell (1992:12) effective secondary school management is aware of teachers need, offers feedback in response to performance and encourages teacher's long-term professional development and used this development for the benefit of the school. Potter and Powell provides positive leadership, and sets goals and motives the staff to be committed to their achievement.

Bitsa and others (1998:122) also explores that the relationship between principals' attributes; leadership styles, practices, and behaviors; and student achievement. Hallinger and Heck (1998:167); Waters and others (2003:33) synthesize 43 studies conducted between 1980 and 1995 that investigated evidence of the relationship between school management and student achievement. They concluded that principals have a measurable but indirect, effect on the school effectiveness and student academic achievement.

Generally, in the school system, the school management is the key to organize, mobilize and integrate all the school's human and non human material resources so as to bring about quality of education in that school and enhance students' academic achievement. Thus, to carry out this responsibility, the school principal should be well qualified, trained and experienced in the school management and organization area.

2.4.2 Characteristics of Teachers

Effective teaching is determined by teachers' knowledge of subject matter and mastery of pedagogical skill which create positive effects on students' academic achievement. To show the importance of qualified teacher, Ayalew (2009:113) has indicates the teachers play a decisive role in the fulfillment of educational goals. Whatever, curriculum change is introduced and whatever reforms are made all will be of little or no avail without qualified and commitment of teachers.

Dauglass and others (2000:342) indicate one important components of teachers' instruction in helping students learn how to learn. Teacher must themselves know more about the foundation of subject area and they must understand how students think as well as what they know in order to create experience that produce learning. Each teacher is expected to mix and match objectives and activities to produce a meaningful learning experience for students (Allison and others, 2001:26). Teachers need practice and continual feedback to master the use of experimental learning techniques (John and others, 1997:290). Frase and Conley (1994:6) pursue the point that unless teachers are included in the provocative concept it will be impossible to attain and sustain quality improvement in education. Frase (1992a:23) notes that "We believe that teachers are every school's greatest resource, and that only through teachers professional growth and development can schools growth and development can schools achieve marked success".

Moreover, UNICEF (2000:15) suggests that efficient use of school time has a significant impact on student academic achievement. In addition, on going professional development can help overcome short coming that may have been part of teachers' pre-service education and keep teachers abreast of new knowledge and practices. Thus, on going training for teachers have a direct impact on students' academic achievement.

Moreover, Willims and others (2000:36) show that low and late remuneration may lead teachers to take on another job, which hurts student learning. A study in 12 Latin America countries found that children in more likely to have lower test scores and higher grade repetition. Effective teachers are highly committed and care about their students and they need supportive working conditions to maintain these positive attitudes (UNICEF, 2000:18). The ultimate goal is to bring improved performance, quality and out put to education, and, simultaneously to bring pride of workmanship to teachers (Deming, 1986:248). The notation of bringing pride of workmanship to teachers is the heart of total quality education.

Teachers can make a difference even in a situation where there are no sufficient classrooms, libraries and other required teaching learning materials if conditions are suitable for them and get the required training and incentives (Fekede, 2006:24). Moreover, Fekede indicates that if teacher are well qualified, well paid, motivated, respected and get opportunity to update his/her knowledge get prepare pedagogically and content wise. Teachers can make a difference in student academic achievement in class rooms and initiated to do things with their own effort. They can develop a feeling of ownership can work a long with national policy to being the desired development. The issues of teachers are critical for academic achievement of the students. The most important measurable impact of the schools on the measure competence of their students was not the curriculum or a school's resource, but teachers knowledge of subject matter and method of teaching (Herbert, 1982:24; Denis

1987:35). Once teachers achieve clarity about they expect students to know and be able to do, students in turn can be more successful in meeting those educational goals and expectations (Allisoïn and others, 2001:30).

Allison and others(2001:90); Fuller(1986:63); Mussaazi (1987:1900) note that teachers are one of the essential elements in quality learning. Quality constantly influences school achievement. Teachers are responsible for presenting the content standards, practical materials, and instructional strategies to the success of their students Pracharopoulos and Woodhall (1995:218) reports after examining 32 studies that trained teachers do make a difference and particular that teacher qualification, experience and amount of educational knowledge are positively related to students' achievements.

However, student achievement gains would be constrained if teachers were not competent in effectively using additional instructional time, investing more resources to lengthen the school day may have no influence on achievement until teacher skills are upgraded (Fuller, 1986:73). The strength of any educational system, however, largely depends on the quality and commitment of its teachers. Ayalew (2009:1103) suggests that indeed teachers are the most important element in the realization of educational goals. Because of this every educational system should strive to attract qualified people to the profession and to provide them with the best possible working conditions and material incentives that will satisfy there needs.

2.4.3 Class Size

Class size is the number of students to be taught in a given class. The number of students in a class has the potential to affect how much is learned in the number of different ways. For example, it could affect how students interact with each other, the level of social engagement. This may result, for example in more or less noise and disruptive behavior, which in turn affect the kinds of activities the teacher is able to promote. It could affect how much time the

teacher is able to focus on individual students and their specific needs rather than on the group as a whole.

Class size is among the major factors that influence the academic achievement of students. Gorton (1988:58) suggests that class size is inversely related to students' academic achievements. Smaller class size yield greater academic achievement. Regarding this point Willmis and others (2000:1) notes that school systems have established a primary mode of learning that involves groups of students of about the same age interacting with single individual leading activities in a confined physical space, directed toward learning in particular topics. Ayalew (1991:120) states concerning the teachers of smaller class size tend to invent and adapt new practices, to get more individual attention and to show greater understanding of individuals. As a result classrooms with fewer students are more conducive to learning and teaching process. Steven (1994:52) indicates that classes or groups in which activities designed primarily for social and emotional development are carried on, should undoubtedly be quite small, so that teachers in change many become thoroughly familiar with each pupils, his needs, his personal qualities and his problems.

Amare (1998:294) indicates that, over-crowded class rooms were one of the observed critical problems of the education system in Ethiopia. At the result of this problems related with students follow up students' participation, teacher students' communication and feedback system were some of the major consequence of over crowded class rooms. Most researchers, teachers and students prefer relatively small class size for effective, teaching learning process. The advantage of small class size intention in term of peer learning, flexibility over learning objectives, meeting individual needs, and encouragement of higher order learning skills (Blatchford, 2003:35).

Different authorities including Fuller (1986:24), Cooper (1989: 87) and Blatchford (2003: 65) found that smaller classes resulted in greater teaching knowledge of students, frequency of one-to-one contacts between teachers and pupils, variety of activities, adaptation of teaching to individual students, and opportunities to talk to parents. Substantial reductions in class size would be necessary to raise achievements. Class size affects the amount of individual attention the immediacy and responsiveness of teachers to students, the sustained and purposeful nature of interaction between teachers and students, the depth of teacher's knowledge of the students in his/her class, and sensitivity to individual students particular needs. Over all there is support the notion that in smaller classes likelihood of what we call teacher support for learning.

Another empirical support, which states in favor of small class-size, conducted by Fuller (1986:29) reveals that, study on Malaysia secondary schools found a significant effect on students in language achievement. This implies that effective teaching learning process takes place in relatively small class size. Other writers like Barr and Dreeben (1983:23) also identify many reasons why smaller class size might contribute to higher students achievement, including better teacher contact with parents and more personal relationships between teachers and students. However, because classroom instruction is the most powerful aspect of schooling for achievement the effects of class sizes on achievement are most likely to occur if class size is linked to instruction. Moreover Willmis and others (2000: 21) indicate that students may pay better attention when there are fewer students in the class room.

In general the optimum class size student ratio is the key factor for providing appropriate instructional opportunity, and class-size reductions may change what teachers do. That is, teacher may teach differently in smaller classes. If the changes were beneficial for students (e.g. more frequent assessment, more writing, more discussion, more help for individual students. etc) academic

achievement would rise. The direct cause of this achievement increase would be instructional in prevents and class size would be the indirect cause.

2.4.4 Parent Involvements

Parental involvement has been considered as important in children's learning achievement. Epstein (2001:221) suggests that parent involvements in school have positive influence on students' learning achievement. Kumari and others (2007:181) indicate that international research provides evidences for the view that parental encouragement and support for learning activities at home, and parent involvement in schools and class rooms have a positive impact on students academic achievements. Parents have been considered as the first teacher of children, and children were viewed as continuously learning both in schools and family. In addition, Robert and Joanne (2004:40) note that parent involvement in children's education from birth until they leave home has a major positive effect on students' academic achievement. As a result, schools have always tried it involve parent in education of their children. Common and visible examples are parent teacher conferences, school open houses, parent teacher associations and organization and school advisory councils. Although opportunities such some parents unable or choose not to participate.

Chen and Gregory (2010:21) note that a number of studies have shown that students whose parents are more involved in their schooling have higher grades, better attendance, and fewer discipline problems than do their peer whose parents are less involved. Besides, Chen Gregory indicated that there are numerous types of parenting practices associated with positive related academic and social competences. There practiced including the following: a)parent participation in school related activities, such as monitoring home work and attending parent-teacher association meeting b) parent encouragement of positive school behaviors and c) expectation for achievement and attainment, for educators promoting these practices presents an opportunity to help students achievement.

Epstein (1997:55) argues that cooperation between home and school can optimize children's development by promoting consistency in mutual reinforcement of learning-related practices in the two environments. In addition, Epstein proposed two major types of family school involvement that may influence student's educational outcomes, such as parents a) being involved at school by volunteering or attending events and b) participating in school related activities at home by helping with homework or checking that homework is done. So, parents can directly participate in the student's instruction by helping with home work and supplementary learning with activities at home. They can provide continuity for what is taught in school and encourage designed outcomes through behavioral reinforcement.

Moreover Chen and Gregory (2010:24) note that perceived parental involvement through socialization of educational values, such as having high academic achievement and attainment expectations, had the strongest association with students GPAs and classroom engagement. Thus, it appears that less recognized psychosocial forms of parent involvement may be more developmentally appropriate and effective in helping teens achieve educational success than are practice-based involvement in school activities. In South Africa, the introduction of outcome-based education paved the way for greater parent involvement in education (Msila and others, 2004:302). Thus the education system expects the parents to play a crucial role, to share their responsibility in education.

Furthermore, Vassallo (2000:1) points out that parent involvement in a student education is a strong predictor of learner achievement typically, the more involved the parent, the better student academic achievement yet the school environment was hampered by the conspicuous absence of parents in decision making. Teachers have to make decisions frequently without the involvement of the parents. This is tantamount to a bureaucratic form of management but if there is a lack of involvement of parents, then a collegial climate can not be

easily created with in the school's milieu (Msila and others, 2004:305).In other hand, if guidance of teachers' services were maximized, the learners could be empowered to work even with less parent involvement. Nevertheless, it is common knowledge that there are good teachers and bad teachers and this happens in a given profession. For this reason, when students fail the focus should also be on the parent's involvement role in the education of their children (Msila and others 2004:306).

UNESCO (2004:31) realized that the goal of education can not be achieved through the limited resources of government alone. Community participation is one of the strategic that should be promoted to achieve the goals of set in education. According Denis (1987: 52-53) genuine partnership must be based on certain factors, in the first place there must be a common objectives and that clearly exists in mutual desire of both parents and school to help develop the talents, skills and personal qualities of their children to maximum possible; secondary there must be effective communications and thirdly there must be effective access to knowledge. As the result the mutual desire of parents and schools improve the academic achievement of student.

2.4.5 Instructional Material and School Facilities

The academic achievement of students can be affected by a number of factors in general secondary schools. Among these is availability of instructional materials such as text books, news papers, audio-visual aids, pedagogical centers, modules, reference books magazines and other equipment. Amara (2006:101) suggests that instructional materials, with a limited help from the teacher, have lots of contributions for the development of students' active learning by facilitating practical, independent and interactive learning. In addition to these recent scholars studies show that instructional materials and school facilities have power to make a learner active, creative, responsive and independent.

Lockheed and others (1991:47-48) indicate that instructional materials are critical ingredient to learning, and the intended curriculum can not be easily implemented without them. They provide information presented and provided opportunities for students to use what they have learned. Instructional materials are all forms of materials with which students and teacher interact for the purpose of academic achievement. Amare (1999:53) tends to consider instructional materials as the instruments with which a teacher teaches and from which a student learn.

Moreover Fekede (2006:25) notes that the availability of resources and other instructional materials that lead to improvement of academic achievement. Similarly, an education system having all resources needed to accomplish its objective, will equipped schools with facilities and teaching learning materials form which students achieve high results. Instructional materials are inputs directly linked to the instructional processes consistently influence student's achievements. Many scholars hold that school's learning achievement is a function of material inputs expanded per pupil and the efficiency with which these inputs are managed by the teachers and the head master (Fuller, 1986:30).

It is believed that quality teaching materials can help even in adequately trained teachers to improve their teaching skills and upgrade their own knowledge. As a result, there is no doubt that essential teaching materials considerably affect academic achievement. Materials inputs are directly linked the instructional process constantly influence students achievement (Fuller, 1986:32). Besides, Solomon (2006:78) indicates that instructional and facilities encompass materials through which teaching and learning process is carried out. It also includes the physical environment of the class rooms. The most important instructional materials that the review treats are put here under.

A study that included 50,000 students secondary schools found that students whose schools lacked class rooms, materials and had an inadequate school facilities were significantly more likely to show lower test scores and higher repetition than those whose schools were well equipped (Willmis and others 2000:177). The quantity of school building may be related to other school quality issues, such as the presence of adequate facilities, laboratory, library, clean water supply, classrooms, latrine, space and furniture availability, and so on all have an impact on the critical learning factor of time on task (UNICEF, 2000:8). For example, when pupils have to leave school and walk significant distances for clean drinking water, they may not always return to class.

According to the MoE (2003:81) school facilities include water, latrines clinic, laboratory, pedagogical center, and laboratories. These facilities are required to be proportional to the number of teachers and students in the school for the provision of improve the academic achievement of students. School libraries provide essential materials and technology of curricular and instructional needs. School library media specialists teach information literacy skills essential for academic achievement and prepare students the long life learners.

Douglass (1954:442) notes that the library has a sufficient number of good references books, including encyclopedias, atlas and dictionaries, the contents of which are not too old, and an adequate number of books on all subjects taught in the high school, suitable for use as reference and supplementary reading for students in high-school classes, and general reading materials of the various kinds which have been selected by people who are competent to know what are the interests and needs of the students. Douglas (1954:443); Rossoff (1992:193) also show that an academic library is the heart of the school anatomy and library in high school teaching reaffirms the fundamental role of the classroom interaction located centrally and preferably quite close to the study hall .

Fuller (1987:279) informs in his research result the number of books on loan from school library was significantly and positively related to students who reported that they used the library more frequently were performed at high academic achievement than the other. In general well equipped and organized libraries available in secondary schools support the classroom instruction. Books and other materials have also to be relevant and updated in order to facilitate the learning achievements. Therefore school library is school facilities that significantly influence student's achievement.

The laboratory is an indispensable aspect of science teaching because the laboratory provides students with opportunities to engage in processes of investigation and inquiry (Abdullah 1978:1; Hegarty, 1985:153). Pupils will go out from our laboratories able to "see and do". However, some of the studies on the effectiveness of the science laboratory had revealed that students who had regular laboratory sessions tended to develop a range of manipulative skills (Bates, 1978:154). Laboratory experiences result in significant and desirable changes in the natural classroom behavior of students, and are often associated with improved student's academic achievement. In addition, Fuller (1986:32-33) notes the study conducted in India, Thailand and Iran indicated that two indicators of laboratory use number of students in laboratory classes and time spent in laboratory classrooms were related to learning achievement.

MoE (1995:3) notes that Ethiopian secondary schools of the laboratory standard recommended that Biology, Physics, Chemistry laboratories each comprises separate demonstration, store, and preparation rooms. Moreover furniture for laboratories such as stool, teachers chair and table teacher demonstration table, student's work bench laboratory cupboards were recommended with trained lab technicians. Mekete (2003:2041) indicates that laboratory experience is more effective for learning achievements of science students when teachers are given a clear and thorough understanding of the intended outcome of experience. Moreover students respond positively to

laboratory experiences when they are first made aware of the objective of experience of, the importance of the behavior or outcomes of science learning.

2.4.6. Characteristics of Students

Academic achievement could also be affected by the characteristics of students such as discipline, interest to learn and academic background leaving other economic and social factors in tact. Students' characteristic refers to being aware of what students are like and the characteristics typical of children at various ages. It focuses on development, the long run changes in students' overtime, especially in their thinking, feeling and behavior (Domewoz, 1997:8).

School facilities, optimum class size, conducive school environment, good management and efforts and qualities of teachers would have no significant value without being assisted by good students' behavior and interest for lessons. It is the sound combination of these situations that make learners successful in their academic achievement. More efficient use of classroom time is strongly related to pupil performance within industrialized nations (Joyce, 1991:41). Considerable progress on this potential source of school efficiency could be made-by sharpening classroom management and teaching skills-within existing levels of material inputs.

According Joyce (1991:45) a total of 13 studies (analyses) have been done regarding the effect of length of instructional program and time spent on student achievement, and hence 11 of them or (85% of the analyses) have shown positive correlation with student academic performance. As the above author indicates, hours of instruction (per year) spent on general science was significantly associated with (science) achievement in India, Thailand, and Iran. Generally, instructional time has significant effect on students' academic performance or achievement. In addition, Joyce (1991:20) states that the importance of giving homework frequently as follow: Pupils doing homework learn more than those doing no homework even if it is not marked. If the homework is marked and gone through individually with each pupil, to help

him/her see his shortcomings and how to improve then, them, the children learn much more.

The above author indicates that giving homework even without correcting is much better than without giving homework, this is, because that learner would at least make themselves busy with their lesson. As Joyce (1991:20) suggests that, a total of seven studies (analysis) have been done regarding the impact of homework frequencies on student academic achievement, five of the analyses (studies) have shown positive correlation with students academic achievement. Generally, from the various points taken from different authors, and studies conducted on homework frequency, conclude that homework frequency has significant effect on students' performance. The most common instructional purpose of homework is to provide the student with an opportunity to practice or review material that has already been presented in class. Preparation assignments introduce material to help students obtain the maximum benefit when the new material is covered in class (Harris and others, 2006:34). Extension homework involves the transfer of previously learned skills to new situations also, homework has been offered as a means for developing personal attributes in Students that can promote positive behaviors that, in addition to being important for academic pursuits, generalize to other life domains.

Elmore (1996:92) indicates that students' readiness to learn which interacts, in turn with school quality. A student with high degree of readiness is better able to take advantage of high quality of learning for their lack resources, or to compensate for their lack. A student with low readiness is less able to capitalize on learning opportunities and more vulnerable to deficient learning environment.

CHAPTER THREE

RESEARCH DESIGN AND METHOD

3.1 Research Method

The study employed descriptive survey method because includes surveys and fact finding enquires, that describe situations and events without bias and it is also a method used to scan a wide field of issues, population and programs in order to answer questions concerning the status the problem of the study. Moreover, the method is particularly important for the study since it is intended to make detail description and analysis on the factor affecting EGSECE achievement of students. The relevance of the descriptive method for such purpose has been indicated by (Seyoum and Ayalew, 1986:16; Creswell,2002:154). Further more, Best and Kahn (2005: 177) describe that descriptive survey is an important type of research method that must not be confused with clerical routine of gathering and tabulating figures, as it involves defined problems and objectives.

3.2 Source of Data

The data for the study was obtained from primary and secondary sources. Concerning primary sources, relevant data was collected from students, teachers, secondary school principals, and Woreda Education office experts. Primary data collection can be thought of as the means by which information is obtained from selected subjects of an investigation. Regarding secondary data source (relevant book, journals, educational bureau statistics, reports and legal documents were consulted). Moreover, reports and documents secondary schools such as list of students result, reports of parent participation, class size, profile of teachers, profile of school principal and availability of instructional materials and school facilities were reviewed to obtain pertinent data.

3.3 Sample Size and Sampling Technique

The secondary schools of eastern zone of Tigray national Regional State were found in all of the nine Woredas. Out of the nine Woredas 7(77.8%) were selected for this study on the basis of stratified sampling technique. This technique was applied in order to be able to include the urban and rural Woredas in the sample. The Woredas with more than one secondary schools were taken into consideration. So that number and representativeness of the schools found in the Woreda were also considered. There are 19 secondary schools and 3 TVET institutions in the zone of which 6(31.5%) secondary schools and 2(66.7%) TVET institutions were selected as sample on the basis of purposive sampling technique. The logical reason for using this purposive sampling technique is that it enabled the researcher: (1) to include schools that have been served greater than 6 years for the sake of considering students achievement of consecutive 5 years results of EGSECE; and (2) to take into account the participation of urban and rural schools, governmental and nongovernmental secondary schools. Agazi, Wukro, Tsinseta (NGO) were the schools selected from urban woredas .While, Atsbi, Dowhan and Lideta (NGO) were selected from rural woredas of the zone. Besides, Adigrat and Edagahamus TVET institutions were selected from urban and rural areas respectively.

In the seven sample Woredas: seven Woreda education office experts and seven secondary school principals involved in unstructured interview. The selection of Woreda education office experts and Secondary school principals were using purposive sampling technique because that individuals selected have experienced the central phenomenon. 82 general secondary school teachers were selected using availability sampling technique in completing the questionnaires. The primary consideration of availability sampling was the judgment of the researcher as to who can provide in the best information to achieve the objective of the study.

In the six secondary schools 5081 total students 254(5%), and two TVET centers 560 total TVET trainers 84(15%) sample size student respondents were selected using stratified and simple random sampling technique to consider grades 10,10+1and 10+2. Focus group discussions were conducted with 10 randomly selected members of students' parliament of each sample educational institution. The rationality of using simple random sampling was used up on the idea that each person or unit selected should have a completely random chance of being selected.

3.4 Data Gathering Tools

To collect information for this study questionnaires consisting of closed ended items, unstructured interview, document analysis and focus group discussion were used to gather relevant information for the study.

3.4.1 Documents Analysis

Document analysis is a useful method to investigate decision making, resource allocation and outcomes alignment, participation of parents, school plan, students' achievement results and school performances. The documents of seven sample secondary schools, seven Woreda education offices and Tigray State Education Bureau were assessed to collect the required information. This instrument was employed to secure the necessary information about students result, parents participation, availability of instructional materials and school facilities. Documents can provide valuable validation of other measures, either in support of disconfirmation of them.

3.4.2 Questionnaire

Questionnaire has a high amount of data standardization. It provides a relatively simple and straight forward approach to the study of value, attitudes, beliefs and motives and adapted to collect generalize able information from almost any human population (Best and Kahn, 2005: 179). The questionnaire was administered to collect data from students and teachers. This is because of

questionnaire does not only secure information about opinion and view but also serves as an appropriate instrument to obtain variety of opinions relatively with in short period of time.

3.4.3 Interview

An interview is a two way conversations conducted by an interviewer to obtain (facts and data) from respondents (source).An interview was used to obtain additional information from secondary school principals and Woreda education office experts. The presence of the interview encouraged participation and involvement, moreover the interviewer clarified questions The information obtained is concerned with people attitudes, awareness, intentions, and experiences, beliefs and constrains. Therefore, interview was conducted with available and purposefully selected seven school principals and seven woreda education office experts respectively.

3.4.4 Focus Group Discussion

Focus group discussion is concerned with a formalized process of bringing a small group of people together for interactive and spontaneous discussion of one particular topic or concepts. Focus group normally consists of six to twelve participants who are guided by one or two professional facilitators. The researcher, therefore, conducted focus group discussion with randomly selected ten students from each organization to compliment the questioner and interview, focus group discussion was conducted with randomly selected ten students from each organization.

3.5 Data Analysis and Presentation

The major method employed in this study is quantitative method. In addition some qualitative aspects were included. Quantitative data collected through questionnaire and from documents were analyzed using frequency counts, percentages, mean, mean rank, weight mean rank and spearman rank correlation coefficient. Chi-square was also employed to determine the

difference in attitude between the groups of respondents depending on the nature of the basic questions and the data, frequencies were tallied and computed using percentages to measure the research outputs for all items employed in this study. This is because percentages often show more clearly the pattern of results and it probably makes more sense to display the distribution of reasons within two groups of respondents. On the other hand, the qualitative data gathered through focus group discussion and interview were expressed by descriptive statements to arrive at a general conclusion based on the research objective.

3.6 Pilot test

Before the distribution of the questionnaires to the sample population of the study, a pilot test was conducted in Yemane secondary school which was not included in the study. This helped the researcher to get feedback as to whether it was constructed properly especially in detecting some redundant, ambiguous, and unclear items of the questionnaire. Based on the item test for constructive comment of the research advisor, 5 items were modified and 3 items were dropped due to redundancy. Finally, after improving the questionnaire based on the feedback from pilot test, the instruments were administered, collected, tabulated and analyzed.

CHAPTER FOUR

4. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with presentation, interpretation and analysis of data. It focuses on characteristics of respondents, EGSECE achievement pass rate, trends in achievement pass rate, GPA results of students and different factors affecting the EGSECE achievement of students.

The necessary data involved in the study were obtained from the documents of secondary schools, Woreda Education Office and Tigray State Education Bureau. Moreover, additional information of study was collected from students and teachers through questionnaire. Interview and focus group discussions were also employed to collect qualitative data from principals, Woreda education office experts and students respectively to fill the gap and to get additional data which enrich the data obtained through document analysis and questionnaire.

4.1. Characteristics of Student Respondents

A total of 108 grade 10, and 143 preparatory class students as well as 81 TVET trainees, i.e., 332 respondents participated in the study. Sex and age characteristics of these respondents are presented in the table below.

Table1: Student Respondents by Sex and Age

Variables	Characteristics Of categories	Respondents						Total	
		Grade 10		TVET		Preparatory		No	%
		No	%	No	%	No	%		
Sex	Male	62	57.4	35	43.2	90	62.9	187	56.3
	Female	46	42.6	46	56.8	53	37.1	145	43.7
	Total	108	100	81	100	143	100	332	100
Age	11-13 years	-	-	-	-	-	-	-	-
	14-16 years	27	25	3	3.7	44	30.5	74	22.3
	17-19 years	77	71.3	75	92.6	99	69.5	251	75.6
	20&Above	4	4.7	3	3.7	-	-	7	2.1
	Total	108	100	81	100	143	100	332	100

Table 1 item 1 shows that the proportion of female respondents was 42.6% in grade 10, 37.1% in preparatory and 56.8% in TVET. This reflects the gender disparity that existed in secondary education in general and in preparatory classes in particular. Gender gap that is already wide at grade 10 gets wider at preparatory classes because girls achieve less in grade 10 national examinations (EGSECE) .This is also revealed by the fact that the ratio of female respondents (56.8%) is much higher than male respondents (43.2%) as TVET trainees were selected from students who fail to pass to preparatory programs.

Secondary school age group in Ethiopia ranges from 15 years to 18 years old, i.e. ,15-16 years old for the general secondary education (9-10) and 17-18 year old for the preparatory program(11-12).Table 1,item 2, only 27(25%)of grade 10, 75(92.6%) of TVET and 99 (69.5%) preparatory student respondents age were fit the educational level. The remaining respondents were either below or above age in the educational level.

4.2 Trends in Students Achievements

Examinations are commonly used in association with cognitive goals in order to review students' achievements with respect to a common body of knowledge associated with a discipline or program. The achievement level of students at individual schools serves as the main type of school performance information.

The Ethiopian secondary education is divided into two cycles: general secondary education (grade9-10) and preparatory program (11-12).As indicated earlier after completing the two year general secondary education students sit for national examination (EGSECE) that to select students that have to join preparatory program(11-12),Technical and Vocational Education Training (TVET). The following table shows trends in students' achievements at the grade 10 national examination.

Table 2: EGSECE Pass Rate by School and Year 2005/06-2009/10

	Name of school	2005/06			2006/07			2007/08			2008/9			2009/10			average		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1	Agazi	44.1	47.1	45.5	30.3	14	22.2	34.3	25.3	29.9				30.4	33.8	32.1	35	28.2	31.7
2	Atsbi	31.9	58.3	40	29.9	18.6	26.9	21.1	10.3	17.1	31.7	27.3	30.6	13.3	15.6	14.5	25.1	21.6	23.8
3	Dowuhan	11.2	29	19.8	28.1	32.9	30	39.1	31.5	37.6	37.6	54.2	43.5	30.6	44.7	36.3	30.8	39.6	34.3
4	E/hamus	17.6	18.4	17.9	32	19.4	26.6	15.1	11	13.2	19.5	16.5	18.6	35.2	34.4	34.9	23.7	18.8	21.6
5	Lideta M	25	60	50	75	80.9	78.8	12.5	24	19	20	64.7	50	29.7	50	39.4	30.6	55.5	44.8
6	Tsinsata	90.3	94.5	92.2	88.7	84	86.5	97	97.6	97.3	97.6	95.7	96.8	93.3	99.3	96.2	93.5	94.6	94
7	Wuqro	29.5	36	32.5	31.2	17.1	25.2	43	24.4	34.4	39.6	38.1	39	29.9	38.9	34.3	34.6	30.7	32.9
Average		35.4	43.6	39.2	33.5	22.8	26.1	34	24.3	29.5	39.9	42.7	40.9	33.2	38.4	35.7	34.9	32.9	33.9

Source: TSEB 2005/06-2000/10 analysis of national examination

Table 2 shows that EGSECE pass rate of general secondary schools of the study area for a five years period covering between 2005/06 and 2009/2010. It revealed that achievement varies from school to school, year to year and between sex. Out of the seven schools selected for the study, five were government while the remaining two were non-governmental schools run by the Catholic Church. Average pass rate for all the five governmental secondary schools was less than 33% indicating that only one third of these who take grade 10 national examination pass to preparatory program while the other two third either join TVET program or the work force. On contrast the average pass rate for the nongovernmental secondary schools run by the Catholic Church

was twice or three times that of most government run schools. Achievements by students of Tsinseta Mariam secondary school where 94% of them on average get pass marks is particularly worth mentioning. The EGSECE achievement pass rate of students in consecutive five years range from 2005/06 and 2009/10 revealed that 39.2, 26.1, 29.5, 40.9 and 35.7 respectively. This indicates that annually achievement pass rate of the schools in the study area were inconsistency.

Table 3: EGSECE Achievement pass Rate by Gender and School

N/S	Name of school	2005/06		2006/07		2007/08		2008/09		2009/10		Average	
		M	F	M	F	M	F	M	F	M	F	M	F
1	Agazi	57.6	42.4	68.3	31.5	58	42	-	-	45.6	54.4	57.3	42.7
2	Atsibi	55.5	44.5	82	18	78	22	77.2	22.8	45.7	54.3	68.8	31.2
3	Dowuhan	29.2	70.8	55.8	44.2	63.5	36.5	55.8	44.2	50	50	53.7	46.3
4	E/hamus	59.1	40.9	68.6	31.4	60.8	39.2	71.1	28.9	59.6	40.4	64.3	35.7
5	Lideta M.	14.2	85.8	34.6	65.4	25	75	18.7	81.3	39.2	60.8	29.3	70.7
6	Tsinseta	53.6	46.4	55	45	54.9	45.1	59.2	40.8	50.8	49.2	54.6	45.4
7	Wuqro	49.1	50.9	71.3	28.7	67.4	32.6	61.3	38.7	45.1	54.9	58	42
AVERAGE		45.5	54.6	62.2	37.8	58.2	41.8	57.2	42.8	48	52	55.1	44.9

Figure 2. EGSECE Achievement Pass Rate by Gender and school (Source: TSEB)

Table 3, indicates that gender disparity regarding the EGSECE result from 2005/06 to 2009/2010 revealed that 55.1% of males and 44.9% females enable to join preparatory program. In addition, gender wise EGSECE achievement pass rate of the sample secondary school in the consecutive five year range from 2005/06 and 2009/10 shows that the only Lideta Mariam secondary school female students EGSECE result leads by wide gap than half of the males' result. On the other hand, the remaining six secondary school male students EGSECE results found better than the female's result. To sum up the researcher infer that male students achieve better result than female students.

Table 4. EGSECE Results by School GPA 2005/06 and 2007/08

N/S	name of school	Candidates			GPA≤1.88			2.00≤GPA≤2.14			2.28 ≤GPA≤ 2.88			3.00 ≤GPA≤ 4		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1.	Agazi	2027	1806	3833	30.5	56	42.5	23.3	24.8	24	37	18.4	28.2	9.2	0.8	5.3
2	Atsbi	1221	563	1175	33.1	58	40.9	32.6	27.3	30.9	27	14.2	23	7.3	0.7	5.2
3	Dowuhan	362	267	629	26	43	33.2	41.2	36.3	39	28	18.7	24	5	1.8	3.6
4	E/Hamus	969	756	1725	46	69.6	54.2	27	19.9	23.8	20.2	10	15.7	6.8	0.6	4.1
5	Lideta M.	36	66	102	41.7	36.6	38.2	13.8	36.4	28.4	41.7	25.8	31.4	2.7	1.5	2
6	Tsinseta M	375	313	688	0.26	3.2	1.6	5.6	9.6	7.4	39.5	53.4	45.8	54.6	33.8	45.2
7	Wukro	2403	1929	4332	32.7	60	44.8	26.7	24	25.5	31.4	15	24.1	9.2	-	5.6
	Total	7384	5700	13084	32	55.6	42.2	26.3	24	25.3	31	17.7	25.2	10.6	2.7	7.2

Source: TSEB 2005/06 and 2007/08 EGSECE GPA results

In addition, the pass rate of students in national exams can also be analyzed through assessing how high or low their average test scores . Table 3 revealed that the majority of those who join preparatory program pass with cut point (annually declared least GPA pass point). Out of 13,084 students who sat for the Ethiopian General Secondary Education Certificate examination (EGSECE) in seven secondary schools between the academic years of 2005/06 and 2007/08 only 7.2% were able to score GPAs between 3.00 and 4.00 high achievers. However, 42.2% of students achieve less than 2.00 those were low achievers. There also existed high school level and gender difference in the proportion of high, medium and low achieving students. Three secondary schools which were Agazi, Edagahamus and Atsibi that accounted for more than 51.46%(6733) students of the candidates scored only 5.3%, 4.1% and 5.2% students that scored 3.00 and above. On the other hand 45.2% of students from Tsinseta Mariam secondary school achieved 3.00 and above. As the result, except one, the achievement of female students was less than that of the male students. The only exception here was again Tsinseta Mariam where the proportion of that had average GPA between 2.28 and 2.88 were 53.4% while the comparable score for boys was 39.5%.

4.3 Factors Affecting EGSECE Achievement of Students

4.3.1 School Level Management

Among the tasks that contribute to the improvement in students' results at school level is proper management and coordination. Though school level management includes education and training board, PTA, vice principals the most major role top rests on the principal. The school principal is responsible for day-to-day management of the school including guidance and direction of the teachers and other staff of the school and accountable to the board of management. Data was collected from different documents of sample secondary schools of the study area regarding the qualification, experience training of the school management especially concerning school principals.

Table 5. Profile of School Principals

Variables	Characteristic category	Respondents	
		No	%
Qualification	Diploma	1	14.3
	1st degree	6	85.7
	2nd degree	-	-
Field of Study	EdPM	1	14.3
	Other Subjects	6	85.7
Experience in principal ship	1-3 years	4	57.1
	4-6 years	2	28.6
	7 years and above	1	14.3
Training in principal	None	2	28.6
	Short	4	57.1
	Long	1	14.3

Teachers Development Program (TDP) guideline on school leadership prepared by the ministry of education noted that principals of secondary school should possess masters degree. However, 6(85.7%) principals in the study were first degree holders, while 1(14.3) was diploma holder. Therefore, there is a serious

shortage of qualified principals. Moreover, only 1(14.3%) of the principals has relevant field of study, i.e. Educational Planning and Management (EdPM) while the rest 6(85.7%) were trained as subject area teachers. In addition to this 2(28.6%) of the principals did not take even any short term training.

Concerning the experience of school principals in the field, 4(57.1%) of the principals had the experience of 3 years or below. In addition, 2(28%), 1(14.3%) of them of the study area were experienced 4-6 years and 7 years above respectively. This indicates that most secondary schools are being lead by principals with first degree holding but field of training not related with school leadership. Moreover, they lack experience in leading secondary schools.

Table 6: School Management Role on Students' Achievement

N / S	Items	Respondent	5		4		3		2		1		Total		x ²
			NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	
1	Principal's involve teachers, students in decision-making	Student	33	10	80	24	124	37.3	68	20.5	27	8.2	332	100	10.3
		Teacher	4	4.8	25	30.5	36	43.9	17	20.7	-	-	82	100	
2	Principal's involve parents in school activities.	Student	42	12.6	75	22.6	151	45.5	34	10.3	30	9	332	100	9.62
		Teacher	13	15.8	20	24.2	41	50	5	6.3	3	3.7	82	100	
3	Principal evaluate the EGSECE result with stakeholders.	Student	43	12.9	41	12.3	90	27.1	125	37.6	33	10	332	100	1.89
		Teacher	11	13.6	9	10.9	23	28	34	41.5	5	6	82	100	
4	Principals' visits classroom regularly when teachers are teaching.	Student	50	15	70	21	76	23	112	37.7	24	7.2	332	100	2.11
		Teacher	10	12.2	15	18.3	20	24.4	29	35.4	8	9.7	82	100	

N.B 5= very high, 4= high, 3= moderate, 2= low 1= very low

Teachers and students were asked whether teachers, students and parents were involved in decision making related to teaching learning, whether EGSECE are discussed at school level and whether or not principals conduct classroom observation. Majority 78.5% of the teachers and 34% of the students rated their involvement in decision making either as very high or high; while only 20.7% of the teachers and 28.6% the students rated it either as very low or low. In fact no teacher respondent rate his/her involvement as very low. The

calculated chi-square values, $\chi^2=10.27$ was greater than the critical value, $\chi^2=9.49$ at significance level 0.05 and degree of freedom four. This indicated that there is statistically significant difference between the two groups of respondents on the issue of the principal's involve teachers, students and in school decision.

Teachers and students were also asked whether principals involve parents in different school activities in Table 6, item 2. A few less than half (45.5%) of the students and half (50%) of the teachers revealed as moderate. However, 34.6% students and 40 % teachers rated parents involvement in different school activities to boost EGSECE performance either as low or very low. Likewise, the computed Chi-square, $\chi^2=9.62$ was greater than the critical value $\chi^2=9.49$ at significance level of 0.05 with degree of freedom four. Thus, this implies that there was significant difference between two groups of respondents concerning the parents involvement power of principals.

The students and teachers were also asked their opinion on principals' role to evaluate the EGSECE results with stakeholders to attempt improving the result. Majority 47.6% of students and 47.5% teachers replied the role of principal to evaluate the EGSECE results with stakeholders either as low or very low. The computed, chi-square $\chi^2=1.89$ indicated that is far less than the critical table value $\chi^2=9.49$ at significance level of 0.05 with four degrees of freedom. Thus, shows that there is no significant statistical difference between the two groups of respondents about the ability of school principals to create common consensus with stakeholders to achieve high results in EGSECE. Hence, the researcher conclude that school principals are poor in mobilizing stakeholders toward educational tasks. This may be emanate form their low knowledge of human skills.

As indicated in Table 6 item 4, majority 44.9% of students and 45.1% teachers rated either as low or very low on the regular visit of principals to

class rooms during teaching learning process . However, a few less than one fourth both groups of respondents rated moderate in the same issue. This shows that principals do not gave emphasis on classroom observation. That is the key option of support teachers to boost the result of students in EGSECE. Likewise, the computed chi-square $\chi^2=6.68$ was below the critical value $\chi^2=9.49$, which indicated that teachers and student respondents share common perception on the role of principals in classroom observation during teaching learning process.

Focus group discussion held with students on the role of school principals to boost students EGSECE performance also revealed that principals are not helpful in planning and implementing activities that boost students result. Mostly, principals even do not control teachers and classes are missed. Similarly Woreda education office experts were asked to give their response regarding the role of school principals to boost students EGSECE performance. Respondents' pointed out those school principals do not innovate and initiate school community and other stakeholders to improve the students' performance.

Thus, it is possible to infer from quantitative and qualitative data lack the ability to involve the school principals' external stakeholders and school community to work in improving student achievement. In addition school principals face difficulties to initiate, mobilize students and teachers using different motivation systems. This seems to emerge because of lack of qualification, experience and poor leadership quality.

4.3.2 The Effects of Teacher Characteristics

The strength of any educational system largely depends on the quality and commitment of its teachers (Ayalew, 2009:1103). This reflects knowledge skill and ability of teachers due to qualification all the teaching and learning process could be affected and plays a prime role in the teaching-learning process. As a

result the teacher shoulders the main responsibility for success or failure in students' achievement. Therefore, teachers' factors have huge impact on students' achievements.

Table 7. Teachers' Profile

Variables	Characteristic category	Respondents	
		No	%
Qualification of teachers	Diploma	9	2.5
	1st degree	363	97.5
Training of teachers	Teaching profession	307	82.5
	None- teaching profession	65	17.5
Experience in teaching of teachers	1-3 years	111	29.5
	4-6 years	142	38.2
	7-9 years	38	10.3
	10-13 years	28	7.5
	14-17 years	28	7.5
	18 years and above	25	7
Weekly Work load of teachers	≤ 20 periods	253	68
	21-25 periods	119	32
	26-30Periods	-	-
	Greater than 30 periods	-	-

Table 7, indicates that 363(97.6%) of the teachers have first degree. Showing that supply of teachers as per the required qualification was not fulfilled. Only 9(2.5%) of teachers in sample schools were diploma holders, which is below the qualification required for secondary education teaching. On the other hand, the fact that 307(82.5%) of the teachers specialized with teaching profession, while, 65(17.5%) teachers were not trained with teaching profession indicates that though they have the qualification required for the level, a good number that do not have training on pedagogical knowledge and skill are serving as teacher. This may lead to lack of using appropriate teaching methodology which in turn affects students' achievement.

Regarding the experience of teachers the majority 29.5% and 38.2% of teachers were beginner and junior teachers respectively. Moreover, 10.3% teachers, 7.5% senior teachers, 7.5% associate lead teachers and 7% lead teachers. Thus, this implies majority of teachers are novice in their experience which may face difficulties of teaching and using instructional aides. Regarding weekly work load of teachers majority 253(68%) of the teachers were loaded less or equals to 20 periods per a week and 32% of teachers in the study area were loaded 21-25 periods per a week. However, none of teachers were loaded more than 25 periods per a week. Thus, this indicated that the weekly periods loaded to teachers are pastel.

Table 8. Teachers' Follow-up on Students' Achievement

N	Items	respondents	5		4		3		2		1		Total		X ²
			No	%	No	%	No	%	No	%	No	%	No	%	
1	Teachers provide exercise and feedback on their performance	Student	34	10.2	43	12.9	140	42.1	102	30.7	13	3.9	332	100	12.4
		Teacher	1	1	3	3.6	39	47.5	29	35.3	5	6	82	100	
2	Teachers encourage students to be competent	Student	92	27.7	47	14.1	120	36.1	57	17.1	16	19.5	332	100	10.4
		Teacher	24	29.5	5	6	39	47.5	12	14.6	2	2.4	82	100	
3	Teachers identify weakness and strength of their methodology.	Student	39	11.7	53	15.9	101	30.4	103	31	36	10.8	332	100	12.3
		Teacher	5	6	12	14.6	20	24.4	39	47.5	6	7.3	82	100	
4	Teachers conduct ongoing professional	Student	46	13.8	93	28	112	33.7	52	15.6	29	8.7	332	100	15.82
		Teacher	20	24.3	25	30.5	32	39	4	4.8	1	1	82	100	

N.B 5= very high, 4= high, 3= moderate, 2= low 1= very low

According to item 1 of Table 8, majority 42.1% students and 47.5% teachers reported teachers sometimes give homework, class work, tests and assignments and give feedback in their performance. However, 34.6% students and 41.3% teachers rated, teachers follow up through homework, class work and assignments either as poor or very poor. Thus, this indicates from the above issue teachers provide inadequate exercises and assignments, Besides, the feedback on their performance were insufficient. Regarding the encouragement of students in teaching learning process 36.1% of students and

a few less than half (47.5%) of the teachers revealed that it was moderately it as done. However a few more than one fourth of both respondents reported very high.

Item 3 of Table 8, majority 31% of the students and 47.5% of the teacher respondents revealed that, teachers do not use EGSECE results to identify strength and weakness in teaching methodology. Examination results can be very useful source of information for teachers, to give them in sights into the weakness and strengths of their students, and there for their teaching, the study indicates that they do not use it.

As can be seen in item 4 Table 8, 41.6% of students and 54.8% teachers revealed that teachers conduct ongoing professional development to improve the result of students. Thus, indicates that teachers moderately recognize conducting on going professional development helps to improve the performance of teachers to effective teaching learning process. As a result it boosts the EGSECE performance of students. Similarly, the calculated chi-square value of all items characteristics of teachers was greater than the critical value of (table value) chi-square $x^2=9.94$ at 0.05 significance level and degree of freedom four. The test indicates that there is significant difference between the two groups of respondents concerning the provision of feedback, encouragement evaluation of weakness and strength and in conducting on going professional development.

On the other hand, in the focus group discussion students were asked to give their opinion concerning the commitment, support of teachers to improve the decline of EGSECE result of students. Accordingly, their responses were that, teachers did not internalize it. Most teachers did not thought as responsible and accountable on the decline of EGSECE results. They blamed to the back ground capacity of the students. Thus, this indicates that teachers of general secondary education blameworthy on the turn down of the EGSECE results for

their students. In the same manner the interviewed school principals and Woreda education office experts revealed that though teachers know the poor results in the EGSECE, they are not committed and motivated to utilize their effort appropriately to boost student's performance.

4.3.3 The Effect of Student Characteristics

Poor performance at national examination could be result of various factors. These factors, in turn, could be linked to students' characteristics or other features that are out of control of students. The effects of some factors related to students' characteristics are presented below.

Table 9: Students' Characteristics

Variable	Characteristics category	Respondents						Total	
		Grade 10		TVET		Preparatory		No	%
		No	%	No	%	No	%		
Tutors	No tutor	79	73.2	62	76.5	103	72	243	73.2
	Family	17	15.7	11	13.5	26	18.2	55	16.6
	Hired tutor	12	11.1	8	10	14	9.8	34	10.2
	Students	-	-	-	-	-	-	-	-
Total		108	100	81	100	143	100	332	100
Study hour per day	None	53	49	42	51.8	66	46.2	161	48.5
	1-2hours	39	36.2	19	23.5	42	29.3	100	30.1
	3-4hours	8	7.4	14	17.3	20	13.9	42	12.6
	5hours and above	8	7.4	6	7.4	15	10.5	29	8.8
Total		108	100	81	100	143	100	332	100

The educational support given after school hours as shown from Table 9, the majority 243 (73.2%) of student respondents do not get educational support after the class. However, 55(16.6%) of students supported by family members. Only 34(10.2%) of the student respondents supported by hired teacher after a class. This signifies that the majority of students did not support after a class. This may cause low EGSECE result of students' performance.

In addition, Students were asked to respond how many hours they utilized their time for study. As shown in Table 9, the majority 161 (48.5%) student respondents did not show fixed study hours per a day. However, 100(30.1%),42.5(12.6%) and 29(8.8%) of student respondents' utilize their time for study after class spend 1-2 hours , 3-4 hours and 5 and above hours per a day respectively. This indicates that majority of students did not study after a class. This may cause the difference on EGSECE the result of students due to proper utilization of time.

Table 10. Students Role on Students' Achievement.

N / S	Items	respondents	5		4		3		2		1		Total		x ²
			No	%	No	%	No	%	No	%	No	%	No	%	
			1	Students develop high learning interests to boost EGSECE results	Student	34	10.2	26	7.8	30	9	68	20	174	
Teacher	5	6	6	7.3	12	14	20	24.4	39	47.5	82	100			
2	Students frequently do Exercise independently	Student	31	9.3	40	12	71	21.4	169	50.9	21	6.3	332	100	14.06
Teacher	4	4.8	12	14.6	30	36.9	36	43.9	-	-	82	100			
3	Students use school facilities effectively	Student	33	9.9	51	13.4	91	27.4	116	50	41	12.3	332	100	1.66
Teacher	5	6	13	15.8	22	26.8	33	40.2	9	10.9	82	100			
4	Students avoid cheating examination	Student	11	3.3	10	3	64	19.2	81	24.4	166	50	332	100	6.68
Teacher	4	4.8	3	3.6	10	12.2	30	36.6	35	42.7	82	100			

Note: 5=very high, 4=high, 3=moderate, 2=low, 1=very low

As Table10 item 1, the students and teachers were asked their opinion on the students learning interests and level of preparation for high result of national examination. Majority 72.4% students and 71.9% teachers respondents rated students' effort as either low or very low. This indicates that a problem exists in students preparation for the examination .Thus, based on the data analysis students oversimplify their role and learning interests in their preparation. The computed chi-square, $x^2=3.95$ which is far less than the critical value (table value), $x^2=9.49$ at significance level of 0.05 and degree of freedom four also shows that both teachers and students share common perception when it comes to ill preparation of students.

Students and teachers were also asked whether students frequently do their homework, class work and assignments independently. Majority 57.2% of students and a few less than half (43.9%) teachers rated students performance in this regard as low or very low. Thus, indicates that the effort in doing class work, homework and assignments is insufficient. However statistical analysis noted that there is significant difference between the response of both groups respondents, that is the calculated chi-square, $x^2=14.06$, greater than from the critical value (table value), $x^2=9.49$ at significance level of 0.05 and degree of freedom four. In item 3 Table 10 students and teacher respondents were asked the utilization of school facilities. Majority 62.3% of the students and 51.1% of the teacher respondents were revealed that either as low or very low, whereas, 21.4% of students and 36.9% teachers rated as moderate. The computed chi-square was, $x^2=1.66$ far less than the critical value (table value) $x^2=9.49$ at 0.05 significance level and degree freedom of four. Thus, teachers and students share common perception on the effective utilization of school facilities.

In item 4 Table 10 the students and teachers were asked to rate the extent of avoidance of cheating national exams. Three fourth (74.4%) of students and 79.3% teachers revealed either as low or very low in avoiding cheating in exams. This may be result from lack of confidence. This indicated that students do not challenge to study hard using their effort, as a result develops cheating customs. The computed chi-square was, $x^2=6.68$ less than the critical value, $x^2=9.49$ at significance level of 0.05 and degree of freedom four . This signifies that both groups of respondents believed that students did not avoid cheating.

In the focus group discussion, the issue how students get ready and exploit text books and school facilities to achieve high results in EGSECE were raised. For that reason, the forwarded responses are little attempts made due to different psychological, social and environmental factors of learners. This implies that

less innovative and give little attention to improve their own swiftness, interests, and ability may cause negatively affects on their EGSECE achievements. In the same way, the interviewees revealed the preparation and utilization text books of school facilities. Hence students are less competent to achieve high results due to their preparation and inefficient utilization of facilities and proper consumption of time. The ineffectiveness of students may cause low results in EGSECE.

From, these data analysis, focus group discussion and interview held with students, teachers, principals and Woreda education office experts, the researcher infer that the majority of students do not make every attempt to improved their results on their effort. Moreover, the majority of students are low initiative, lack of interest in teaching and unpromising on daily performance in secondary education.

4.3.4. The Effect of Class Size

According to Ministry of Education the average class size acknowledged for general secondary schools under favorable condition is 40 students in a class.

Table 11. Class Size Distribution of General Secondary Schools

N/S	name of school	Grade	Total number of students	Number of section	Class size	Average class size(9-10)
1	Agazi	9	1127	16	70	1:65
		10	467	8	58	
2	Atsibi	9	816	14	58	1:57
		10	437	8	55	
3	Dowuhan	9	305	6	51	1:52
		10	209	4	52	
4	Edaghamus	9	1029	18	57	1:57
		10	616	11	56	
5	Lideta Mariam	9	37	1	37	1:39
		10	40	1	40	
6	Tsineta Mariam	9	370	7	53	1:50
		10	329	7	47	
7	Wuqro	9	2114	30	71	1:64
		10	1702	30	57	
8	Total	9	5798	92	63	1:60
		10	3800	69	55	

Source: Sample secondary schools

most of the classrooms in the study area were over crowded. These causes low EGSECE achievements. This finding is in level of the finding of (Takeste 1990:510) which indicated over crowded classes are considered as fundamental cause for decline the quality of education in Ethiopia.

4.3.5 The Effects of Parent Involvement

Parent encouragement and support for learning activities at home, and parent involvement in schools and class rooms, have a positive impact on students learning (Kumari, 2007:181). Parent involvement in schools has been explored as a possible means through which students can be provided with additional support.

Table 12: Educational Background of Parents

Variable	Characteristics category	Respondents						Total	
		Grade 10		TVET		Preparatory		No	%
		No	%	No	%	No	%		
Educational background of parents	None	63	58.3	52	64.3	81	56.6	196	59
	Basic education	37	34.3	28	34.5	43	30	108	32.5
	Certificate	3	2.8	-	-	10	7	13	4
	Diploma and above	5	4.6	1	1.2	9	6.4	15	4.5
Total		108	100	81	100	143	100	332	100

Student respondents' inform in Table 12, parents' educational level a few more than half 196 (59%) of the parents were illiterate, 108 (32.5%) able to read and write with the knowledge of basic education, only 13(4%) parents posses' certificate and 15 (4.5%) of parents' qualified diploma and above. This may have negative impacts on students EGSECE achievements. As the result, majority of parents were illiterate that students may not supported academically by their parents. So, this may face problems of achievements. Family educational background factors are considered as the most important factors that exerted strong influence on the academic achievement of students (Mathewos, 2000:28).

Table 13. Parent Involvement

N/S	Name of school	Frequency schools organize parent's visit to school of parent involvement						
		Daily	Weekly	Monthly	Quarter	Semester	Annual	Total
1	Agazi						✓	1
2	Atsbi						✓	1
3	Dowuhan						✓	1
4	Edagahamus						✓	1
5	Lideta M					✓	✓	2
6				✓	✓	✓	✓	4
7	Wukro					✓	✓	2
Total		-	-	1	1	3	7	12
Percent				14.3%	14.3%	42.8%	100%	

As illustrated in the Table 13, only 1(14.3%) of sample secondary school invite and participate parents in school activities and students issue monthly and quarterly. Only 3(42.8%) two non governmental and only one government secondary schools organize planned parents visit every semester while all secondary schools organize annual parents' day at the end of the academic year. These parent involvements do not include the involvement of member of PTA and parents visit to schools due to students' disciplinary problems. This shows that, parent's involvement in schools affair is inadequate.

The rationality of timely parent involvements requires information on their children's progress to provide fundamental information that supports parents in making decision about the education of their children. In addition, written report and teacher parent meeting are the most common through which parents receive information on their children's progress.

Table 14. Parent's Role on Students and School Performance

N	Items	respondents	5		4		3		2		1		Total		x ²
			No	%	No	%	No	%	No	%	No	%	No	%	
1	Parents communicate with teachers about students' issue.	Student	35	10.5	41	12.5	64	19	132	40	60	18	332	100	6.35
		Teacher	6	7.4	9	11	8	10	41	50	18	21.9	82	100	
2	Parents involve in school activities	Student	31	9.4	42	12.6	58	17.5	143	43	58	17.5	332	100	5.63
		Teacher	11	13.3	8	9.7	17	21	26	32	20	24	82	100	
3	Parents provides feedback to school about their children performance	Student	44	13	58	17.5	65	20	104	31	61	18.5	332	100	4.7
		Teacher	6	7	17	21	11	13.5	28	34.1	20	24.4	82	100	
4	Parents evaluate the weakness and strength of the school	Student	24	7.2	15	4.5	78	23.5	48	14.5	167	50.3	332	100	9.21
		Teacher	12	14.6	5	6.0	16	19.5	20	24.5	29	35.4	82	100	

N.B: 5= very high, 4= high, 3= moderate, 2= low, 1= very low

Parents involvement in education are one of the most recognized factors impacting in students EGSECE achievements. As illustrated in Table 14 item 1, 192(58%) students and 69 (71.9%) teachers view the involvement of parents either as low or very low on the communication of parents with teachers regarding students issue. Thus, this signifies that the communication of parents with teachers concerning the students discipline, progress and attendance were insufficient. Thus, low communication of parents with teachers may result high repetition low attendance and high problem of discipline. Thus, this finding with level the finding (Chen and Gregory, 2010) that students whose parents are less involved in their schools have low grades, weak attendance and high discipline problems.

The majority 201(60.5%) of students and 46(56%) the teacher respondents revealed either low or very low on the parent involvement in school activities . This implies that parents are not decision makers in school affairs and powerless to find the possession of the school. Secondary schools PTA members are four form parents, two teachers, one principal and one student

representative. Here parents were supposedly included in PTA do not active participant in their schools to make decisions.

The parents feedback provide to school about students' progress were asked to student and teachers. Half (49.5%) students and 44(58.5%) teachers reported either low or very low. This implies that the feedback mechanisms from parent to school is inadequate. Thus, this seems to be emanated from low experience and low motivation from school administration these are unenthusiastic to get involve in their children school may be students unsuccessful in EGSECE results.

The fourth item Table 14,students and teachers were asked the parents' evaluation to weakness and strength of the school depend on EGSECE results. For that reason, 64.5% students and 59.9% the teacher respondents revealed as either very low or low. As result majority of respondents indicated in the above mentioned issue parents were depress to evaluate the weakness and the strength of the school depending on their children EGSECE results. The calculated chi-square of all items was less than the critical value, $\chi^2 = 9.49$ at significance level of 0.05 and degrees of freedom four. This implies that there is no significant difference between the two groups of respondents relating to the parent involvement in secondary school.

Focus group discussion on the issues how parents' involvement in school activities and on students EGSECE results also confirmed that parents visit schools only when summoned because of children's disciplinary Problems. This shows that linkage school and parents relationship are not strong enough to enable parents involve in the affair of their children's' schooling. In the same way, information composed from interviewees concerning parents' participation in evaluating their students' performance at EGSECE. As a result, the responses were that the participation of parents in school activities and

evaluating the EGSECE performance no avail. When parents summon to participate in school activities gave little attention.

Based on the above data analysis, focus group discussions and interview it is possible to deduce that parents' involvements in schools activities and student results were insignificant or no avail. Parents' engagement in schools when students create disciplinary problems the result may cause students low EGSECE achievements.

4.3.6 Instruction Material School Facilities

School facilities play their own role in enhancing quality of education. A check list was prepared to observe availability of different school facilities and the results are summarized below.

Table 15. School Facility and Instructional Materials

No	Items	Adequately Available		Inadequate Available		Not available	
		No	%	No	%	No	%
1	Classroom Furniture	7	100	-	-	-	-
2	Library	3	43	4	57	-	-
2.1	Full time librarian	3	43	4	57	-	-
2.2	Update reference books	2	29	5	71	-	-
3	Laboratories	2	29	5	71	-	-
3.1	Equipment and apparatus	3	43	4	57	-	-
3.2	Trained laboratory technician	-	-	1	14.5	6	85.7
4	Pedagogy center	3	43	4	57	-	-
5	Latrine(boys and girls)	2	29	5	71	-	-
6	Internet	1	14.5	1	14.5	5	71
7	Tap Water	2	29	5	71	-	-
8	Electric	7	100	-	-	-	-
9	Lounge	-	-	2	29	5	71
10	Text books	7	100	-	-	-	-

Library is among the major facilities that are thought to be very useful with a strong effect on students' academic achievements. It goes without saying that, student cannot acquire knowledge only through text books or class room lectures. Thus, libraries should be available and organized with necessary materials in order that they could deliver adequate service for the beneficiaries.

Table 15 shows that all schools have adequate classroom furniture. Regarding the availability of library 3(43%) secondary schools' have standard library service. However, 4 (57%) library of secondary schools do not have adequate user and only 2(29%) have full time librarian that provide services for more than 10 hours per a day. The other, 5(57%) school libraries do not have full time librarian and provide service for less than seven hours per a day.

The reference books 5(71 %) of the libraries stocked old and foreign books that irrelevant to general secondary education , while only 2(29 %) secondary schools of the study area complete with updated reference books . In other hand, Majority of the libraries of sample secondary schools do not deliver adequate services for the beneficiaries due to lack of full time librarian ,opening hours of libraries and updated reference materials. As the result students achieve low EGSECE results.

School laboratory is useful facilities to translate theory in practice. This can be realized if laboratory in schools deliver efficient and effective services. School laboratory service 3(43%) sample secondary schools fulfill three separated laboratories with adequate chemicals, equipments and apparatus. However, 4(57%) secondary schools have inadequate chemicals, equipment and apparatus. On the subject of laboratory technician 6(85.6%) sample secondary schools are without trained or specialized laboratory technician. Thus, this revealed that the service deliver to students in translating theory to practice were insufficient. Facilities like electric adequately available in all sample secondary schools, however, Tap water and latrines inadequate available in majority of secondary schools. The services of lounge and internet are not

available in most secondary schools. Concerning pedagogy centers of sample secondary schools are 4(57%) deliver inadequate available services, while 3(43%) provide sufficient services to improve teaching learning process. The distribution of text books are adequate available in sample secondary school before this year.

Thus, the utilization of school facilities and instructional materials was insignificant. This might be due to lack of trained laboratory technicians full time librarians and other constrains. Therefore, this poor utilization of school facilities and instructional materials results ineffectiveness on the EGSECE result of students of the study area.

On the other hand, focus group discussions held with students were asked to give their opinion concerning the availability and proper utilization of instructional materials and school facilities to boost students EGSECE performance. The distribution of students' text books are one to one before these year. But other facilities like library, laboratory and updated reference materials, trained laboratory technicians and full time librarians revealed insufficient. In addition, respondents reported that school management gives little attention to library and laboratory services. The opening hours of the library are during when students in a class, even if the library stocked with foreign books irrelevant to prepare national examinations. In other hand, the laboratories have shortage of qualified laboratory technician. From this point of view, the utilization of school facilities and instructional materials of sample secondary school are insufficient to improve the EGSECE result of students.

In addition from the interviewees report, the proper utilization of school facilities and instructional materials are insufficient due to lack of trained laboratory technician lack of full time librarian and commitment of school communities. The availability of students' text books are adequate one to one in all subjects before this year. But updated reference books, equipments,

chemicals, and apparatus are inadequate available in every school of the study area. To sum up, the utilization of instructional materials and school facilities provides in secondary schools are inefficient and ineffective. Specially, there is no any trained laboratory technician in these secondary schools this implies students that could not translate theory to practice in biology, chemistry and physics. As a result, this cause low GPA results in national examinations.

4.3.7 Rank order of Major Factors Affect the EGSECE Achievement of Students

As indicated earlier teaching-learning in general and students performance in national examinations are affected by many factors. Respondents were asked to rank order major factors identified from the literature review and their responses are summarized as follow.

Table 16: Rank Order of Factors Affecting Students EGSECE Achievement

N/ S	Items	Respondents				Spearman rank order	Weight mean	Weight
		Students		Teachers				
		Mean	Mean Rank	Mean	Mean			
1	Over crowded classrooms	3.65	6	4.36	3	0.2	3.78	5
2	Shortage of instructional materials and school facilities	3.99	3	3.75	4		3.90	4
3	Lack of parent involvement , support and awareness in School activities	3.85	4	4.73	2		4.01	3
4	Poor school management	3.81	5	3.48	5		3.72	6
5	Lack of commitment , interest of teachers in teaching	4.40	2	3.30	6		4.71	2
6	Lack of interest students in learning.	5.41	1	5.56	1		5.21	1

Table 16 revealed that both teachers and students share common perceptions in ranking the factors that affect students learning achievements. Both groups agree that students lack of interest in learning is number one factor affecting

their performance .Nevertheless, their differ in ranking the share of teachers. Students have ranked lack of commitment and interest on the side of teachers as second major factor while teachers considered it as sixth factor. Lack of parent involvement, support and awareness in school activities is ranked as second major factor by teachers while it is ranked as fourth serious factor by the students. Besides, student respondents ranked as sixth the overcrowded class rooms as factors affecting students learning achievements while teachers rank as third factor. This may indicate that teachers consider the challenges of follow up in giving activities, tests and even the students discipline whereas students may give little attention as the factor for their learning. In the same manner in Table 16 the students and teachers ranked the shortage of instructional materials and school facilities as third and fourth factor respectively. Moreover, in ranking poor school management share common perception as fifth rank by both groups of respondents.

Generally, lack interest students in learning, lack commitment and lack interest teachers' in teaching, poor parent involvement support and awareness in school activities as the major three first factors affecting the EGSECE achievement of students. Shortage of instructional materials and school facilities, overcrowded class rooms and poor school management ranked the second three major factors affecting the EGSECE achievement of students in the study area. The finding has got the support the finding of (Fuller,1986:29; Kumar and others, 2007: 18) Spearman's rank correlation coefficient result which is 0.2 indicated reasonably weak positive correlation agreement between the ranking of student and teacher respondents. Moreover, the interviewees were asked, what are the major factors affecting the EGSECE achievement of students. The respondents revealed that inefficient uses of instructional materials and school facilities, poor teachers preparation, cheating and incompetence of learners, crowded of class rooms, location of school, hopelessness of learners and weak follow up of parents among the many factors which affect the EGSECE achievement of students in the study area.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Major Findings

The main purpose of this study was to describe the factors affecting EGSECE achievement of students. The study was carried out with specific reference to six secondary schools and two TVET centers of Eastern Zone of Tigray Regional National State.

The basic questions of the study are:

1. What are the trends in students EGSECE achievement of different years of general secondary education?
2. What are the major factors that impede result of students' in general secondary education?
3. Do school principals teachers and parents work to address those factors cooperatively?
4. Is there statistically significant difference between high achieving and low achieving students in EGSECE results?

To this end, the descriptive survey approach was employed as the study method. The study was conducted in six secondary schools and two TVET centers and total participants were 514. A questionnaire was administered to 338 students and 82 teachers; 80 students (ten from each of the eight educational institutions) participated in focus group discussions and seven school principals and seven woreda education office experts were interviewed. However six questionnaires were discarded because they were incomplete. Sample secondary schools and respondents were selected using simple random, stratified, purposive and availability sampling techniques.

Document analysis, Likert 5-scale closed ended questionnaire, unstructured interview and focus group discussion were used as major tools of the data collection. The information gained through those data gathering tools were

analyzed by frequency accounts, percentage distribution, mean and mean rank. Spearman rank correlation coefficient, weighted mean rank and descriptive statement were also employed. Chi-square was employed to test the significant difference of two groups of respondents. The major finding of the summary in the study is presented as follows:

The EGSECE achievement pass rate of students in consecutive five years range from 2005/06 and 2009/10 revealed that 39.2%, 26.1%, 29.5%, 40.9% and 35.7% respectively in five consecutive years range 2005/06 to 2009/10. As the result indicated, the EGSECE achievement pass rate did not show series trend, that is inconsistency in sample secondary schools. In addition, 94% and 45% of students from two private schools, namely Tsinseta Mariam and Lideta Mariam secondary schools which are owned by catholic church score pass marks that enable them to get promoted to preparatory programs. However, only less than one third of the students from Agazi, Wukro, Dowuhan, Atsibi and Edagahamus, which are governmental secondary schools got promoted to preparatory schools. What is more, there is also gender disparity in all the schools. That is, except one school Lideta Mariam (where females score better than males), in all the remaining schools males perform better than females. In general, the trend of EGSECE result in study area were one year increasing the next year decreasing even the high achiever secondary schools the result of consecutive year either increasing or decreasing.

The major factors impede the EGSECE result of students in general secondary education were ranked according to the respondents (i.e., students and teachers): students' lack of interest in learning, lack of teachers' commitment and interest in teaching and lack of parent involvement, support, and awareness in school activities are the first three sever consecutive factors. Moreover, shortage of instructional materials and school facilities, over crowdedness of class rooms and poor school management are the other most sever consecutive factors.

Mariam secondary schools were twice or three times greater than that of the governmental schools.

The main reasons and/or factors for the low achievement of the students are: students' lack of interest in learning, lack of commitment and interest of teachers in teaching, lack of parent involvement, awareness and support in school activities, the inadequacy of instructional materials and school facilities, over crowded class rooms and poor school management. That is , if students are not with high moral to learn, and don't feel confident in sitting for exams it is obvious that they could not do their home works, class works and other activities as needed. And this, in turn has it has deficiency in the EGSECE result of the students

On top of this lack of commitment and interest of the teachers in teaching was another barrier that hinders students from achieving good scores. Put differently, the novice teachers- who lack commitment and enthusiasm due to different reasons, such as looking for the transfer to and getting better status in political administration- can hardly satisfy the academic thirst of the field and the achievement of good scores of the students. These dissatisfied and less committed teachers can never satisfy the students and hence students could not be able to score good results for they do not acquire the required skills from the specific courses. Furthermore, lack of parents' involvement in school activities and their poor follow up of their children's affairs in and out side of their home has low EGSECE results of the students. That is, lack of communication between school communities and parents has its own causes low EGSECE achievement of the students.

Overcrowded class rooms, insufficient instructional materials, low school facilities and poor library and laboratory services are the other hindrances that negatively affect the results of students. In addition, school principals are less qualified and less trained with the measure area of educational administration.

They lack the relevant experience to accomplish the academic tasks of the schools and hence they face difficulties to mobilize and initiate school community to create conducive teaching learning environment. Therefore, principals who have clear deficiency in experience and qualification are also contributing to the problems that cause the low EGSECE achievement of students.

Furthermore, School management, and parents despite their being the top leader of in teaching and learning matters, externalize the accountability and responsibility to teachers. Teachers blame the educational back ground of students and to parents. In turn parents also blame to teachers and schools. In general schools principals, teachers and parents make little attempt to cooperatively address the existing EGSECE problems of the students.

5.3 Recommendations

According to the Educational Policy of Ethiopia, in order for the students to be promoted from one level to the next, students are required to score a minimum of fifty percent and above. However, majority of students in the study area annually achieve below fifty percent. Hence, In view of the finding of the study and conclusion drawn, the following recommendations are forwarded to improve the academic achievements of students:

1. Woreda Education Office and Regional Education Bureau in collaboration with MOE and NGOs should execute the required educational inputs such as standardized laboratory, standardized library, ICT and Internet accesses. Besides, have to provide updated reference books, employ full time librarians to provided necessary services, provide the required laboratory equipments, chemicals and facilities, train and specialize laboratory technicians for biology, physics and chemistry for it is help full to relate theory with practice, and build additional secondary schools in each sub-Woreda to schools to make it conducive environment to the learners.

2. To overcome the low dedication of teachers and inspire them so that they can happily stay in their occupation- in the schools and in education sectors- the government should provide additional incentives like house allowance, stretching the amount of the career level, planned reward and further education opportunity.
3. MOE have to prepare continuous training stages concerning educational administration for the school management to upgrade their leadership capacity that to qualifies masters degree .
4. The school management should initiate the involvement of parents and community members in different school's activities and decision-making to develop the sense of ownership. This can be achieved through arranging educational panels, educational conferences, news papers and parents' education day
5. Parents should be aware of the importance of challenging assignments and curricula and the procedures as well as daily progress of their children and community should build additional classrooms to the established secondary schools.
6. In order to enhance better result of students' achievement, the school should create awareness on how important the follow up of parents or families on their children's activities (e.g. studying in program, homework, class work, taking notes, group works, projects, assignments, discussion etc.) which has great impacts on the learners' achievement.
7. Teachers should also give assignments, projects, group works to the students in order to collect and use the knowledge, experiences and best practices of the societies and the teacher should use the inputs obtained from the society to boost the national examinations.

Finally, the problem is not an easy one to be adequately studied by a beginner researcher. Thus, the researchers would like to recommend that other individuals should carry out deeper and wider research work on this thesis.

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Appendix A
Addis Ababa University
School of Graduate Studies
College of Education and behavioral studies
Department of Educational Planning and Management

Questionnaire to be completed by secondary schools teachers

To the Respondents:-

This questionnaire is prepared for the purpose of conducting a study on Factors Affecting EGSECE Achievement of Students in Eastern Zone of Tigray. To achieve the purpose, your cooperation in completing this questionnaire is highly appreciated and the success of this study by and large depends on your honest and sincere responses to the question items. The data you provide will be kept confidential and for the purpose of this study only. You are, therefore, kindly requested to provide the required Information.

General direction

- Don't write your name.
- Indicate your response by marking '√'
- Give short and precise responses to open-ended questions.

Please, follow instructions provided for each part.

Thank you in advance for your cooperation!

Part I

I. Background and Personal Information

Fill the required information on the space provided by writing and marking “√”

1.1 Name of school _____ Woreda _____

1.2 Sex Male Female

Part Two

Direction: this part presents four sections of questionnaire regarding the factors affecting EGSECE achievements of students on factors

- parent involvement,
- teacher characteristics,
- students characteristics,
- school management and

Those are expected to be informed about general secondary school students. Hence you are cordially requested to judge your school against each statement in each section by putting “√” mark in one of the five scales in front of each item which corresponds to your judgment or perception.

Please, use the following five scales to respond to each item/questions in each section.

Very high =5, High = 4, Moderate= 3, Low= 2 Very low=1

Please respond by making a tick "√" against the response you think most appropriate.

Section One. Questionnaire related to parent involvement

No	Item	5	4	3	2	1
1	Parents communicate with teachers about students academic progress, student discipline, attendance					
2	Parents involve in all school activities, PTA, parent teacher conference voluntarily					
3	Parents provides feedback about their children to school					
4	Parents evaluate the weakness and strength of school depending the EGSECE results of students in each year					

Section two. Questionnaire regarding teacher's characteristics

No	Items	5	4	3	2	1
1	Teachers give homework, class work, tests, and assignments regularly and give feed back on their performance.					
2	Teachers encourage students able to be competent					
3	Teachers evaluate the EGSECE result of each year used to identify weakness and strength of the method used.					
4	Teachers conduct on-going professional development to improve the result of students					

Section three Questionnaire Related to School Principal

No	Items	5	4	3	2	1
1	Principal's participate teachers, students, in decision making (related to teaching-learning) activities					
2	Principal's participate parents in different school activities and in school improvement program, inform on their children's EGSECE results					
3	Principal evaluate the EGSECE result of students with teachers, students, parents, and strive to improve the result					
4	Principal's visits classroom regularly (when teachers are teaching) for improvement of student result.					

Section four: Questionnaire Related students characteristics :

No	Items	5	4	3	2	1
1	Students develop high learning interests and well prepare for high EGSECE results					
2	Students improve doing homework, class work and assignments independently					
3	Students utilize school facilities effectively					
4	Students avoid cheating in examinations					

Part III.

Direction: Below there are lists of possible reasons assumed to affect the EGSECE achievement of students in your school. Please rank the items according to their contributions for low EGSECE achievement of students. Write a number from 1-6 on the box provided.

N.B: Write 6 for the first sever factor,5 for the second,4 for the third,3 for fourth,2 for the fifth and 1 for the sixth sever factor respectively

- Over crowded of class rooms
- Shortage of instructional materials and school facilities
- Lack of parent involvement, parent support & parent awareness in school activities
- Poor school management
- Lack commitment, interests of teachers in teaching.
- Lack of interests' students in learning

Appendix B
Addis Ababa University
School of Graduate Studies
College of Education and behavioral studies
Department of Educational Planning and Management

This interview guided questions is to be answered by general secondary school principals and Woreda education office officials.

Part I

1. What are the factors that positively or negatively affect at EGSECE performance students?

2. is there adequate instructional materials and school facilities in your school/ explain? -----

3. If you have adequate instructional material and school facilities in your school
a. How do you utilize?
b. How do you evaluate with the result of EGSECE achievement of
4. Do you think school management and teachers are aware of these factors?
5. What measures are taken to boost students' performance at EGSECE?
6. Do schools involve parents in evaluating their students' performance at EGSECE?

Appendix C
Addis Ababa University
School of Graduate Studies
College of Education and behavioral studies
Department of Educational Planning and Management

Questionnaire to be completed by of secondary schools students.

To the Respondents:-

This questionnaire is prepared for the purpose of conducting a study on Factors Affecting EGSECE achievement of students in Eastern zone of Tigray. To achieve the purpose, your cooperation in completing this questionnaire is highly appreciated the success of this study by and large depends on your honest and sincere responses to the question items. The data you provide will be kept confidential and will not be disclosed to any third Party. You are, therefore, kindly requested to provide the required Information.

General direction

- Don't write your name.
- Indicate your response by marking '√'.
- Give short and precise responses to open-ended questions.

Please, follow instructions provided for each part.

Thank you in advance for your cooperation!

I. Background Information

Instruction: - Some characteristics of students are given below. Please respond either by filling in the blank space or of by circling the letter the appropriate response.

1. Name of school _____ Woreda _____
2. Grade _____
3. Sex A. Male B. Female
4. Age A. 11-13 years B. 14-16 years
 C. 17-19 years D. 20 years and above
5. Your parents' educational status is:-
 A/ never been to school B/ between grade 1 and grade 12
 C/ has a certificate D/ has a diploma above
6. Who gives you tutorial at home?
 A/ no one tutors me B/ family members C/ a hired tutor D/ students
7. How many hours do you study per day?
 A/ I do not have time to study B/ 1-2 hours C/ 3-4 hours
 D/ more than 5 hours per week

Part Two

Direction: this part presents four sections of questionnaires regarding the factors affecting EGSECE achievements of students on factors:

- Parent involvement,
- Teacher characteristics,
- Students characteristics, and
- School management.

Those are expected to be informed about general secondary school students. Hence you are cordially requested to judge your school against each statement in each section by putting "√" mark in one of the five scales in front of each item which corresponds to your judgment or perception.

Please, use the following five scales to respond to each item/questions in each section. **Very high =5, high = 4, moderate= 3, low= 2, very low=1**

Please respond by making a tick “√” against the response you think most appropriate.

Section One. Questionnaire related to parent involvement

No	Item	5	4	3	2	1
1	Parents communicate with teachers about students academic progress, student discipline, attendance					
2	Parents involve in all school activities, PTA, parent teacher conference voluntarily					
3	Parents provides feedback about their children to school					
4	Parents evaluate the weakness and strength of school depending the EGSECE results of students in each year					

Section two. Questionnaire regarding teacher's characteristics

No	Items	5	4	3	2	1
1	Teachers give homework, class work, tests, and assignments regularly and give feed back on their performance.					
2	Teachers encourage students able to be active creative responsive in teaching learning activities					
3	Teachers evaluate the EGSECE result of each year used to identify weakness and strength of the method used.					
4	Teachers conduct on-going professional development to improve the result of students					

Section three: Questionnaire Related to School Principal

No	Items	5	4	3	2	1
1	Principal's participate teachers, students, in decision making (related to teaching-learning) activities					
2	Principal's participate parents in different school activities and in school improvement program, inform on their children's EGSECE results					
3	Principal evaluate the EGSECE result of students with teachers, students, parents, and strive to improve the result					
4	Principal's visits classroom regularly (when teachers are teaching) for improvement of student result.					

Section four: Questionnaire Related students characteristics

No	Items	5	4	3	2	1
1	Students develop high learning interests and well prepare for high EGSECE results					
2	Students improve doing homework, class work and assignments independently					
3	Students use text books and school facilities effectively					
4	Students avoid cheating in class and national examinations					

Part III.

Direction: Below there are lists of possible reasons assumed to affect the EGSECE achievement of students in your school. Please rank the items according to their contributions for low EGSECE achievement of students. Write a number from 1-6 on the box provided.

N.B: Write 6 for the first sever factor,5 for the second,4 for the third,3 for fourth,2 for the fifth and 1 for the sixth sever factor respectively.

- Over crowded of class rooms
- Shortage of instructional materials and school facilities
- Lack of parent involvement, parent support & parent awareness in school activities
- poor school management
- Lack commitment, interests of teachers in teaching.
- Lack of interests' students in learning

3. School Management

N/S	Name of school	Qualification of principal			Total Services		Training	
		Diploma	1 st degree	2 nd degree	In teaching	principal	Long(EdPM)	short Subject)
1								
2								
3								
4								
5								
6								
7								

4. Students Text Book Ratio

N/S	Name of school	2008/2009			2009/2010			2010/2011		
		language	natural sciences	social sciences	language	natural sciences	social sciences	language	natural sciences	social sciences
1										
2										
3										
4										
5										
6										
7										

Parents Involvement

N/S	Name of school	Frequency of parent involvement					
		Daily	Weekly	Quarterly	Semester	Annual	Remark
1							
2							
3							
4							
5							
6							
7							
Total							

Appendix E

Table10: Critical Values of Chi Square

Degrees of freedom	Significance level, p			
	0.05	0.02	0.01	0.001
1	3.84	5.41	6.63	10.83
2	5.99	7.82	9.21	13.81
3	7.81	9.84	11.34	16.27
4	9.49	11.76	13.28	18.47
5	11.07	13.39	15.09	20.51
6	12.59	15.03	16.81	22.46
7	14.07	16.62	18.47	24.32
8	15.51	18.17	20.09	26.12
9	16.92	19.68	21.67	27.88
10	18.31	21.16	23.21	29.59
11	19.67	22.62	24.72	31.26
12	21.03	24.05	26.22	32.91
13	22.36	25.47	27.69	34.53
14	23.68	26.87	29.14	36.12
15	24.99	28.26	30.58	37.67
16	26.23	29.63	32.00	39.25
17	27.59	30.99	33.41	40.79
18	28.87	32.35	34.80	42.31
19	30.14	33.69	36.19	43.82
20	31.41	35.02	37.57	45.31

Declaration

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

Name Girmay Negash

Date of submission-----25/05/2011-----

Signature----------

The thesis has been submitted for examination with approval as a university advisor

Name Taddele Hagos (PhD)

Date of Approved----------

Signature----------