ANALYSIS OF SECONDARY SCHOOL INTERNAL EFFICIENCY

THE CASE OF GUJI ZONE

A THESIS PRESENTED TO THE SCHOOL OF GRADUATE STUDIES
OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE MASTER OF ARTS
DEGREE IN EDUCATIONAL LEADERSHIP

BY

MUKTAR BEDEWI

APRIL 2011

ADDIS ABABA

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

DEPARTEMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

ANALYSIS OF SECONDARY SCHOOL INTERNAL EFFICIENCY THE CASE OF GUJI ZONE

BY

MUKTAR BEDEWI

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

DEPARTEMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

APPROVED BY THE BOARD OF EXAMINERS

Yekunoamlak Alemu (Ph.D)

Chairman, Department Graduate Committee

Signature

Paddle Hogo

Advisor

Signature

Examiner

Signature

Acknowledgements

I would like to express my deep appreciation to Dr. Taddele Hagos, my thesis advisor, for his assistance, constructive and critical comments, continued support, unreserved guidance, un-dying patience and engaging me in conducting this study from designing the research proposal up to its completion, which otherwise would hardly be realized in its present form. Especially his good approach is highly valued by me.

My special gratitude also goes to my father, Bedewi Mohammed and my mother, Aregash Wayessa for the educational path way they set me on many years ago. I also extended my appreciation to my wife, Alewiya Taha, my intimate friend, Abdulhakim Abdusselam and my sister, Mekiya Bedewi for their endless encouragement and support.

I also extend my appreciation to all the subjects of this study student, teachers, principals, PTA members and parents for their warm approaches and their precious time in responding to the questionnaire.

Finally, I would like to thank AAU, school of graduate studies, Negele Borena Town Adminstration and Negele secondary and preparatory school, for their financial and material support to carry out this research work.

Muktar Bedewi

Table of Contents

Page

CHAPTER FOUR

CHAPTER FIVE

List of Tables

Pages

List of Figures

Acronyms and Abbreviations

ANOVA	Analysis Of Variance
Eu-ra	European Research Association
GZEO	Guji Zone Education Office
IAE	The International Academy of Education
IIEP	The International Institute for Educational Planning
KEB	Kebele Education Board
MOE	Ministry of Education
OEB	Oromia Education Bureau
PTA	Parent-Teacher Association
TGE	Transitional Government of Ethiopia
U.S. $	United States Dollar
UNESCO	United Education, Social and Cultural Organization

Abstract

The purpose of this study was to examine the situation of internal efficiency in secondary schools of Guji zone, identify the major factors behind low school internal efficiency and to suggest possible solutions. A descriptive survey research method was applied. This involved an investigation of trends of internal efficiency and factors that affect it in one way or another. The study was conducted in 5 secondary schools selected using simple random sampling technique. The subjects of the study were 495, out of which 310 of them were students selected using simple random sampling, and the remaining 133, 21, 15, 10, and 6 of them were teachers, PTA members, parents, school principals and educational experts respectively selected using purposive sampling. Data were collected through questionnaire; a semi structured interview with parents; a focus group discussion with PTA members and document analysis. The data obtained were interpreted and analyzed using various statistical tools such as percentage, mean, standard deviation and ANOVA. Results that emerged from this study indicated that the average drop out and repetition rates for grade 9 during the five years under consideration were 17.4 percent and 15.3 percent respectively and similarly the average secondary school dropout and repetition rates were 12.65 percent and 11.2 percent respectively. In addition the result reveals that the problem with drop out and repletion rate is worse in boys than in girls. Moreover, results of this study indicated that the students experience several barriers to learning that are related to teachers, student themselves, school system, socio-economic, socio-cultural, and school management, which could cause them either to drop out of school or repeat grades. This includes factors such as students' lack of effort to study hard, low self conception, lack of interest in education and low future success in education, lack of teachers encouragement of students' performance and shortage of teachers, overcrowded class rooms and lack of school facilities, poor school management and poor school community relationship, school distance and the need for child labor, and peer group initiation. Due to these factors secondary education of the zone is leaving behind about a quarter of its students every year. On the basis of these findings, taking the societies' s settlement condition into account before opening new secondary school, early identification and targeting of learners at risk of either dropping out of schools or repeating grades, organizing workshops, evaluating students' performance continuously, and training more teachers on the basis of school needs are forwarded as recommendations to alleviate the problem of low secondary school internal efficiency in the zone.

CHAPTER ONE
THE PROBLEM AND ITS SETTING

This chapter deals with the problem and its approach and consists of the background of the study, statement of the problem, objective of the study, significance of the study, delimitation of the study, limitations of the study, operational definition of key terms and phrases and organization of the study.

1.1. Background of the study

Progress in education is taken to be essential for sustainable development, environmental protection, improvement in material and child health and participation in democratic social and political process. Education is currently becoming the most important contributor to national economic growth. Empirical evidence suggests that educational investment has been one of the most important factors contributing to economic growth in both developed and developing countries. Some evidence showed that in developing countries the average rate of return to human capital investment is higher than the rate of return to physical investment, even though we do not take into account the positive effect of education on the productivity of physical capital (Psacheropoulos, G. and Woodhall, M. 1985). In support of this, the range of investments in education and the range of research and studies which try to improve the quality of education in both state and private organizations show that effective and efficient secondary education has a key role in directing society's development process towards its purposes and it addressed key constraints to sustainable development (Aziz, N. and Lasonen, J. 2006; and UNESCO, 2000). Access to good quality schooling is, thus, of a central importance to national development.

Secondary education holds a privileged position in all education systems. It is placed between primary and tertiary sectors in structure and content, and it is at the hub of all educational reforms. Good quality secondary education is now considered as a prerequisite both for successful integration of young people into

the modern economy and for the ability of countries to benefit from the Information Communication Technology and knowledge revolution and to compete successfully in the new globalized, knowledge based economy (World Bank, 2001). It also plays a crucial role in the socialization of young people and in targeting at-risk youth, and is central to fostering positive social attitudes. Secondary education also yields considerable private returns and provides opportunities to acquire attitudes, skills (which enable young people to participate fully in society, take control of their lives, and continue learning) and competencies unlikely to be developed during the primary grade. Therefore, this sector requires being efficient.

Efficiency is a term borrowed from economists and adapted to the education system; and as originally developed and refined by economists, the concept of efficiency refers to the optimal relationship between the inputs into a system and the outputs from the system (Tegegn, 1998). An education system is said to be efficient if maximum output is obtained from a given input, or if given output is obtained with minimum possible input (OEB, 2007). These support the fact that the most relevant indicator of education system efficiency is not just the number of students enrolled in the system but the number of graduates, who have completed a given educational level with intended resource and required learning skills, attitude and knowledge. Thus, improving efficiency in educational systems enable the system to produce more desired education outputs and outcomes with a given educational resources. Supporting this, (Misganu, 2010) argued that, producing maximum number of qualified graduates in the education system is the building-block for the necessity of efficiency in school.

Educational efficiency is analytically distinguished into external efficiency and internal efficiency. External efficiency is the comparison of social costs and social benefits (Lissanu, 2004; and UNESCO, 2003). Different from external efficiency that includes wider objectives of society, internal efficiency is only

concerned with the relationship between inputs and outputs within the education system or within individual institutions.

School internal efficiency is usually measured using indicators such as dropout rate and repetition rates. Lockheed and Verspoor, (1991) indicated that the average repetition rates in low income and lower middle income countries are two to five times higher than those in upper middle and higher income countries. Moreover, different studies made by (Bekele, 2004; Tammiru, 2006; and Misiganu, 2010) indicated that the problem is sever in Ethiopia. Therefore, internal efficiency is the central theme of this paper.

1.2. Statement of the problem

In most societies a complete secondary education is not only indispensable for university entrance but also a prerequisite for many types of jobs. In Ethiopia secondary education is expanding at the annual average rate of 16.3 percent (MOE, 2009). In the same way the enrollment rate is growing by over 17.8 percent per year, reaching almost 1.5 million students in 2007/08 (MoE, 2009).

In the case of Oromia there was no any secondary school prior to 1937 while 12 secondary schools were established between 1938 and 1947 (OEB, 2009). The expansion of secondary education in the region showed continuous trend and in the academic year of 2007/08 it is increased to 385, which is almost 35 percent of the total secondary schools in the country (MoE, 2009).

In Guji Zone secondary education has been rapidly expanding in the past decade. The number of secondary schools, which was 3 in 1998/99 academic year increased to 13 in 2007/08 (OEB, 2009). This indicates that at least one new secondary school was being opened every year in the past decade. Concerning GER of secondary education in the zone, the Oromia Education Bureau report clearly shows that it reached 27 percent in 2007/08 (OEB, 2009).

However, though secondary education has been rapidly expanding it has a problem of internal efficiency, which is expressed by school dropout and grade repetition. Studies made by (Bekele, 2004; and Tilaye, 1997) indicated that school dropout and grade repetition are the two problems of secondary schools in Ethiopia. The annual abstract prepared by Ministry of Education (MoE, 2010), reveal that from 736,924 students registered in grade nine in 2007/08, 499,866 of them only sat for the grade ten national exam.

The annual abstract prepared by Oromia education bureau (OEB, 2010), shows that out of the 344,958 students registered in grade nine in 2008/09, 44,260 of them were repeaters. This implies that a total of 13.7 percent of grade 9 students were utilizing the resource at least for the second time. Moreover the abstract indicates that 56,918 (16.5 percent) of the students registered for this academic year dropped out of secondary schools.

Similar problems of school dropout and grade repetition are observed in Guji zone. The OEB annual abstract report clearly shows that of the total of 11,542 students registered in grade 9 in 2008/09, the number of repeaters was 1639 (14.2 percent) (OEB, 2010). The same document also shows that, 1996 (17.3 percent) of the students registered in grade 9 in 2008/09 dropped out of the school system. This problem calls for an investigation of its trends and root causes. The aim of this study, therefore, was to analyze trends in internal efficiency in the zone, identify factors that contribute to low efficiency and forward possible solutions.

Generally the researcher used the following basic question in order to examine the internal efficiency of secondary school.

1. What are the trends in secondary education internal efficiency in Guji zone?
2. Which sex (Boys or Girls) is more affected by the problem of school dropout and grade repetition of secondary schools in the zone?

3. What are the major factors behind school dropout and grade repetition of secondary schools in the zone?

1.3. Objectives

The main objective of this study is to examine the situation of internal efficiency in secondary schools of Guji zone and to provide necessary suggestion for the improvement.

Specific objective

- To investigate the trends in internal efficiency of secondary education.
- To identify which sex (boys or girls) is more affected by the problem of school dropout and grade repetition.
- To identify various factors that affect internal efficiency of secondary education.
- To identify effective and viable measures for the improvement of internal efficiency of secondary school.

1.4. Significance of the study

Education enables individuals and society to make all rounded participation in the development process by acquiring knowledge, ability, skills and attitudes (TGE, 1994). But when students, dropout of school, sequential learning cannot occur, subject matter skills cannot be developed, and much student talent is wasted. Therefore, this problem call for the cooperation of educators, planners, policy makers and different stakeholders in order to make continuous and thorough evaluation of the country's secondary education system. It is clear that knowledge of how the secondary education system works and of extent the problem affects the system is essential. To this end the result of this study will help:

1. To identify the predominant causes of school dropout and grade repetition, and compilation of information on the status and degree of internal efficiency in secondary schools.

2. As a source of information for further and comprehensive regional or nationwide study on the problem.

1.5. Delimitation of The study

It is obvious that assessing the internal efficiency of secondary school at national or regional level provides us with complete picture than what a zone does. However, the research was delimited to Guji zone. In terms of document analysis, the study was delimited to examine the trends of five years enrollment, dropout and repetition rates (i.e. from 2005/06-2009/2010). Moreover, content wise the research was delimited to analyze the numerical value of drop out and repetition rates, and major causes of school dropout and grade repetition.

1.6. Limitations of the study

The mismatches between the statistical data found from different sources about the number of dropouts and repeaters were the first major problem that the researcher faced. However, the researcher exerted all possible efforts to cross-check with school rosters, because the school rosters are the source of information for schools, woreda and zonal education office, even for regional education bureau.

The second limitation of this study is that dropouts, who is not enrolled in this academic year, should have been included with equal share with that of sampled students, who experienced dropout/repetition and enrolled in this academic year, but it was very difficult to include them as expected; because they were dispersed in different part of the zone. However, efforts were made to include some of them with the help of repeater student respondents.

Therefore, indeed the study would have been more exhaustive and complete than it is now had these limitations been inexistent. However, maximum effort was put to make the study come up with relevant information and recommendations that would assist in understanding the real nature of the problem in the study area.

1.7. Definition of Terms

General Secondary school: refers to schools providing post primary education in a first cycle, i.e. grade 9-10 (MOE, 2009).

Preparatory School: refers schools providing post general secondary education in a second cycle, i.e. grade 11-12 (MOE,2009)

Secondary School: refers schools providing secondary education i.e grade 9-12

Efficiency: refers to the relation between inputs into the educational system and outputs from that system (Simmons, 1980).

Input: refers the number of pupils initially enrolled in a given grade at a given level of education.

Output: refers the number of pupils who successfully complete a given educational cycle.

Internal Efficiency: refers to the average number of years of schooling an education system has to provide to produce one graduate.

Dropout Rate: refers the percentage of students who discontinue their learning from a given grade compared to the previous year's total enrollment in the same grade.

Repetition Rate: refers the percentage of students repeating in a given grade.

1.7. Organization of the study

The study comprises five chapters. The first chapter presents the problem and its settings. The second chapter focuses on review of the related literature. The third chapter treats the research design and methodology and the fourth chapter presents presentation, analysis and interpretation of the data. The last chapter contains summary, conclusion and recommendations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The purpose of this study is to examine the status of internal efficiency and factors contributing to inefficiency of secondary schools in Guji zone. In examining these in the zone, related recent Ethiopian and International publications and research works are reviewed.

Therefore, this chapter deals with the views of different scholars on the issues related to efficiency of an education system, the consequence of low school internal efficiency, factors associated with low internal efficiency of education system, educational indicators of school efficiency, and strategies for improving low school internal efficiency of the system.

2.1. Efficiency in Education

The term efficiency, which is commonly used in economics, is used to describe the relationship between the inputs allocated to an education system and the output that results from the use of such inputs (Psacharopoulos and Woodhall, 1985; Simmons, 1980). In addition to this (eu-ra, 2006) defines efficiency as it refers to the ability to perform well or achieve a result without wasted resources, effort, time, or money (using the smallest quantity of resources possible). Supporting this (Lockheed and Hanushek, 1994) argued that, a more efficient system obtains more output for a given set of resource inputs or achieves comparable levels of output for fewer inputs, other things being equals. All these show that efficiency refers to input-output relationship of a system.

In mainstream economic analysis, education is seen as a production process in which inputs (such as students, teachers, and text books) are combined to yield desired outputs (such as student learning) within the education sector and larger societal outcomes outside the sector (such as increased earnings in the work place or greater social equality under the prevailing educational

technology (encompassing pedagogy, curriculum, and school organization) and input price (Tsang, 2002). This major application of economic analysis is to inform decision makers in education system so as to improve efficiency level of an education system.

According to Oromia education bureau an education system is efficient, if a maximum output is obtained from a given input, or if a given output is obtained with minimum possible input (OEB, 2009:126).

2.1.1. Internal efficiency

Internal efficiency of an education system refers to the average number of years of schooling an education system has to provide to produce one graduate. As an example for general secondary education, perfect internal efficiency would mean the government would need to provide, on average, two years of schooling to produce a 10th grade graduate, or additional two years on this (i.e a total of four years) to produce a 12 th grade graduate. Coombs and Hallak (1987:9) elaborate the definition of internal efficiency as "the relationship between a system's (or subsystem's) outputs (learning achievement) and the corresponding inputs". This indicates that different from external efficiency that includes wider objectives of society; internal efficiency is only concerned with the relationship between inputs and outputs within the education system or within individual institutions.

In addition, UNESCO (2003) elaborates that internal efficiency in education deals with the use of resources, and refers to the internal dynamics of the education system in transforming inputs and process into outputs, or entrants into graduates.

Internal efficiency is measured by the relation between input and output, and external efficiency is judged by the relation between output and outcome. Since it seems impossible to achieve high outcome with low output, it cannot be possible to expect satisfactory external efficiency when internal efficiency is very

low. Therefore, the importance of internal efficiency is not only due to itself, but also due to its medium role in external efficiency.

Generally, internal efficiency tries to measure the success of a given number of students in completing a specified educational level or cycle. Grade repetition and dropout are the two key variables which reduce the level of internal efficiency of a system.

2.1.1.1. Grade Repetition

Grade repetition is the practice of requiring a student to remain in the same grade level for an extra school year rather than being promoted to a higher grade level along with his age peers. UNESCO (1998:15) defined repetition as "A retention in the same grade or level of study where the normal expectation is either promotion or completion of schooling". Bremier and Pauli (1971:18) also define repetition as "a year spent by pupil in the same grade and doing the same work as in previous years".

The practice of grade repetition has several dimensions- economic, pedagogical, psychological, political and social, which are intimately related to each other. From the economic point of view, grade repetition is expensive and represents wastage at micro and macro levels (i.e government and families) (UNESCO, 1998).

There is great debate over the pedagogical aspect of grade repetition. However, from the pedagogical point of view grade repetition is taken as a remedy to slow learners (UNESCO, 1998). Yet, several studies seem to indicate that repeating is not an appropriate answer to pupil's low educational achievements.

In the psychological dimension, grade repetition is considered as harmful for students. Supporting this, (UNESCO, 2006) argued that, repetition is a source of reduced self-esteem, impaired peer relationships, behavioral problems, developing negative attitude towards school, and absence from school.

From political perspectives, repetition practices are the result of inefficient educational system, lack of adequate working conditions in school, inadequate educational policies and poor quality of schooling (Shiefelbein and Wolff, 1992).

Social promotion, on the other hand, suspends the grade repetition in an effort to provide opportunities for all students to have more success in schooling process.

As it is mentioned above high grade repetition rate is one of the indicator of school low internal efficiency. Eisenmen (1997) reported that, repetition rates in developing countries often are quite high and the highest rate were in the Sub-Saharan African countries, where each year, about 22 percent of primary students and 21 percent of secondary students were repeating their grade followed by the North African and Middle Eastern countries averaged about 12 percent for the primary grade and 21 percent for the secondary grades. But Latin American and Caribbean countries averaged about 9 percent and 8 percent for primary and secondary grades respectively.

According to another report made by UNESCO (2003:30), in some African countries like Congo, Gabon, Angola, Central African Republic and Madagascar, a third of the enrolled students repeat in the same grade.

As a whole, these confirm that the great majority of those students enrolled in secondary schools repeat a class at least one time in their education year. It has also evidenced that the repetition rate in secondary schools of Sub Saharan African countries is of high magnitude which requires great attention from researches and policy makers.

2.1.1.2. School Dropout

Dropout is an act of students discontinuing their learning from a given grade level. McWhirter et al, (2007:127) defined dropout as "a pupil who leaves school before graduation and before completing a program of study". Furthermore Brimer and Pauli (1971:15) explained dropout as "a pupil who

leaves school before the end of the final year of the educational stage in which he is enrolled". They further elaborated that, completing a given level but failing to continue to the other higher level of a school system does not constitute a dropping out condition.

In general dropout refers to students who are out of the school system before completing a given educational level or cycle.

The second indicator of school low internal efficiency is high school dropout rate. Concerning the severity of the problem John M. (2006) expressed it by Saying "the silent epidemic". Curle (1973:48) also expressed the situation by saying, "it is ironic that the richest and poorest countries share a serious educational problem –the drop out". For instance, Paulson (2006) reported the severity of the problem as "of all the African American students who enter 9th grade in the U.S., about 49.8 percent don't graduate with regular diplomas after 12th grade, about 17.8 percent above the National average". Supporting this High school dropout report in America (2007) reported that, as a result of the increase in truancy in the U.S., drop out are increasing at higher rates, particularly among African Americans. They further reported that, about 7000 students drop out of school each day, averaging about 1.23 million who drop out of school each year, half of which are minorities.

Similarly in Ethiopia as different researchers (Wanna, and Tsion 1994; Tillaye, 1999; Habtamu, 2002; Lissanu, 2004, Tammiru, 2006, Misganu ,2010) reported the country's educational system is entangled with high dropout problem both in primary and secondary level.

2.2. The Incidence of School Low Internal efficiency among Sexes.

Many research findings show that the rate of repetition and drop out varies among sexes. The World Bank's review report (1980) indicates that significantly, dropping out and repeating are more prevalent amongst females than amongst males. Other studies (Asefa, 1991; Wanna & Tsion, 1994)

indicated that female students were highly victimized by the phenomena of dropout and repetition. In the same way research findings (Anbesu, 1992; and Elleni, 1995) have argued that since a greater share of house hold duties is shouldered by females, their dropout and repetition rate is most frequent. According to (Tilaye, 1997; Dirirsa, 1993; and Hassen, 2005) survival rate of female students was much worse than their counterpart parts.

2.3. Consequences of School Dropout and Grade Repetitions

As it is confirmed by World Bank (2001) low internal efficiency, which is described by high school dropout and repetition rate, is a "black hole" absorbing the output of an education system.

2.3.1. Consequences of Grade Repetitions

Repeating a grade prematurely has a significant impact on the individual, and in addition, has severe economic and social repercussions in communities and society as a whole. Various authorities including: Bremier and Pauli (1971), Tanguaine (1990), Lissanu (2004), Alexander (1994), and UNESCO (2006) note that grade repetition has economic, psychological, social, and quality of education consequences.

2.3.1.1. Economical consequences

From the economic view point, it is clear that repetition considerably increases the number of pupils to be accommodated every year and this is very expensive. In many countries, which cannot afford to open access to secondary education, repetition prevents the expansion of secondary education to meet the goal of the country. Bremier and Pauli (1971:44) emphasized that "every school place occupied by a repeating pupil is causing additional expenditure that would not be needed if he/she were making normal progress". Furthermore, Tanguaine (1990) discussed that, pupils who require more than one year to complete a grade take up space, teaching time, textbooks and other resources that could be devoted instead to other new pupils. For example, as the data collected by

UNESCO (1998:25) shows the total cost of repetition for the year 1995 was about 6 billion US $ for all regions together.

From a societal economic perspective, schooling is most efficient if every student moves up a grade every year (UNESCO, 2006:6). This indicates that, each student who repeats has the economic effect of adding a new student. In other words, repetition leads to larger class sizes, the need for additional desks, supplies classrooms and teachers.

In general in many countries where financial resources are scarce like Ethiopia, repetition is a great problem for school internal efficiency as well as for the economic development of the country. The problem also hinders Ethiopia from becoming a middle level income country at 2020.

2.3.1.2. Psychological consequences

The experience of failure usually is not beneficial for student's self esteem and repeating grades is not a stimulating experience. UNESCO (1998) emphasized that, pupils, who do not progress to the next grade level with their peers, invariably struggle with problems of self-esteem. Furthermore, UNESCO, (2006:15) indicated as grade repetition is stressful to students and associated with reduced self-esteem, impaired peer relationships, alienation from school, and sharply increased likelihood of eventual dropout. A study made by Sulmean (2002:7) also shows that, in Egypt "dropout rates are significantly four times higher among students who ever failed a grade, thus indicating that grade failure derives students to dropout".

2.3.1.3. Social consequences

Many research findings expressed repetition as a problem that affects both the expectation of family of the students and the society at large. Alexander (1994:25) elaborated the social consequences of repetition as "beyond costs calculated in dollars, there also may be psychological costs involving self-esteem and personal happiness. These costs are born by both children and

families-parents because dreams for their children are compromised, and children because they grow to see them selves as failures or misfit". Further more Lissanu (2004:23) explained that repetition creates a negative impression on the expectation of parents regarding the academic performance of their children.

As a whole, grade repetition forces the family of students' and the society at large to develop negative attitude toward students' academic performance. In other words, they consider repeaters or drop outs as not gifted to learn.

2.3.1.4. The effect of repetition on quality of education

High level of repetition at the secondary level affects the quality of education by increasing class size in schools. As mentioned by Adane (1993:72) large class size has a significant influence in the performance of students, and hinders them from getting adequate assistance and close attention from their teacher.

2.3.2. Consequences of School Drop Out

Failing to complete high school not only affects the individual, but his/her community, and society as a whole. Youth who do not complete a high school lack the skills required to secure permanent employment, are more likely to be on welfare, and are more at-risk for drug/alcohol abuse (Davis, Ajzen, Saunders, & Williams, 2002). High school dropouts relatively lower levels of productivity, and reduces the national income (Glennie & stearns, 2002: Rumberger, 1987). These consequences of drop out could be viewed in terms of their negative effect on health status, labor market income and tax revenue, and psychological consequences.

2.3.2.1. Consequences on health status

High school graduates have improved health status and lower rates of mortality than high school dropouts (Cutler and Lieras-Muney, 2006). Furthermore Andrew et al. (2009), emphasized that, those with more education use more

preventive care and tend to visit doctors more when they have less severe aliments. This offsets the cost savings from improved overall health.

2.3.2.2. Consequences on labor market income and tax revenue

One of the best documented relationships in economics is the link between education and income: more highly educated people have higher incomes than high school dropouts. Failure to graduate from high school has both private and public consequences: income is lower, which means lower tax contribution to finance public services.

Learners, who dropouts of school, are at an economic disadvantage, due to the fact that their unemployment rate is significantly higher than that of others, that complete their grades. Furthermore, they earn significantly less over their lifetime than others who had graduated (McWhirter et al. 2007).

In general schools drop out decreases the chance of employment and being employed with relatively good payments.

2.3.2.3. Psycho-social consequences

Dropping out of school often has an effect on the psychological well being of individuals. Learners, who dropouts of school, may experience dissatisfaction with themselves, the environment and their lack of opportunities, and may in turn regret their decision to leave school because of negative consequences, such as having to live in lower socio-economic circumstances (McWhirter et al. 2007). In addition, it increases the likelihood of unwanted pregnancies, alcohol and drug abuse, criminal activities, and other social problems (Lissanu, 2004).

As parents, due to earning low wages, early school leavers may have to work long hours in order to provide for their families, which would make it, difficult to spend quality time with their children. This may have a negative effect on their relationship with their families. As individuals, who dropped out of school, have lower personal occupational aspiration than their peers who graduated,

they may in turn also have lower educational expectations for their own children (McWhirter et al. 2007).

2.4. Causes of Low School Dropout and Grade Repetition

Many research findings including; World Bank, (1980), UNESCO, (1966); Tilaye, (1997), Lissanu, (2004), and Tekeste,(1990) show that school low internal efficiency, which is indicated by high dropout and repetition rate, is caused by different factors (such as pupil related factors, teacher related factors, Location of the school distance from home to school, family background and etc) and they have categorized them in different ways according to their similarity.

2.4.1. School related factors

A number of school factors have been associated with school low internal efficiency, such as poor education quality in the form of overcrowded classroom, poorly trained teachers, teacher learner ratio, and lack of learning materials. In addition to this World Bank (1980) explained that lack of guidance and counseling service, irrelevance of the curriculum, poor academic performance, availability of school facilities and absenteeism are other factors related to school environment that causes school low internal efficiency.

- **Large class size:** As mentioned by Adane (1993:12), class size has a considerable influence on the performance of students for they need more assistance and closer attention from their teachers. This is likely to be effective in a situation where the class size is convenient enough for the teacher.

Supporting this many researchers (Habtamu, 2002; Tanguaine, 1990; Takeste, 1990; & Tilaye, 1997) identified large class size as one of the causes of school inefficiency.

ETFOO,(2002), also explained that students who start their education in small classes are less likely to dropout, more likely to graduate on time, to take more challenging lessons and are more likely to attend college than their peers from

large classes. It further indicated that students in small classes participate more in school, have fewer discipline problems and have more opportunity to work with others to solve problems and take responsibilities within their classroom.

Therefore, large class size hinders students to get adequate support from their teacher and this leads them to perform less in their academic activities, and this finally exposes them either to repeat a class or dropout.

- **Lack of guidance and counseling service:** Guidance and counseling service can play a major role in decreasing school dropout and repetition rate. Results emphasized that school guidance and counseling personnel needed to engage actively with learners who are struggling to stay in school in order to explore their experiences: why they want to leave, and what would make them stay.

Garman and Brown, (1969) have documented that the presence of guidance and counseling service in high schools and in higher education is highly important. According to Ediger (1987) cited in Tilaye (1997), adolescents in high schools facc with a variety of problems (social, academic, personal, and so forth) which make the counseling service very crucial in the system. He further explains that a pupil who is at risk of being a dropout due to anti-social behavior reveals behaviors like loses interest in school, cut classes frequently and shows tardiness in school, enjoys being cruel to others in school and society, and desires to inflict physical pain to others is extremely quarrelsome and aggressive, carries knives and others objects to inflict harm to peers and others in society and the like.

In sum, these confirm that lack of guidance and counseling service in a school accelerates students' repetition and dropout rate. Thus, guidance and counseling service have to be present in school and provide necessary services to shape the life of students.

- **Teachers Quality:** Many research findings indicate that teachers' quality is one of the main factors to keep students in school and enabling them good performance in their academic activities. Coombs (1985) and Graham and Brown (1991) indicated that one of the most important factors for low internal efficiency of education system is ill qualification of teachers. In views of Eastor and Bringen (1982), teachers are very crucial to adolescent adjustment in school setting and for the vast majority of school youth effective learning and persistence in school takes place when there are sufficiently trained teachers. This is the reason for Chantanvanich and Fry (1990) to remark the selection and training of teachers needs a careful scrutiny.

Adane (1993) indicated that lack of sufficient qualified teachers in kind and number affects the efficiency of the education system. UNESCO (1966) also reveals that schools staffed with under qualified teachers tend to have a high dropout and repetition rate because of lower performance of students in their academic activity. In conformity with this, Taddese (1974) states that quite a number of students had left school due to low qualification of teachers and unfriendly relationships between teachers and students.

In general, the quality of the teacher in a school plays a great role in determining the interest of students to learn and stay long in school hoping the future result of education.

- **Curriculum Relevance:** Many researchers (Carr-Hill, 2002; Lockheld and Levin, 1993; and UNESCO, 2002) emphasized that for any education system to achieve its intended objectives; its curriculum must be relevant and responsive to socio economic, cultural and life style situation of the society that it would be to serve. In conformity with this Anderson (1992) states that pupils learn best and stay longer at school when what they are learning makes sense in their lives and gives them a better chance in life. UNICEF (1992:ix) also notes that:

> "Since education is perceived as investment in the future economic well-being of the individual and the family, parents will most likely see education as more relevant if it is related to their children's present and future social and economic needs".

This indicates as the relevance of the curriculum to children's lives and aspiration is a must to attract their needs and interests.

Generally, to enhance interest of community in general and that of school children in particular the curriculum must be responsive and give attention to local, socio-economic, cultural and environmental situation.

- **Absence of adequate instructional materials:** Researchers like Fuller (1987), Taddese (1974), Adane (1993) and Anderson (1992) argued that inadequate supply of appropriate school inputs (such as: textbooks, teacher guides, libraries, laboratories, teachings aids like maps and so forth) can affect student achievement and progress at school.

In general, lack of instructional materials in the school like text books, teaching aids, reference books and the like have a great impact on students active participation in learning and teaching process and hinders them from performing better in their school life latter leads them to dropout.

- **Lack of school facilities:** The school environment plays a factor in how students feel comfortable and are able to relate to their lives, and ultimately their decision to graduate. Elleni (1995) points out that due to prevailing budgetary crisis in Africa; children have a tough and unpleasant time at school. She explains that school buildings are dilapidated, depressing or the classrooms have broken desks and chairs, with no Ventilators and sanitation, and lack of recreation area, sport fields, launches, toilets and all these discourage pupils' learning and aggravate repetition and dropout.

To sum, inadequate provision of school facilities will give rise to low student performance which later leads to repetition and early school leaving (dropout).

- **Students' Perceptions of Teachers' Attitudes:** Not a widely researched topic, teachers' attitudes as perceived by students may also have a drastic effect on students' ability to learn, their self-esteem, and ultimately their academic success. An earlier study found that student perceptions of support,

interest, and respect received from their teachers was the most influential element of academic motivation, effort, and achievement (Zimmerman, Khoury, Vega, Gil, & Warheit, 1995). They also noted that students' perceptions of teacher disinterest directly related to feelings of alienation, lack of commitment to school, and high dropout rates of low socioeconomic status minority students.

- **Learning Styles of Students:** Teaching methods that involve a variety of learning styles may lead to more student success. Learning style and behavioral trends exist, and students from particular socialization and cultural experiences often possess approaches to knowledge that are highly functional in their original living environment and can be capitalized upon to increase performance in academic settings (Claxton, 1990). Learning styles are a way of perceiving, conceptualizing, and problem solving; a preferred way of interacting with and responding to the environment (Francis, 2000). Matthews (1996) also expressed them as they are cognitive, affective and psychological indicators of the manners by which students perceive, interact with, and respond to their learning environment. He further explained that students who learn with their preferred learning styles are more likely to gain more knowledge and skills when taught and counseled through their natural or primary style rather than through a style that is secondary or undeveloped, particularly when they are presented with new materials or engage in new experiences.

- **Grade Repetition as Cause of School Dropout:** Some researchers have identified grade retention as the most powerful predictor of drop out status whilst other studies have argued that grade repetition in the early primary years help learners to perform better in the later years of their schooling. Jimerson and Ferguson (2007) conducted a longitudinal study of grade retention in order to examine the academic and behavioral outcomes of retained learners through adolescence. They found that retained learners are more likely to drop out of school and show aggression during adolescence. Study by Ou and Reynolds (2008) also identified grade retention in the elementary grades as

one of four predictors linked to significantly lower levels of school performance. They argued that grade retention could have a negative effect on self-esteem, and be the beginning of school experiences and adult expectations that could lead to an increased risk of learners dropping out of school.

- **Lack of involvement in co-curricular activities and behavior:** research showed that learners who repeat a grade and drop out of school differ from learners that successfully complete schooling in terms of academic performance and behaviors. An investigation done (McWhirter et.al. 2007) showed that the ones that drop out/repeat are less likely to be involved in extracurricular activities and tend to achieve lower grades and test results. They also do less homework, have more disciplinary problems, are late more often, get suspended from school more frequently and are often in trouble with the police. They are less involved in extra-mural activities, such as sports or clubs, report feeling alienated from school, and do not feel popular among their peers.

More recently, McIntosh, Flannery, Sugai, Braun and Cochrane (2008), explored the relationship between academics and problem behavior in the transition from middle school to high school. They noted that previous research identified this as a challenging time of development when learners at risk of dropping out of school/repeat grades are faced with several challenges. In addition, problematic behavior presented as a distinctive barrier to school graduation and learners with emotional and/or behavioural problems appeared to be twice as likely to school drop outs/grade repeaters (McIntosh et al., 2008).

2.4.2. Socio- Economic Factors

Research indicates that the social-economic environment in which children grow up is an important exosystematic predicator of their overall well being. It is argued that their health, education, later employment and future earnings largely depend on the socioeconomic status of their family (Brooks-Gunn & Duncan, 1997; Garbarino,1998, as cited in McWhirter et.al.,2007:31).

Poverty, school distance, unstable home environment, individual learner characteristics, teenage pregnancy, and peer-group system are among socio-economic factors that affect efficiency of schools in one way or another.

- **Poverty:** Poverty has had widespread effects and has been noted as the caves of various social and interpersonal problems. It has been said that poverty and poor educational and social conditions often sustain each other.

Ratele, (2007) defined poverty as: "Deprivation and unmet needs across different aspects of social and economic life such as educations, living environment, health, income, material necessities and employment". Hence, poverty is not only associated with money, but has an impact on the life style, as well as the social, educational and political life of individuals and their communities. It also influences peoples' personalities and motivation and inevitably becomes integrated in all aspects of life. It generally presents in the form of an inability to provide sufficient food for the family, overcrowded living conditions, lack of employment opportunities, low wages, lack of job security, absent fathers and children living away from home (Ratele, 2007). It is the risk factor that is most frequently associated with family stress and school failure (Mewhirter et al., 2007).

According to Masitsa (2006), children living under poverty might have a negative impact on their ability to perform at school, lead to repeat grades, and eventually drop out of school. In line with this findings from a study conducted in the Limpopo province, South Africa,(Pillay Nesengeni,2006) revealed that adolescents from many child-headed families had to much work and several problem at home which affected their concentration abilities and school education. In addition learner tends not to complete educational tasks, and fail their examination, which invariably led to poor self-esteem (Pillay Nesengeni, 2006).

Thus, poverty is an issue which might put learners at risk of negative outcomes such as repetition and dropping out of school, which in turn results in further poverty due to fever available work options.

- **School Location (Distance from Home to School)**: Many studies have found that distance from home to school has a significant role in the learning condition of student. Tillaye (1997) emphasized the impact of distance to school on student learning as:

> It is unfair to expect that a student, who walks, for one or two hours a day will follow his/her lesson regularly and effectively. Fatigue, boredom, thirst and hunger are dominant and these deter his/her active attendance and participation in class.

This shows that distance to school leads students to be less achiever in their academic performance and in turn decide to repeat or dropout.

In most societies, distance is inversely related to the prospects of girls going to school, especially after puberty (Lissanu, 2004:38). This is because when school is far from their residence (living) area, female students became psychologically threatened by the dangers of rape, which result in early pregnancy and unwanted marriage.

- **Teenage pregnancy:** Research (Manlove, 1998; and Grant and Hallman, 2006); have found that teenage pregnancy is related to leaving school early. Data from the United States showed an association between factors relevant to adolescents' school experiences, and the risk of school-age pregnancy and birth among 8th graders (Manlove, 1998). Results showed that high levels of engagement at school level were associated with postponement of pregnancy, and that learners who dropped out of school were more likely to have school-age pregnancies. Grant and Hallman (2006) found that young learners who were committed to their school and education, and experienced a sense of belonging were less likely to become pregnant while attending school. This shows that female students are forecasting drop out as a result of being pregnant.

- **Peer-Group System:** Peer groups represent the world outside the family, and can present difficulties for the individual if its members value antisocial behaviour. Under such circumstances the young person either has to resist engaging in such behaviour (which may result in compromising the social relationship), or give in to the peer group pressure (McWhirter et al., 2007). Peer pressure involves the strong influence that a group has on an individual. Such individuals usually have limited ability to resist such pressure (McWhirter et al., 2007). Peer cluster theory (Beauvais et al., 1996; Oetting & Beauvais, 1986, as cited in McWhirter et al., 2007) suggests that young people who engage in problem behaviour have a propensity to find each other and form peer cluster groups. Such groups then normalize and encourage antisocial and problem behaviours, and are an important influence on their behaviour (McWhirter et al., 2007).

- **Family system:** Progress Report (2007) identified the following family characteristics as contributing to school drop out and repetition: single-parent households, older siblings, family's cultural resources and parent-child conversations about school. They found that learners who drop out and repeat tend to have parents who are less involved and demanding, do not model educational attainment, and provide little educational support in general. This confirmed Masitsa's (2006) findings that the following factors can have a detrimental impact on a child's ability to perform academically: inadequate parental support, learners not living with their parents, divorced or separated parents, loss of parents or single parent families and family conflicts. Children taking on adult roles, such as employment due to financial stress levels are high, are also associated with higher drop out and repetition because of failure (Ou & Reynolds, 2008).

According to Boon and Cook (2008) having a strong emotional parent-child relationship in adolescence promotes motivation, attentiveness and perseverance, and stressed that the absence of such a relationship can hinder psychological development and predisposes problem behaviours. Competent

care-giving is viewed of utmost importance in the development of resilience, where resilience is conceptualized as achieving academic success despite being disadvantaged socio-economically, whilst demonstrating acceptable and motivational behavioural patterns.

2.5. Strategies to Improve Internal Efficiency of Secondary Education

Results of many researcher McIntosh et al., (2008) and Terry (2003) recommended different strategies that can be used to reduce school dropout and repetition rate that in turn increase the level of school internal efficiency level. The following are some of the strategies.

2.5.1. Providing academic support to students

Findings from (McIntosh et el., 2008) study emphasize that academic support and behaviour support go hand in hand to allow learners access to success and academic engagement. It also stressed the importance of early identification of individual learners at risk for dropping out of school, as waiting until high school may be too late to prevent them following a path to dropout. They recommended a systems-level approach to improve academic and behaviour outcomes.

Terry (2003) also found that families and friends have considerable influence on high school learners' decisions to leave school before graduating. Findings suggested that, in order to address the problem, schools should make an effort to actively welcome and make learners' families and out-of-school friends more at ease with the school settings. In addition, it was recommended that parents and guardians receive guidance and training on how to provide academic support to their children in educational settings (Terry, 2003).

Results from research done by the Ministerial Committee on learner retention in the South African schooling system concurred with this, as they found grade retention as generally ineffective as an intervention strategy when addressing early learning problems. They recommended that learners who are repeating

grades should have specially designed educational programmes, which are not simply a repetition of the content material that they experienced the first time. They therefore regard the solution to grade repetition in providing such learners with better opportunities to succeed academically (Progress Report, 2007).

2.5.2. Improving quality of Instruction and Early Intervention

It is possible to assume the pupils are for more likely to be motivated to learn and develop good attitude towards learning if the curriculum and teaching methods are of high quality. By contrast, pupils who are bored and fail to see the connection between their personal lives and what they are taught in schools become candidates for academic failure and eventually dropping out. So there is much that can and must be done to improve the quality of instruction through a concerted strategy to improve the curricula, the training of teachers and the reorganization of the school to promote learning (UNESCO, 1998).

A considerable body of literature demonstrates the advantages of 'front-leading' educational services to make sure the pupils get off to a good start and build a strong base for future learning. A study in Madagascar, for instance, found strong correlation between preschool education and high internal efficiency. The high rate of repetition in grade 1 suggests how important it is for pupils to get off o a good start in their schooling (UNESCO, 1998).

In many poor nations where child labor is intensively used and where there are financial constraints, constructing schools and providing educational facilities is not an easy task. Under such circumstances the application of innovation that promote efficient utilization of the available resources, such as teachers schools and materials through double and multiple shift system is of paramount importance.

Multiple shift system in developing countries both increases enrollment and reduces unit costs. Multiple shift lower school fees and makes more working

hours available to child labors, thus benefiting poor children, Lockheed and Verspoor (1991) and UNESCO (1998).

2.5.3. Flexible Education Calendar and Program

One of the major causes of low enrollment, dropout and repetition in developing countries is high demand for child labor. This problem is especially acute during peak time of agricultural production, hence children have to serve their family during peak time and learn during off time, and under such circumstances, application of flexible school calendar will ease the problem.

2.5.4. Making Educational Materials More Available

Teaching aids,, including textbooks are scarce in many developing countries. Many ministries of education have little funding left from salaries to spend on textbooks and supplies. With few exceptions, developing countries cannot produce good quality learning materials basically due to absence of a publishing industry of their own. So the promotion of national publishing industry is a promising strategy (UNESCO, 1998).

2.5.5. Lowering the Costs of Education

There are different experiences that several countries have attempted to reduce direct costs of education for rural children and girls, some of the measures include lowering or elimination of school fees, providing instructional materials and uniforms, offering free or standardized transportation proving school feeding programs, boarding facilities and scholarship. On the other hand, strategies to reduce indirect costs include reducing opportunity cost of students through the development of labor saving strategies such as timing of the school year (Lockheed and Verspoor, 1991).

2.5.6. Awareness Creation and Community Involvement

A survey conducted in china revealed that nearly half of the dropouts left schools with the decision of their parents (UNESCO, 1998). This can be reason

out of the lack of awareness of parents about the value of education. This initiates of integrated effort to change parents' attitude. It is crucial to involve religious, women's group, civic organization and other leaders in the community for information campaigns; therefore, establishing parent teacher association and school training board can boost the community support for education, so that parents do not take away their children from school and follow their pupils' progress (Lockheed and Verspoor 1991).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This part of the research deals with research method, sources of data, sample populations and sampling techniques, data gathering tools, procedures of data collection, and method of data analysis.

3.1. Research Method

A writer in research methodology, Kumar (2005) suggested that, the choice of research method depend on the objectives of the study. Since, the major purpose of the study is to examine the trends in internal efficiency of secondary schools in Guji Zone, descriptive survey method, which enables to describe the state of internal efficiency in secondary education and factors that affect it in one way or another, was applied in this study.

3.2. Data Sources

Primary Sources: These were students, home room teachers, school principals, PTA members, and parents of students'.

Secondary Sources: Annual educational abstracts of MoE and OEB, annual statistical report and statistical graphs of GZEO and Woreda education district office, and school rosters were used as secondary sources.

3.3. Samples and Sampling Techniques

Guji zone is administratively divided into thirteen woredas and two administrative towns. Within the zone there are fifteen secondary schools. Out of which 8 are general secondary (9-10) and the remaining of them are complete secondary schools (9-12). From these, five secondary schools were selected using simple random sampling (lottery method). From each sampled schools, school principals, academic school principals and PTA members were purposely selected, because they could provide detail and in depth information about the

factors related to school dropout and grade repetition. All home room teachers found in sample schools were included in the study using purposive sampling, because, they are believed to provide detail information about factors related to students dropout and repetition than any other. In addition to this, simple random sampling (random number table) was used to select students.

Table 1: Distribution of samples for the study

No	Schools	Individual respondents									Grand
		For questionnaire						For FGD		For interview	
		Teachers		Students		Principals		PTA		Students' parent	
		P	S	P	S	P	S	P	S		
1	Negele	32	32 (100%)	335	78 (23%)	4	2 (50%)	7	7 (100%)	3	122
2	Adola	38	38 (100%)	283	65 (23%)	4	2 (50%)	7	7 (100%)	3	115
3	Shakiso	33	23 (100%)	278	64 (23%)	4	2 (50%)	7	7 (100%)	3	99
4	Bore	21	21 (100%)	230	53 (23%)	3	2 (75%)	7	7 (100%)	3	86
5	Uraga	19	19 (100%)	217	50 (23%)	3	2 (75%)	7	7 (100%)	3	81
	Total	133	133 (100%)	1347	310 (23%)	18	10 (56%)	35	35 (100%)	15	503

Key:- P: Population S: Sample

3.4. Data Gathering Tools

Four different data gathering instruments, namely: questionnaire, interviews, focus group discussion and document analysis were used to collect relevant information from sample population.

Questionnaires: Questionnaires were used to gather information on characteristics of respondents, factors affecting school internal efficiency, and measures being taken to alleviate low school internal efficiency. The reason for selection of questionnaire as a data gathering tool is because it is appropriate instrument to obtain variety of opinions within a short period of time from a large population and also helps respondents to express their opinion and views freely. Two types of question items i.e., open and close-ended, questions were employed for teachers, students and principals. Close-ended were prepared to keep the respondents' minds riveted on the subject and to facilitate the process of tabulation and analysis. Open-ended questions were prepared because it permit the responding person create an answer.

Interview: This instrument was employed to collect further information on factors related to school low internal efficiency. A face-to face interview was held with one mother and four fathers of drop out students' and five fathers of grade repeaters. Semi-structured interview was used because of its average flexibility and the few restrictions it places on respondents answer.

Focus Group Discussion: A focus group can be described as a type of group interview led by a moderator to discuss a specific topic (Johnson & Christensen, 2008). Babbie & Mouton (2001) explain the main advantage of focus group interviews as providing an opportunity to observe interaction on a topic in a limited period of time. They state that it may provide less depth than individual interviews, but that it is effective in providing evidence about similarities and differences in participants' experiences and viewpoints (Babbie & Mouton, 2001). It has also a real benefit of sharing views, experiences and stories between participants, and of acquiring the insight full and rich data from participants (Miller and Brewe, 2003). Hence, it was employed with members of PTA to gather detail information on the influence of different factors to students drop out and repetition, and measures taken to alleviate the influence degree of the factors.

Document Analysis: Annual educational abstract of MOE and OEB, GZEO annual report, and school rosters from 2005/06-2009/10 academic year were analyzed in order to investigate the trends of secondary school internal efficiency. In line with this Kumar (2005) has noted that analysis of the content of records, documents and other printed matter constitutes the second use of survey to collect facts for a research study. Due to this, document analysis became one of the instruments of data collection.

3.5. Pilot-Testing

Before administering the instruments of data collection it is very essential to standardize the tools. Accordingly, after several reviews was made by the researcher and advisor of this paper, the questionnaires were pilot tested in Wadera secondary and preparatory school that was not included in the sample, to refine them if there were any confusing and unclear questions.

The questionnaire was filled by 28 repeaters, 10 teachers and 3 principals. After that, the structured questionnaires were tested for reliability and content validity. To maintain the reliability of the instruments split-half method was used. Spearman Brown formula was applied to the product moment correlation between scores. Thus, the result was 0.89. Statistical literatures reveal that a test result greater than 0.5 or close to one is considered reliable. This indicates that, the questionnaires were reliable. However, some basic arrangements were made on the sequences and general layout of the questionnaires. Long sentences were shortened and rephrased. After all these efforts the revised instruments prepared for students is translated in to Amharic and Afan Oromo by four language teachers graduated with BA in English/Amharic and Afan Oromo/English and working in the study area, to make the language understandable to the students. Finally the questionnaire were duplicated and made ready for data collection.

3.6. Procedures of Data Collection

The first step towards collecting the necessary data with the tools made ready was making official contacts with zone education office to get permission and support for the research work. Then, woreda education officials and school directors were informed about the objectives of the study and conditions were facilitated for the data collection activities. Next the researcher arranged time and place with the respondents. Accordingly, schedule was set for the distribution and collection of questionnaire papers and for the interview and focus group discussion. Then, 463 questionnaire papers were distributed to the respondents after orientation was given at their respective school. Only three days were given for the respondents to return them. Meanwhile, the researcher carried out interviews, focus group discussion and document analysis. Finally, distributed questionnaires were collected.

3.7. Variables of the study

The dependent variable included in this study was internal efficiency, which is measured by school dropout and grade repetition. On the other hand, the independent variables included in this study were school-, student-, teacher-, administration-, socio-economic-, and socio-cultural related factors that affect school internal efficiency.

3.8. Method of Data Analysis

Out of the 463 questionnaires distributed, 310(97.8 percent) of the student respondent, 133 (98.5 percent) of the home room teachers and 10 (100 percent) of the school principals were properly filled and returned. However, 2.2 percent of the total questionnaires were not returned.

Data obtained were first tallied and then tabulated. Depending on the tabulated responses percentages, means and standard deviations were calculated based on the nature of the items. Then analysis and interpretations followed. Data obtained from open ended questions, interviews, and focus group discussions

were carefully examined and studied. They were used to cross check and validate the information obtained from the questionnaires. Furthermore, document analysis was made to identify the trends of internal efficiency.

The response categories having five scales (5-1) were collapsed to three levels; below average (Less than 2.9), average (3), and above average (greater than3). This was to make the interpretation easier, and to increase the confidence level of the analyst as the distinction between such few response categories becomes very clear, and to avoid unnecessary complexity.

The strength of the findings on group differences or the relationship among variables was supported by validation with different statistical tools. These tools are a test of independence and used to estimate the likelihood that some factor other than chances accounts for the observed relationship. The choice of these tools was dictated by the nature of the collected data and objective of the study. Accordingly, one way ANOVA was applied to test the existence of significant difference of the valuations in the responses of informants at 0.05 significance levels or 95 percent confidence levels.

CHAPTER-FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This section of the thesis deals with presentation, analysis and interpretation of the data collected from the respondents through questionnaires, interviews, focus group discussion, and document analysis.

Interviews were conducted with 15 students' parents in order to strengthen the responses given in the questionnaire.

Focus group discussion was conducted with PTA members of the sample school in order to support the responses obtained from students and teachers. In addition to this information from documents of the MoE and OEB annual abstract, statistical figures from zone and woreda education offices and rosters in the school were used in the analysis.

4.1. The General trend of Secondary school internal efficiency of Guji Zone

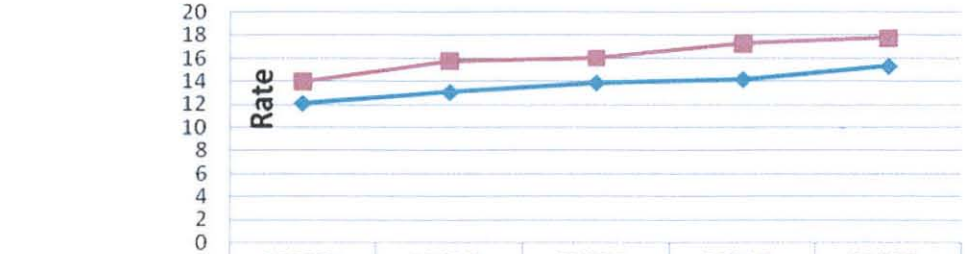
As indicated by annual abstract of Ministry of Education (MoE, 2009) and Oromia Education Bureau (OEB, 2009) the trends of school dropout and grade repetition differs among and within regions and zones. Promotion rate, repetition rate, and dropout rate are the three paths that characterize the efficiency of an education system.

According to the annual educational abstract of MoE and OEB, secondary school enrollment in the country is rapidly increasing from year to year. For example, the annual abstract of OEB (OEB, 2009) shows the GER increased from 22.3 to 39 and from 3.2 to 8.9 in the last five years for general secondary education (Grade 9-10) and preparatory schools respectively. However, as many research findings by (Tilaye, 1997; and Bekele, 2004) indicated, this accelerating enrollment is affected by a problem of school dropout and grade

repetition. To this end this research tries to look at the trends of secondary school dropout and grade repetition of Guji zone.

4.1.1. The Trends of Grade 9 Internal Efficiency

Fig 1: Grade 9 Dropout and Repetition Rates From 2005/06-2009/10



	1998 Ec (2005/06)	1999 Ec (2006/07)	2000 Ec (2007/08)	2001 Ec (2008/09)	2002 Ec (2009/10)
Repetition Rate	12.1	13.06	13.9	14.2	15.34
Dropout Rate	14	15.8	16.05	17.3	17.8

Source: Roster of Sampled Schools

Figure 1 reveals that both drop out and repetition rates for grade 9 have been showing an increasing trend in the zone over the past five years. Repetition rate that was 12.1 percent in 2005/06 worsened to 15.3 percent while dropout rate deteriorated from 14 percent to 17.4 percent in the same period. Since, internal efficiency is the aggregate result of grade repetition and drop out, the figure also shows that, the internal efficiency have been suffering from compounded effect of school dropout and grad repetition.

4.1.2. The Trends of Secondary School Internal Efficiency

Fig 2: Repetition Rate of Grade 9&11, and Dropout Rate of Grade 9-12 From 2005/06-2009/10

	1998 Ec (2005/06)	1999 Ec (2006/07)	2000 Ec (2007/08)	2001 Ec (2008/09)	2002 Ec (2009/10)
Repetition Rate (Grade 9&11)	11.8	12.38	11.03	11.6	12.04
Dropout Rate(Grade 9-12)	14.38	13.15	12.8	11.63	12.65

Source: Roster of Sampled Schools

Similar to that of grade nine, internal efficiency through out secondary eucation (grade 9-11) in the zone is very low. Repetition rate that was 10.9 % in 2005/06 increased to 11.2 in 2009/10. Morover, though it showed a modest improvement over the years from 14.38 to 12.65 %, annual drop out rate was well over 12 %. This shows that about one quarter of secondary school students either drop out school or repeat grades every year.

4.1.3. The Trends of Secondary School Internal Efficiency among Sex

Figure 3 and 4 depicts that repetition and dropout rates for both sexes shows fluctuating trends.

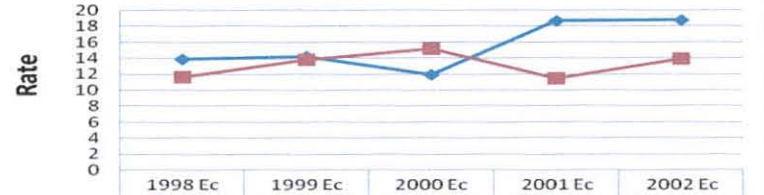
Fig 3: Male and Female Dropout Rates From 2005/06-2009/10 For Grade 9-12

	1998 Ec (2005/06)	1999 Ec (2006/07)	2000 Ec (2007/08)	2001 Ec (2008/09)	2002 Ec (2009/10)
Male Dropout Rate	15.3	16.6	13.6	18.4	19.1
Female Dropout Rate	12.4	14.9	18.5	11.1	15.7

Source: Rosters of Sampled Schools

Figure 3 depicts that dropout rate for male students show an increasing trend from 15.3 % in 2005/06 to 19.5 % in 2009/10 while that of female students increased from 12.4 % to 15.7 %. This indicates that, though high for both sexes, the problem with dropout rate is worse in boys than in girls.

Fig 4: Male and Female Repetition Rate of Grade 9 & 11 From 2005/06-2009/10



	1998 Ec (2005/06)	1999 Ec (2006/07)	2000 Ec (2007/08)	2001 Ec (2008/09)	2002 Ec (2009/10)
Male Repetition Rate	13.87	14.2	11.9	18.7	18.78
Female Repetition Rate	11.6	13.8	15.2	11.4	13.9

Source: Rosters of Sampled Schools

Similarly, figure 4 depicts that repetition rate for male students show an increasing trend from 13.7 % in 2005/06 to 18.1 % in 2009/10 while that of female students increased from 10.5 to 12.6 %. This indicates that, though high for both sexes, the problem with repetition rate is worse in boys than in girls. This finding is to the contrary with the works of (Anbesu, 1992; Dirirsa, 1993; Elleni, 1995, and Tilaye, 1997). This seems because of affirmative action given to the female students in the zone. For example, if a female student attended school days of a given month without being absent, she will be rewarded a one liter food oil.

4.2. Characteristics of Respondents

Under this topic the background information of all the respondents of the study is presented and analyzed under two different categories. The first part deals with students, and the second deals with home room teachers and school principals.

4.2.1. Characteristics of Students

As stated earlier, in this topic personal information of school dropouts and grade repeaters are presented and analyzed in terms of sex, age and marital status.

Table 2: Students' Profile: Sex, Age, and Marital Status.

Item	Sex			Age					Marital status				
	Male	Female	Total	15-16	17-18	19-22	Above 22	Total	Unmarried	Marrie	Promis	Widow	Total
Frequency	176	134	310	124	135	45	6	310	274	21	13	2	457
Percent	56.9	43.1	100	39.8	43.5	14.6	1.97	100	88.4	6.6	4.1	0.7	100

As shown in table 2, out of the total 310 student respondent, 56.19 percent were male and 43.1 percent of them were female. This clearly shows that, the numbers of male and female students included in the sample were almost balanced.

With respect to age, 39.8 percent of the student respondents were in the age range of 15 and 16 years, about 43.5 percent of them were in 17 and 18 years of age range, the rest 14.7 percent and 2 percent of the respondents were in the age range of 19 and 22 and above 22 years respectively. This clearly shows that above 80 percent of the student were in the age range of secondary school students and 16.7 percent of them are in the age range of university students and working force.

Regarding to marital status 88.6 percent of the student respondents were unmarried, and 6.6, 4.2 and 0.7 percent of the student respondents were married, promised and widowed respectively. This reveals that the majority of student respondents were single.

4.2.2. Characteristics of teachers and school principals

In this section, background information of teachers and school principals are presented and analyzed with respect to sex, age, qualification and work experience.

As it is seen in table 5 below, from a total of 143 teacher respondents 93.3 percent of them are male and 6.7 percent of them are female. This indicates that, the participants of teachers questionnaire were male dominated.

Age wise table 5 shows that 67 percent of teacher respondents are in the age range of 21 to 25 years while 24 percent and 17 percent of them are in age range of 26 to 30 and 31 to 35 years respectively. From this one can easily understand that majority of the teacher respondents are very young.

Table 3: Profile of teachers and school principals

	Item	Sex			Age						Qualification			Years of Experience					
		Male	Female	Total	21-25	26-30	31-35	36-40	Above	Total	BA/BED	Diploma	Total	1-3	4-6	7-9	10-12	Above	Total
Teachers	Frequency	124	9	133	67	24	17	2	23	133	125	8	133	58	32	12	4	27	133
	Percent	93.3	6.7	100	50.4	18.1	12.8	1.5	17.3	100	94	6	100	43.6	24	9	3	20	100
Principal	Frequency	10	-	10	-	4	6	-	-	10	10	-	10		4	3	3	-	-
	Percent	10	-	10	-	40	60	-	-	10	10	-	10		40	30	30	-	-

Concerning the educational qualification of respondents, only 6 percent of them are diploma holders, while the rest 94 percent are first degree holders. This shows that there is good supply of teachers qualified for the level.

The table also shows that all of the 10 school principals included in the study are male. This indicates the absence or at least misrepresentation of females in the field of school leadership.

4.3. Factors that causes School Dropout and Grade Repetition

Research works of Tilaye (1997), Lissanu (2004), Hassen (2006), UNESCO (1996), World Bank (1980), and Adane, (1993) indicated that factors related to school system and the external environment contribute to inefficiency of an education systems. To this end, this research aimed in identifying the major factors that contributes to low internal inefficiency of Guji zone secondary schools. In computing the results of the study, the researcher has used different scales to represent the degree of influence of each factor. These are:
5= Extremely series 4= Very series 3= Somewhat series

2= Observed but not series and 1= Not observed at all

4.3.1. Student Related Factors

Under this the significance level of factors related to students, such as students failure in studying hard, lack of interest in education, low future success in education, low self conception due to previous failure in exam, and health problem are discussed.

Table 4: Student related factors and internal efficiency

No	Item	Respondent	Dropout	Repetition	Total mean	Weighted Mean	F_d	P_d	F_r	P_r
1	Failure in studying hard	T	3.82	3.82	3.82	3.84	0.17	0.84	0.216	0.806
		S	3.89	3.90	3.9					
		P	3.8	3.80	3.8					
2	Lack of interest in education	T	3.73	3.65	3.69	3.33	23.728	0.000	2.403	0.084
		S	2.68	3.32	3.00					
		P	3.30	3.3	3.3					
3	Low future success in education	T	3.14	3.8	3.47	3.13	0.265	0.767	67.572	0.000
		S	3.09	2.36	2.73					
		P	2.60	3.40	3.2					
4	Low self conception due to previous failure in exam	T	3.37	3.37	3.37	3.35	0.579	0.561	o.560	0.572
		S	3.47	3.47	3.47					
		P	3.20	3.2	3.2					
5	Health problem	T	2.09	2.09	2.09	1.93	1.622	0.198	2.283	0.102
		S	1.94	1.89	1.92					
		P	1.8	1.8	1.8					

Key: F_d = F for drop out P_d= Sig. for drop out F_r= F for repetition P_r= Sig. for repetition α= 0.05

As shown in table 4 respondents were asked to rate the degree of influence of failure in studying hard to low school internal efficiency. The mean response for teacher, student and principal was found to be 3.82, 3.89 and 3.8 respectively, which shows that the three groups of respondents highly rated the contribution of the factor to low internal efficiency. In fact, the weighted mean score for all the three groups of respondents is 3.84, which shows that, student failure in studying hard, was one of the major causes for students to repeat grades and drop out of school. In other words, the result shows that students' lack of effort to study hard is the major factor that contributes most to low internal efficiency of schools.

The F-test result ($F_{d(2,503)}$ =0.17, P_d>0.05 and $F_{r(2,503)}$ = 0.216, P_r > 0.05) for both repetition and dropout reveals that there is no statistically significant difference between the opinions of the three groups of respondents in perceiving the problem as one of the cause for school low internal efficiency.

This goes with what was reported by various authors including Claxton (1990), Francis (2000), Matthews (1996), Tammiru (2006), and Lissanu (2004) who indicated that, students' failure in studying hard leads them to score less in exams which in turn forces them either to repeat grades or drop out from school.

Students' low self conception is the other factor rated to have second highest score in contributing to the low level of school internal efficiency. Table 4 presents that the mean score value for teacher, student, and principal were found to be 3.37, 3.47, and 3.2 respectively, which shows that all the three groups rated the issue above average, and their responses weighted mean value 3.35 is also indicates that their total sum response indicated it above average. This means that the problem was one of the factors behind low school internal efficiency.

Furthermore, the F-test both for repetition and drop out ($F_{d(2,503)}$=0.579, P_d>0.05 and $F_{r(2,503)}$= 0.56, P_d>0.05) shows as there is statistically no significant difference among the groups response. This means that, the three groups of respondents perceive the impact level of the problem almost in the same way.

The other factor rated by the respondents as the second contributor of low school internal efficiency was students' lack of interest in education. Table 4 shows that, the mean score value of the three groups of respondents teacher, student, and principals are 3.69, 3 and 3.33 respectively. This shows that all the three groups of respondents rated the factor to have above average value. The weighted mean value 3.33 (see table 4) also shows that, lack of interest in education is one of the causes for schools to have low level of internal efficiency.

The F-test result for repetition is ($F_{r(2.503)}$=2.463,P_r>0.05) depicts that, there is no statistically significant difference among respondents in considering student lack of interest in education causes students to repeat grades. But the F-test result for dropout ($F_{d(2.503)}$=23.728, P_d<0.05) indicates that there is statistically significant difference among respondents opinion in perceiving the problem as a factor for students school dropout. Moreover, the standard deviation of the three groups' teacher, student and principals 1.00, 1.68, and 0.949 respectively indicates as students were the source of variation, because of rating the effect of the factor to have below average.

However, there is statistically significant difference among the three groups in perceiving the factor as a cause for students drop out, the grand mean value of the three groups, which is 3.33, shows that the factor has a contribution to school low internal efficiency.

This finding is in line with the works of Lissanu (2004), Tammiru (2006), and Hassen (2005) who indicates that, students' interest to education and their school survival rate have a direct relationship.

Concerning the effect of students' low future success in education on status of school internal efficiency, the table presents that, the mean score for teacher, student, and principal are 3.47, 2.73 and 3.2 respectively. This shows that the teacher and principals rated the factor as having high impact but the students rated it below average. However, their response overall average mean value 3.1 shows that this factor was one of the cause for school low internal efficiency in the study area with moderate level of influence.

As a result, the F- test result for repetition ($F_{r(2,503)}$=67.572, P_r<0.05) shows that there is statistically significant difference among the three groups of respondents opinion. The standard deviation of the groups: teacher (1.0) student (1.33) and principals (0.9) shows that the source of deviation is students who perceived the effect of the factor to be low. This seems that the students were looking for safe side for themselves and pushing the problem

away from them. But both the teachers and principals indicated that the factor is very serious in influencing students to repeat grades. Despite this, the F-ratio result for dropout ($F_{d(2.503)}$=0.65, P_d>0.05) reveals the absence of statistically significant difference among respondents opinion in perceiving the effect of the factor.

However, the weighted mean value 3.35 reveals that students' low future success in education is one of student related factors that contribute to low level of school internal efficiency.

Table 4 presents the mean score value of item 5, which asks the respondents to indicate the degree of influence of students' health problem on school internal efficiency level, was found to be 2.03, 1.92 and 1.8 for teacher, student and principals respectively. This indicates that all the three groups of respondents rated the item below average. Their response weighted mean 1.93 is also below average. This means that, students health problem is not a cause for school low internal efficiency.

Moreover, thc F-test value both for repetition and drop out ($F_{d\ (2,503)}$ =1.622, P_d>0.05 and $F_{r(2,503)}$=2.293, P_d>0.05) shows that there is no statistically significant difference among the opinion of the respondents to the factor.

Generally, students' failure in studying hard was found to be the first major factor related to students that cause secondary school low internal efficiency in the study area. Moreover, factors such as, the students' low self conception, lack of interest and low future success in education were found to be somewhat serious in influencing schools to have low internal efficiency. To the contrary, the influence degree of students' health problem to force students either to repeat grades or drop out of schools was found to be insignificant.

4.3.2. Teachers related factors

The impact level of factors that relate to teacher such as low qualification, shortage of teachers, lack of teaching experience, lack of encouragement of

pupils' performance, and inappropriate evaluation of pupils' performance on school internal efficiency are discussed under this topic.

Table 5: Teachers related factor and internal efficiency

No	Item	Respondent	Dropout	Repetition	Total mean	Average mean	F_d	P_d	F_r	P_r
1	Low qualification of teachers	T	1.95	1.95	2.04	3	48.378	0.00	31.896	0.00
		S	3.33	3.30	3.31					
		P	3.4	3.60	3.5					
2	Shortage of teachers	T	2.77	3.2	2.99	3.18	1.392	10.249	1.21	0.299
		S	2.98	3.12	3.05					
		P	3.20	3.80	3.5					
3	Assignments of less experienced teachers	T	2.02	2.36	1.98	2.5	2.7033	2.703	2.425	0.890
		S	2.34	2.65	2.93					
		P	2.0	2.20	2.7					
4	Lack of encouragement of pupils' performance.	T	2.83	3.30	3.10	3.40	1.825	0.162	1.394	0.249
		S	3.09	3.42	3.25					
		P	3.3	4.10	3.7					
5	Inappropriate evaluation of pupils' performance	T	1.89	2.45	2.17	2.78	51.305	0.000	16.049	0.000
		S	3.16	3.00	3.11					
		P	3.6	2.50	1.05					

Key: F_d = F for drop out P_d= Sig. for drop out F_r= F for repetition P_r= Sig. for repetition α= 0.05

Table 5 indicates that teachers rated all except one factors related with teachers as having low contribution to low internal efficiency. The mean score rated by teacher for shortage of teachers, inappropriate evaluation by teacher, low qualification and lack of experienced teachers were found to be 2.99, 2.17, 2.04, and 1.98 while the mean score for only one teacher related factor, namely lack of encouragement of pupils performance was found to be above average(3.10).

Lack of teachers' encouragement of students performance was rated to have the highest impact in low internal efficiency of schools, mean score value of the teacher, student, and principals respectively are 3.25, 3.10 and 3.7 and the overall average mean value is 3.4. This shows that the factor is one of the major causes of low school internal efficiency.

The computed ANOVA for both drop-out and repetition have showed that statistically no significant difference among each groups of respondents. At ($F_{d(2,503)}$=1.825, P_d>0.05 and $F_{r(2,503)}$=1.394,P_r>0.05) respectively. This means that the respondents' opinion on this item is almost similar. Therefore, it is possible to conclude that, lack of teachers' encouragement of pupils' performance is a grate contributor to school internal inefficiency.

The mean score value of the three groups of respondents to the degree of influence of shortage of teachers to school have low level of internal efficiency, was found to be 3.0 for teacher, 3.05 for student and 3.5 for principal and the weighted mean score value is 3.18. This shows that, all the three groups of respondents rated the influence level of the factor above average. This means the factor is one of the causes of school low internal efficiency.

Furthermore, the F-test value both for repetition and drop out ($F_{d(2,503)}$= 1.392, P_d>0.05 and $F_{r(2,503)}$= 1.21, P_r>0.05) indicates the absence of statistically significant difference among respondents. This means that almost all of the three groups of respondents agree that shortage of teachers was one of the causes of school low internal efficiency.

The annual zone education bureau report also supports this. It indicates that the pupil-teacher ratio were 78:1 and 46:1 for grade 9-10 and 11-12 respectively. In addition to this the report indicates that shortage of science teacher was the major problem of all of the secondary schools found in the zone (GZEO, 2010/11).

In support to this, the result obtained from FGD and interview, reveals that especially lack of science teachers in zone is a very serious problem which calls for an immediate solution.

This finding is in line with the works of Gross, (1994), Coombs, (1985), Graham Brown (1991), Adane (1993), Misganu (2010), and Tilaye (1997) who indicated

that lack of sufficient qualified teachers in kind and number affects the internal efficiency of the education system.

From table 5, one can easily observe that low qualification of teachers is a cause for school low internal efficiency. The total mean score value which is 2.04 for teacher, 3.3 for students and 3.5 for principals indicates that both the students and school principals rated the problem above average and the teachers group rated the impact level very less than the average mean value 3. On the other hand the weighted response mean value 3 indicates that the factor is rated at average level of influence. This means low qualification of teacher is one of the causes of school low internal efficiency but it is some what series.

The computed ANOVA for both dropout and repetition have shows statistically significant difference among respondents at ($F_{d(2,503)}$=48.378, P_d<0.05, and $F_{r(2,503)}$=31.89, P_r<0.05) respectively. This means the respondents' opinion on this factor is different. Furthermore, the standard deviation value for teacher (1.1,1.2), student (1.52,1.5) and principals (1.54,1.4) indicates that teachers are the source of deviation due to perceiving the impact level of the factor very less than the other two groups of respondents. This seems that the teachers are blaming the impact of low teacher qualification on school internal efficiency.

However, the weighted response mean value for three groups of respondents which is 3, indicates that low qualification of teacher is one of the causes of school low internal efficiency, though its effect is average.

The other factor that the respondents asked to rate were the degree of influence of lack of teachers' teaching experience to students dropout and grade repetition; and table 8, presents that the total mean score value of the groups are 1.98 for teacher, 2.93 for students and 2.7 for principals, which indicates that all the three groups of respondents are rated the influence of the factor below average. In addition to this the weighted mean value of the respondents which is 2.5 shows that the factors degree of affecting school internal efficiency is not significant.

Moreover, the calculated F-value both for repetition and dropout ($F_{d(2,503)}$=2.703, P_d>0.5 and $F_{r(2,503)}$=2.425,P_r>0.05) indicates the absence of statistically significant difference between the three groups of respondents response. This means that the three groups of respondents opinion is almost the same in undermining the effect of lack of teachers' teaching experience on level of school internal efficiency; hence, inference to the sample is possible with 95 percent confidence level.

The influence degree of teachers inappropriate evaluation of pupils' performance is the other factor that the respondents were asked to rate and table 5 presents that the mean score value for each group of respondents are 2.17 for teacher, 3.16 for student and 3.6 for principals. This shows that both the student and principal respondent group rated the factor to have above average but the teachers rated it very far below the average value. The weighted mean score value which is 2.78 indicates that teachers' inappropriate evaluation of students' performance is observed in the study area but not as such series in influencing students either to dropout or repeat grades.

However, the calculated value of F-ratio for both dropout and repetition ($F_{d(2,503)}$=51.3,P_d<0.05 and $F_{r(2,503)}$ = 21.3, P_r < 0.05) indicates the existence of statistically significant difference. This means that the opinion of respondents in perceiving the degree of influence of the factor to students' dropout and repeat grades is different. The standard deviation value of repetition (1.2, 1.4 and 1.1) respectively for teacher, student and principal indicates that students are the source of variance, due to perceiving the effect of the factor very serious than the other two respondent groups. To the contrary in both of the cases the teachers were undermined the contribution of the factor to school low internal efficiency.

To sum up, from the teachers related factor discussed above lack of teachers' encouragement of students' performance was found to be the first major factor followed by shortage of teachers in the study area. In addition to these, low

qualification of teachers is observed in the study area but its effect is not serious.

4.3.3. School related factors

The overall school environments play a vital role in how students feel comfortable and are able to relate to their lives, and ultimately their decision to graduate. A number of school related factors such as, availability of school facilities and services, class size, inflexible school calendar and medium of instruction can be associated with school low internal efficiency. Respondents were asked to rate their degree of influence and the table below summarizes the result.

Table 6: Effect of school related factors on school internal efficiency

No	Item	Respondent	Dropout	Repetition	Total mean	Weighted Mean	F_d	P_d	F_r	P_r
1	Lack of school facilities and services	T	3.28	3.28	3.28	3.13	0.668	0.586	0.668	0.513
		S	3.31	3.31	3.31					
		P	2.80	2.80	2.8					
2	Over crowded class rooms	T	3.74	3.74	3.74	3.62	3.521	0.03	2.229	0.109
		S	3.39	3.46	3.42					
		P	3.80	3.60	3.7					
3	Medium of instruction	T	3.01	3.04	3.03	3.24	0.583	0.550	2.872	0.57
		S	3.02	3.34	3.18					
		P	3.5	3.5	3.5					
4	Inflexible school calendar	T	2.41	3.10	2.76	2.64	2.356	0.096	2.549	0.79
		S	2.2	2.77	2.73					
		P	2.3	2.60	2.45					

Key: F_d = F for drop out P_d= Sig. for drop out F_r= F for repetition P_r= Sig for repetition α= 0.05

All the three categories of respondents were asked to rate the degree of seriousness of school related factors such as availability of school facilities, class size, medium of instruction and inflexible school. Accordingly, overcrowded class room, medium of instruction and lack of facilities and services were rated as 1st, 2nd and 3rd respectively.

Table 6 depicts that overcrowded classrooms were reported as the factor most contributing to low internal efficiency. The mean score value of the three groups of respondents fall in the range of 3.42 to 3.74 and the weighted mean is 3.62. This indicates that all of the three groups perceived the influence of large class sizes in repeating grades and pushing students out of schooling. Moreover, data gathered from sampled schools shows that average class size in 2010/11 is 87, 78, 52, and 40 for grade 9, 10, 11 and 12 respectively.

In addition to this, one-way ANOVA was employed to see the mean difference between the three groups of respondents at significance level of 95 percent and the F-test result for both repetition and dropout reveals that there is no significant difference between the opinion of respondents for item number 3 ($F_{d(2,503)}$=3.521, P_d=0.00 and $F_{r(2,503)}$= 2.229,P_r=0.109). Thus, overcrowded class room is one of the major causes of low school internal efficiency in the study area.

An interview and FGD held with interviewees and discussion members resulted in almost the same idea with what discussed above. PTA members given great emphasis, in indicating the seriousness of the problem and one of the teachers, who is the member of PTA of the school and serve as a unit leader in the school expressed the problem as follows: Overcrowded class rooms are not only causes for grade repetition and drop outs. It is becoming major source of disciplinary problem. More than 90 percent of student conflicts are reported to arise due to insufficient sitting places.

This result is in line with the works of Adane (1993), Habtamu (2002), and Tilaye, (1997) who indicate that students, who start their education in large class size are more likely to drop out or repeat grades, less likely to graduate in time, less likely to take more challenging lessons and are less likely to attend collage than their peers from small classes.

Table 6 presents the mean, standard deviation and F-ratio for one way ANOVA test, to show the views of respondent on the influence degree of medium of

instruction on school internal efficiency. It depicts that the mean score value for three of the groups are 3.03, 3.19, and 3.5 respectively for teacher, student and principals, and the weighted mean score is 3.24, which is above average in the rating scale. This means that the factor is somewhat serious in attributing to low school internal efficiency level.

Analysis of F-ratio for one way ANOVA disclosed that there is no statistically significant difference in opinion of respondents in rating the influence degree of medium of instruction on school internal efficiency at ($F_{d(2,503)}$=0.563, P_d>0.05 and $F_{r(2,503)}$=2.872, P_r>0.05) for dropout and repetition respectively.

The other issue that the respondents were requested to rate was the influence degree of lack of school facilities and services to school internal efficiency and table 6, presents that the mean score value for each of the three groups of respondents are 3.28 for teacher, 3.49 for student and 3.25 for principal. This indicates that all of the three groups of respondents rated the effect of the factor above average. The weighted mean value 3.13 also indicates as the factor is rated above average. This shows that lack of school facilities and services have a great contribution in forcing students either to drop out or repeat grades, which totally aggravate the low internal efficiency of secondary education system.

Furthermore, the calculated value of F-ratio both for repetition and drop out ($F_{d(2,503)}$=0.668, P_d>0.05 and $F_{r(2,503)}$=0.94, P_r>0.05) shows the absence of statistically significant difference. This means that all the three groups of respondents agree on the seriousness of the problem in influencing students either to dropout or repeat grades.

In addition to this, the result obtained from observation check list which was analyzed under table 7 goes in line with this result.

Table 7: The extent of Availability of school facilities

No	Facilities	Extent of Availability	Schools				
			Negelle	Adola	Shakiso	Bore	Uraga
1	School library	A					
		I	✓	✓	✓	✓	✓
		N					
2	Latrine for male and female students and teachers separately	A	✓		✓		✓
		I				✓	
		N		✓			
3	Laboratories	A					
		I	✓	✓	✓	✓	✓
		N					
4	Recreational areas	A					
		I	✓	✓	✓	✓	✓
		N					
5	Clean drinking water	A					
		I			✓	✓	✓
		N	✓	✓			

Key:- A: Adequately available I: Inadequately available N: Not available

As can be seen from table 6, school facilities such as, libraries, laboratories, recreational areas and clean drinking water are not adequately available in all of the sampled schools; especially absence of clean drinking water is a serious problem in two of the sampled schools namely Adola and Negelle. Moreover, one of the sampled schools do not have latrine for the female and male students and also for the staffs separately.

Finally the respondents were asked to rate the impact of inflexible school calendar on school internal efficiency and table 6 presents that the mean score value for three of the groups was found to be 2.76 for teacher, 2.73 for student and 2.45 for principal and the overall average mean is 2.64. This indicates that all the three groups of respondents perceived the effect of inflexible school calendar on school internal efficiency to be insignificant.

Furthermore, the F-ratio for both repetition and drop out ($F_{d(2,503)}=2.350, P_d>0.05$ and $F_{r(2,503)}=2.55, P_r>0.05$) reveals that there is statistically insignificant difference between the three groups of respondents

response. Thus, it is possible to disclose that inflexible school calendar is not a cause either for students to drop out or repeat a grade in the study area.

On the whole, from school related factors over crowded classroom is found to be the first major factor followed by medium of instructions; and lack of school facilities and services also found to be a cause for low school internal efficiency.

4.3.4. Factors related to school administration

The effectiveness of schools in educating students is highly dependent upon the presence and nature of effective school leadership. To this end, the significance level of factors related to school administration such as: poor school management, lack of guidance and counseling service, and poor school community relationship on school efficiency are discussed below.

Table 8: Factor related to Administration

No	Item	Respondent	Dropout	Repetition	Total mean	Average mean	F_d	P_d	F_r	P_r
1	Poor school management	T	4.26	3.77	4.02	3.97	1.721	0.180	1.678	0.188
		S	4.04	3.94	3.99					
		P	4.2	3.6	3.9					
2	Lack of guidance and counseling service	T	2.92	3.25	3.09	3.26	0.185	0.185	1.439	0.238
		S	3.13	3.06	3.1					
		P	3.6	3.6	3.6					
3	Poor school community relation ship	T	3.3	3.41	3.62	3.66	0.074	0.074	1.06	0.347
		S	3.64	3.2	3.42					
		P	4.5	3.4	3.95					

Key: F_d = F for drop out P_d= Sig. for drop out F_r= F for repetition P_r= Sig for repetition α= 0.05

Table 8, depicted that all the three categories of respondents unanimously rated poor school management as a major contributing factor to low internal efficiency. The mean score value for each of three groups of respondent, for the influence degree of poor school management on school internal efficiency is 4.02 for teacher, 3.99 for students and 3.9 for principals. This indicates that all of the three groups of respondents rated the factor very far the above average. In addition to this the responses overall average mean score value of the item

indicated in table 10, is 3.97, which means that poor school management is one of the detrimental factors of school internal efficiency.

Furthermore, the computed ANOVA test ($F_{d(2,503)}=1.721$, $P_d>0.05$ and $F_{r(2,503)}=1.678, P_r>0.05$) for both dropout and repetition respectively indicate absence of significance difference among respondents. This means that the opinion of the three groups of respondents on the effect of poor school management on school internal efficiency is almost the same.

The general characteristics (table 5) shows that all principals included in the sample are BA/BED degree holders and have a service of 4 or more years

However, result obtained from open ended question, which asks the school principals to list recent training that they have taken and their field of study; indicates that none of them have taken training related to school management and also none of them are graduated from EdPM department. This seems to be the source of poor school management in the study area.

The second factor that the respondents were asked to rate is the effect of poor school community relationship on school internal efficiency. Table 8 presents that the mean score value of the three groups of respondents are 3.62 for teacher, 3.42 for student and 3.95 for principal. This indicates that, the three groups of respondents rated the effect level of poor school–community relationships to be high. The weighted mean score value 3.66 indicated in table 8, also reveals that poor school community relationship is one of the causes for low school internal efficiency.

One-way ANOVA test is employed to see the response difference among the three groups of respondents and the calculated value of F-ratio for both repetition and dropout ($F_{d(2,503)}=2.621$, $P_d>0.05$ and $F_{r(2,503)}=1.06, P_r>0.05$) respectively indicates the absence of statistically significant difference. This means that all the three groups of respondents rated the influence level of the

problem almost in the same manner. Thus, it is possible to infer this at 95 percent significant level.

The other factor rated under this related to administration is the impact of lack of guidance and counseling service to students dropout and grade repetition. Table 8, shows that the mean score value of the item is ranging between 3.09 to 3.6, which means that all of the three groups of respondent rated the impact level of the factor above average. In addition to this, the response weighted mean of the factor, which is 3.26 indicates that the impact level of the problem is somewhat serious.

Moreover, the calculated F-test value for both repletion and dropout ($F_{d(2,503)}=1.693, P_d>0.05$ and $F_{r(2,503)}=1.439, P_r>0.05$) reveals that in the three groups of respondents there is no statistically significant difference in perceiving the impact level of the problem at this level.

This finding is in line with the works of Asmerom, et,al. (1989), Garman & Brown (1969), Norton, (1967), and Deble (1980). They indicated that lack of guidance and counseling service in a school accelerates students' repetition and dropout rates.

In general from the administration related factors poor school management is found to be the first major factor of school internal efficiency followed by poor school community relationship. In addition to this lack of guidance & counseling service is found to be one of the causes of low school internal efficiency, even though its effect is somewhat serious.

4.3.5. Socio-Economic factors

The socio-economic environment in which students grow up is an important exosystematic predictor of their overall well being. Accordingly, socio-economic factors such as school distance, the need for child labor, poverty and unstable home environment were identified from the literature and respondents were asked to rate them according to their level of seriousness.

Table 9: Effects of socio-economic factors on school internal efficiency

No	Item	Respondent	Dropout	Repetition	Total mean	Weighted Mean	F_d	P_d	F_r	P_r
1	Need for child labor	T	3.82	3.62	3.77	3.78	2.273	0.104	2.114	0.122
		S	3.65	3.87	3.76					
		P	3.7	3.89	3.8					
2	Lack of financial & material support.	T	3.17	3.03	3.1	3.22	0.795	0.452	0.321	0.725
		S	3.08	3.06	3.07					
		P	3.6	3.4	3.5					
3	School distance	T	3.39	3.39	3.39	3.38	0.535	0.586	6.408	0.665
		S	3.49	3.49	3.49					
		P	3.2	3.30	3.25					
4	Unstable home environment	T	3.21	3.28	3.25	2.94	2.304	0.092	1.262	0.284
		S	3.19	3.14	3.17					
		P	2.20	2.6	2.4					

Key: F_d = F for drop out P_d= Sig. for drop out F_r= F for repetition P_r= Sig for repetition α= 0.05

Of the four socio economic factors identified above, need for child labor was highly rated by most of students, teacher and principal respondents. As can be seen from table 9, the mean score value of the three group of respondent for this item is 3.77, 3.76 and 3.8 for teacher, student and principal respectively. This indicates that all of the three groups of respondents rated the influence level to be above average. In addition to this the weighted mean 3.78 shows that all of the respondents perceived the seriousness of the factor to be high.

Moreover, F-ratio for one way ANOVA test of both repetition and drop out indicates that there is statistically insignificant difference among respondents. This means that all of the three groups of respondents' opinion are almost the same in indicating the seriousness of the factor.

One major reason behind the seriousness of the factor in the study area could be the fact that most woredas of the zone have commercial activity that demand more labor. For example, in the zone there are three woredas, where gold

mining is traditionally done and also there are other two woreds where coffee is more abundant.

Interview was made with one person who has five children. From these children two of them are attending their education, one is diploma holder employed in government office and two of them are high school drop outs and are now working in the area where gold is traditionally mined. It is worth to express what he said during the interview. It is translated as:

> Both of my children, who are mining gold traditionally, are financially helping me and my two children, who are attending their education than the one who holds diploma and is employed; so I and my family all prefer these two children, who are mining gold traditionally.

From this one can easily understand that the two children who are attending their education, will make two of their brothers, who are mining gold traditionally as a model than who is employed; and later on they will experience dropout. The other thing is that this two children's family is not blaming their children's drop out.

The other factor addressed in table 9 is the degree of influence of lack of financial and material support on school internal efficiency; and the mean score value of the three groups of respondents indicated in the table is 3.1 for teacher, 3.07 for student and 3.5 for principals, which shows that all of the three groups of respondents were rated the contribution of lack of financial and material support to school low internal efficiency to be high. In addition to this the weighted mean score 3.22 indicates that in sum total the respondents considered lack of financial and material support as one of the cause for school low internal efficiency.

Furthermore, the computed F-ratio for one way ANOVA reveal that the difference in responses of respondents for this factor is statistically not significant at ($F_{d(2,5503)}=0.795, P_d>0.05$ and $F_{r(2,503)}=0.321$, $P_r>0.05$)) for both repetition and drop out respectively.

Accordingly, Pillay Nesengeni (2006), and Masitsa (2006) indicated that lack of financial and material support is an issue which might put learners at risk of negative out comes, such as repetition and dropping out of school, which in turn results in further problem due to fever available work options.

This result also goes in line with what is discussed in table below about the students' family back ground.

Table 10: Students' Family background

No	Item		Father	%	Mother	%
1	Educational back ground	Illiterate	98	31.7	180	58.2
		Grade 1-4	129	41.7	51	16.41
		Grade 5-8	46	14.66	26	8.53
		Grade 9-10	27	8.7	53	16.84
		Above 0-10	10	3.28	-	-
2	Parents occupation	Farmer	189	60.83	124	40.04
		Civil servant	18	5.7	29	9.2
		Private business	40	12.5	52	16.84
		Daily laborer	65	21	105	34.
3	No of children's parents have	1-3			81	26.2
		4-5			132	42.7
		Above 5			97	31.07

Table 10, depicts that 145 (32 percent), and 266 (58.2 percent) of the drop outs' and repeaters' father and mother are illiterate, 190 (42 percent) and 75 (16.4 percent) of the students' father and mother respectively were educated from 1-4 grades, the rest 122(25 percent) and 116(24 percent) of the students father and mother respectively were educated above grade 5. This means that almost 75 percent of the respondent families were not educated.

Concerning students' parent occupation table 4 indicates that almost 80 percent of the drop outs and repeaters families are farmer and daily labor.

With respect to number of children's that the respondents' family have table 4 shows that 195 (about 43 percent) and 142 (about 31 percent) of the dropouts' and repeaters' family have 4-5 and more than five children's respectively. This indicates that most of the drop outs and repeaters are from larger families.

All these reveals that, most of the dropouts and repeaters are from families, who have low level of educational background, are farmer & daily laborer, and have more than three children's.

As it can be seen from table 9, the mean score value of the three groups of respondents for item 1, which asks them to rate the degree of influence of school distance to school internal efficiency is 3.39 for teachers, 3.49 for student and 3.25 for principals and the overall response mean value for these respondents is 3.38. This means that school distance is one of the major causes for low internal efficiency of an education system.

The computed ANOVA test of significance at 95 percent confidence level showed that no statistically significant difference (P-value greater than 0.05 for both repetition and dropout). This means all the three groups of respondents perceives the effect of the problem on internal efficiency of the education system as serious. Thus, school distance is one of the major contributors to low internal efficiency of an education system.

Accordingly Tillaye (1997), Lissanu, (2004) and others indicates distance to school leads students to be less achiever in their academic performance and in turn decide to repeat grades or drop out of school. In addition to this the results of FGD and interview with PTA members and parents of students, who experienced either repetition or drop out substantiate the seriousness of the problem.

Furthermore, the general characteristics of students included in the sample indicated in table below go in line with this result.

Table 11: Students home to school distance, time for their arrival to school, and number of days absent from school.

Item	Distance from home to school					Time of school arrival					No of days absent from school				
	< 30 min	30-60min	1-1:30 he	Above 1:30	Total	Always	Often	Someti me	Never	Total	1-5	6-10	11-15	>15	Total
Frequency	111	96	51	52	310	107	163	39	1	310	39	163	107	1	310
Percent	35.9	30.9	16.4	16.9	100	34.4	52.5	12.7	0.4	100	12.7	52.5	34.4	0.4	100

As can be seen from table 11,only 111 (36 percent) of the drop outs and repeaters came to school by walking less than 30 minutes but for the rest 199 (64 percent) of the dropouts and repeaters the distance requires them to walk above 30 minutes. This indicates that, most of the repeaters and drop outs walk more than an average of 5km distance to go to school. In other words, these students walk 10km per day for the two trips.

Concerning time of arrival at school 201 (65 Percent) of the students arrive at school almost on times but the rest 109(35 percent) of thc student did not arrive on time. This means that 109 (35 percent) of the drop outs and repeaters are late comers.

Regarding to the number of days that drop outs and repeaters become absent from school, 39 (12.7 percent) and 163 (52.5 percent) of the student absent from school 1-5 days and 6-10 days respectively. But the rest 107 (34.4 percent) and 1(0.4 percent) of them are absent from school almost 11-15 and more than 15 school days. This means that most of grade repeaters and dropout are too absent from school. These all indicates that, most of the dropouts and grade repeaters walk to go to school more than 30 minutes, they are late comers, and they are too absent from school.

The final questions that the respondents were asked to rate were the degree of influence of unstable home environment on student dropout and grade

repetition, which both contributes to school low internal efficiency. Table 10 presents that the mean score value for three of the groups is 3.25 for teacher, 3.17 for student and 2.4 for principal and the overall average mean score is 2.94. This indicates that the total sum opinion of the respondents on this factor is below average. This means unstable home environment is observed in the study area but it is not a cause for school internal efficiency.

In addition to this the computed value of F-ratio for both dropout and repetition respectively ($F_{d(2,503)}$=2.394, P_d>0.05 and $F_{r(2,503)}$=1.262,P_r>0.05) indicates that there is statistically insignificant difference among the responses of respondents.

4.3.6. Socio- cultural factors

A number of socio-cultural factors such as, early marriage, gender role disparity, teenage pregnancy, and peer group initiation can be associated with school low internal efficiency. Respondents were asked to rate their level of seriousness and the following table summarizes the findings.

Table 12: The impact of Socio-cultural factors on school internal efficiency

No	Item	Respondent	Dropout	Repetition	Total mean	Weighted Mean	F_d	P_d	F_r	P_r
1	Early marriage	T	2.65	2.65	2.65	2.57	0.746	0.475	2.464	0.86
		S	2.82	2.92	2.87					
		P	2.50	2.50	2.5					
2	Gender role stereotype	T	3.38	3.38	3.38	3.35	0.1120	0.657	3.951	0.02
		S	3.49	3.04	3.04					
		P	3.40	3.4	3.4					
3	Growing with single parent	T	3.18	2.9	3.04	3.21	0.74	0.66	2.4	0.47
		S	3.37	3.18	3.3					
		P	3.2	3.4	3.3					
4	Teenage pregnancy	T	2.88	2.88	2.88	2.87	0.045	0.956	0.031	0.969
		S	2.84	8.85	2.84					
		P	2.90	2.90	2.90					
5	Peer group influence	T	3.56	3.56	3.56	3.84	0.947	0.38	0.92	0.39
		S	3.67	3.66	3.67					
		P	3.2	3.20	2.4					

Key: F_d = F for drop out P_d= Sig. for drop out F_r= F for repetition P_r= Sig for repetition α= 0.05

The first item that respondents were requested to rate was the impact of peer group influence on schools internal efficiency. As it is indicated in table 12, its mean score value is 3.55 for teacher, 3.67 for student and 3.2 for principals. This shows that the three groups of respondents rated the impact level of the problem above average. Moreover, the weighted mean score 3.48 indicates that peer group influence was one of the major detrimental factor of school internal efficiency in the study area.

On the other hand, the calculated value of one way ANOVA F-ratio ($F_{d(2,503)}$= 0.947, P_d=0.389 and $F_{r(2,503)}$=0.925, P_r=0.397) for drop out and repetition respectively is less than the table value (19.5) at 2 and 597 denominator and numerator degree of freedom. This means that there is no statistically significant difference among the three groups of respondent; hence, it is possible to infer this at 95 percent level of confidence.

This finding is in conformity with Mcwhirteret et al., (2007) who suggested that young people who engaged in problem behavior have a propensity to find each other and form peer cluster groups. Such groups then normalize and encourage antisocial and problem behaviors, and are an important influence on their behavior.

The second factor that the respondents were asked to rate its degree of influence on students' dropout and repetition is gender role disparity. Table 12, above presented the calculated mean score value of respondents was found to be 3.38 for teacher, 3.27 for student and 3.4 for principals and the overall response average mean is 3.35. This shows that the three groups of respondents rated that the degree of influence of gender role stereotype on student dropout of school and grade repetition to be serious. This indicates that gender role stereotype is one of the causes of low school internal efficiency.

The calculated F-test value for both repetition and drop out ($F_{d(2,503)}$=0.420, P_d>0.05 and $F_{r(2,503)}$=1.01, P_r>0.05) shows the absence of statistically significant difference among respondents response. This means the three groups of

respondent confirmed as the problem is one of the causes of school low internal efficiency.

The third item that the respondents were asked under factors related to culture is the impact of students' growing with single parent on school internal efficiency. And table 12, shows that the calculated mean score value is for teacher (3.18), student (3.38) and principals (2.90). As one can see from this only the principal group was rated the effect of the factor below average. When we look at the computed F-test value for both repetition and dropout it is ($F_{d(2,503)}$= 0.74, P_d>0.05 & $F_{r(2,503)}$=2.4 P_r>0.05), which indicates the non-existence of statistically significant difference among respondents. This means that, the three groups of respondents response in rating the seriousness of the factor at moderate level is almost the same. Thus, according to the overall average mean score 3.15 students' growing with single parent is one of the causes of school low internal efficiency.

Regarding to the impact of teenage pregnancy on school internal efficiency table 12 also presents that the mean score value for three of the respondents is: teacher (2.88), student (2.84) and (2.9). This shows that each of the three groups of respondents indicated that the impact level of teenage pregnancy in the study area is below average. In other words, the response of the three groups of respondents indicates that the problem exists in the study area but its impact level is insignificant with respect to others.

Furthermore the F-test value for both repetition and dropout ($F_{d(2,503)}$ 0.045, P_d>0.05 and $F_{r(2,503)}$=0.031, P_r>0.05) reveals that, the three groups of respondents opinion difference to the item is not statistically significant. This means all of the three groups of respondents confirmed the low impact level of teenage pregnancy on either students drop out or grade repetition. Therefore, it is possible to conclude that teenage pregnancy is not one of the contributors of school internal inefficiency in the zone.

However, this finding is, to the contrary of Manlove (1998), grant and Hallman (2006) works, which indicates that high levels of engagement at school level were associated with postponement of pregnancy, and that learners, who drop out of school and repeat a grade were more likely to have school age pregnancy.

Table 12 depicts the degree of influence of students' early marriage on school internal efficiency and the calculated mean score value for three of the groups is found to be: teacher (2.65) student (2.87), and principal (2.5). This shows that all the three groups of respondents rated the degree of influence of the item below average. In addition to this the weighted mean also indicates the same thing with value 2.67. These shows, as early marriage is not a cause for low school internal efficiency in the study area.

In addition to this, one way ANOVA was employed to test, if there is any discrepancy between the groups of respondents' opinion to the items. The result of ANOVA test and the associated P-values for both repetition and dropout show as there is no significant difference among the groups of respondents (teachers, students and principals) in under weighting the effect of the problem on school internal efficiency at 95 percent level of confidence.

Boon and Cook(2008), Masitsa's (2006) supported this finding by indicating that single parent households, in adequate parental support and divorced conflicts are the major factor that have a detrimental impact on students ability to perform academically.

To sum up from the above factors categorized under culture related factors, peer group influence was found to be the major detrimental factor in influencing students to drop out or repeat grades followed by growing with single parent and gender role stereotype factors. In addition to this teenage pregnancy and early marriage are observable in the study area but they are not a detrimental factor.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1. SUMMARY

Internal efficiency in education deals with the use of resources, and refers to the internal dynamics of the education system in transforming inputs and process into outputs, or entrants into graduates (UNESCO 2003:141). This indicates that internal efficiency tries to measure the success of a given number of students in completing a specified educational level or cycle. Grade repetition and drop out are the two key variables which reduce the level of internal efficiency of an education system. Therefore, the compounded result of high grade repetition and drop out is low internal efficiency.

To this end, this study deals with analysis of trends in internal efficiency of Guji Zone. Its main purpose was to examine the situation of internal efficiency in secondary schools, identify the major factors behind low school internal efficiency and to suggest possible solutions. In order to achieve its aim, the following basic questions were set.

1. What are the trends in secondary education internal efficiency in Guji Zone?
2. Which sex (Boys or Girls) is more affected by the problem of school dropout and grade repetition in secondary schools of the zone?
3. What are the major factors behind school dropout and grade repetition of secondary schools in the zone?

Three sets of questionnaires covering all the relevant area were designed to collect the necessary information from the above mentioned respondents. In addition, semi structured interview questions were designed for interview with parents of students. Focus group discussion was also held with PTA members.

Moreover, document analysis was made to get detailed statistical data about droouts and repeaters.

5.1.1. Characteristics of respondents

The study showed that from 310 students included in the sample 53 (17 percent) of them are above secondary school age range (i.e above 18 year old), and also 22(7 percent), 12(4 percent), and 3 (1 percent) of them are married, promised and widowed respectively.

With respect to teachers and principals' characteristics, it was found out that 94 percent of teachers and 100 percent of the principals were first degree holders.

5.1.2. Trends of secondary school internal efficiency

The study showed that secondary school students drop out and repetition rates in the study area for the last five academic years (2005/06-2009/100) were (14.38, 10.9), (13.15, 14.45), (12.8, 10.44), (11.63, 10.59) and (12.65, 11.2) respectively. It was also found that average drop out and repetition rates for grade 9 during the five years under consideration were 17.4 percent and 15.3 percent respectively. The result also revealed that in the study area the average secondary school dropout and repetition rate for the last five years was 12.65 and 11.2 percent respectively.

5.1.3. Trends of secondary school internal efficiency among sex

The study attempted to look into the trends of school internal efficiency among sex and the result showed that, in five years the average dropout rate for girls (14.52) has been better than that of boys (16.6). Similarly, average repetition rate for girls (12.3) has been better than that of boys (14.92).

5.1.4 Factors that cause school dropout and grade repetition

Factors that contribute to school low internal efficiency were identified from the literature and respondents were asked to rate their level of seriousness. As a result, 11 major factors, which were rated above 3.5 overall average mean score, were identified and were in turn grouped in to five different categories, such as: pupil related, teacher related, school related, administration related, socio-economic and socio-cultural factors.

• **Pupil related factors.** Concerning pupil-related factors, students' failure in studying hard was found to be the first major factors of school low internal efficiency with average mean (3.84) followed by students low self conception due to previous failure in exam with average mean 3.35. Student's lack of interest in education and low future success in education were also found to be the cause for low school internal efficiency.

• **Teachers related factors:** It was found that lack of teachers encouragement of pupil's performance to be the major factor of low school internal efficiency with average mean (3.4) followed by shortage of teachers with average mean (3.18) related to teachers.

• **School-related factor:** The study showed that, with average mean score of 3.62, overcrowded classroom was the most detrimental school related factor causing school low internal efficiency. It was also found that lack of school facilities and services to be a cause for school low internal efficiency in the study area with mean average score (3.13).

• **Administration related factors:** Regarding administration related factors, the study showed that poor school management is the major detrimental factor with average mean (3.97) followed by poor school-community relationship (average mean=3.66) for school low internal efficiency. Lack of guidance and counseling service was found in the study to be one of the causes for student's dropout and grade repetition with average mean (3.26).

• **Socio-economic factors:** The study attempted to look into socio-economic factors and the need for child labor was found to be the major factor of students' dropout and grade repetition. In addition to this it was found that school distance, lack of financial and material support, and unstable home environment to be a cause for school low internal efficiency with overall average mean value 3.38, 3.22, and 3 respectively. Moreover, regarding students family back ground, it was found that the level of education for majority (74%) of students' parents was lower than grade four. The study also revealed that 189 (61 %), and 127 (41 %) of students' father and mother are farmers; while 65 (21 %) and 114 (37 %) of students' father and mother respectively were daily laborer. It has also been evidenced that, 229 (74 %) of students' (drop out and repeaters) family have more than four children.

• **Socio-cultural factors:** The study result revealed that peer group initiation influence is the major factor related to socio-cultural factors with average means (3.5) for school internal inefficiency; and also it was also found that gender role disparity to be one of the causes for students drop out and grade repetition.

5.2. Conclusion

Based on the analyses of the findings, it can be concluded that secondary schools of the zone are affected by low internal efficiency with average annual repetition rates of over 12 percent and dropout rates over 13 percent, the system is leaving behind about a quarter of its students every year. The low internal efficiency rate was high for males within the past five years than females except in academic year 2008/9 GC, which was high for females. Moreover, the low internal efficiency rate does not show a decreasing rate rather it has been increasing from year to year specifically at grade 9. This low internal efficiency was the consequences of a number of school, teacher, student, administration, socio-economic and socio-cultural related factors. Specifically, the most major factors that highly contribute to low level of

internal efficiency in the study area are students' failure in studying hard, lack of teachers' encouragement of students' performance, overcrowded classrooms, poor school management, the need for child labor and peer group influence.

5.3. Recommendations

The study indicates that secondary education in Guji zone suffers from low internal efficiency expressed in terms of high repetition and dropout rates. The following could be forwarded as recommendations to help solve the problem.

1. In the study, it was found that school distance, economic and social difficulties students face when attending in secondary schools in towns far from home-village and unstable home environment are the major detrimental factors of school internal efficiency. To alleviate these factors, the OEB and the zone need to take into account, the society's settlement condition before opening new secondary schools. In addition to this, efforts need to be made by the region and the zone to invite NGOs, investors and the society to build hostels near to the area where secondary school is found.

2. As several of the participants reported, overcrowded class rooms are the major reasons for school low internal efficiency. Therefore, the region, the zone, and the woredas need to encourage NGOs and the society at large to take part in the expansion of secondary education in the area. Furthermore, schools should create their own income generating methods to construct additional classrooms.
3. It is recommendable that school principals, teachers and supervisors make early identification and targeting of learners who are most at risk of dropping out and grade repetition by intervening in their academic, social and personal lives.
4. It was found that learners did not appear to understand the link between their education and future aspirations. Hence, it would be necessary for schools to organize workshops to provide the learners with the

opportunity to discuss the relevance of their academic work in terms of the world of work and the related challenges. This can be done by inviting members of the community who work in different fields to share their experiences in the workplace.

5. The school principals, supervisors, department heads and teachers need to work together in order to prepare a relevant exam at school level that can evaluate the required performance of students and help them for further preparation. In addition to these teachers should evaluate students' performance continuously in order to identify their academic failure and give support before it leads them either to drop out or repeat grades.
6. It seems necessary for the MOE, the region and universities to work together in training more teachers on the basis of school needs. In addition to this the woreda administrative bodies have to use different motivation mechanism (such as, providing housing service), to motivate teachers, in order to minimize turn over and enabling them to exert their full potential in the work place.
7. Zone education officers, woreda education officers, school principals and PTA members need to devise ways and means in order to fulfill basic school facilities and services such as, toilet(for male and female students, and teachers separately), drinking water, guidance and counseling service, and lounges.

Bibliography

Adane Tessera. (1993). *Wastage in Primary School of Bahir Dar Awraja:* Unpublished Master's Thesis, AAU.

Alexander, L.Karl (1994). *On the success of failure: A reassessment of the effects of retention in primary grades:* 2nd. Edition: Cambridge University Press.

Anbesu Biazen. (1992). *Educational Opportunities and Disparities in Ethiopia:* Unpublished Research Report, ICDR.

Andrew, S. Ishwer, K. Joseph, M. and Sheila, P. (2009). *The consequences of high school dropout.* Center for Labor Market Studies Northeastern University: Boston, Massachusetts.

Assefa Beyene. (1991. *Female Participation and Performance in Rural Primary Schools of Ethiopia:* Unpublished research report, ICDR.

Azizi, N. and Lasonen, J. (2006). *Education and Training and the Economy: Preparing Young People for changing labor market.* IIER: Jyvaskyla University Press.

Bekele Atto.(2004). *A study of factors associated with wastage in secondary education Kefa and Sheka Zone:* Unpublished Master's thesis, AAU

Brewer, J.D. and Miller, R.L.,(2003). The A-Z of Social Research. London: Sage Publications.

Brimer, M.A., and L. Pauli, (1971). *Wastage in Education.* Switzerland: UNESCO, IBE

Boon, H.J. & Cook, J. (2008). Risk or resilence? What makes a difference? The Australian Educational Research, 35(1), 81-102. Retrieved on from

Carl-Hill, R. (2002). *Study on Education for Nomads in East Africa.* State of the Art Review of Relevant Literature, Draft Document Prepared Within the Framework of the Joint II CBA/UNESCO and UNICEF, Paris:UNESCO/IIEP

Chantavanich, A. and Fry. G (1990). Evaluating Primary Education: Qualitative and Quantitative Policy Studies In Thailand. Ottawa: IDRC

Claxton, C. (1990). Learning styles, minority students, and effective education. *Journal of Developmental Education, 14*(35), 6-8.

Coombs, P. H., (1985). *The World Crises in Education: The View From the Eighties.* New York: Oxford University Press.

Coomps, P.H and Hallak, J. (1987). *Cost analysis in education: A tool for policy development.* EDI series in Economic Development. The World Bank: London.

Curle, A. (1973). *Educational problem of developing societies:* With case studies of Ghana, Pakistan, and Nigeria. New York: Praeger Publisher

Cutler, D, and A Lleras-Muney. 2006. *Education and health: evaluating theories and evidence.* NBER Working Paper.

Davis, L., Ajzen, I., Saunders, J., & Williams, T. (2002). *The decision of African American students to complete high school: An application of the theory of planned behavior. Journal of Educational Psychology, 94*(4), 810-819.

Dirrirsa Birbirso. (1993). *Female Participation in Primary and secondary education Post-1974 Ethiopia:* Unpublished Master's Thesis, AAU.

Eisemon, Thomas Own (1997). *Reducing Repetition: Issues and Strategies*: UNESCO: international institute for Educational Planning.

Elleni Tadele. (1995). *African Thought and Education.* New York: Peter Lang.

ETFEO (2002). *Ensuring Equity for Elementary Students. Submission to Education Quality task force.* Ontario. Unpuplished.

Eu-ra (2006). *Key Education indicators on social inclusion and efficiency,* Luxembourg.http:// www. ec.europa.eu/**education**/pdf/doc264_en.pdf

Francis, C.L. (2000). *Learning Styles of African American Children.* Retrieved on February 7, 2007 from http://www.xula/edu/xulanexus/issue2/Francis.html.

Fuller, B. (1987). *Raising School Qualities in Developing Countries: What Investments Boost Learning?* Review of Educational Research, Vol. 57, No. 3.

Garman, C.G., and W.K. Brown. (1989). *Truancy, Chronic Absenteeism and Dropping out.* New York: William Gladden Foundation.

Gelennie, Elizabeth J.& Elizabeth Stearns (2002). *Early dropouts: Reasons for Leaving School: Individual and Contextual Correlates.* Working Papers Series: SANO2-04: Sanford Institute of Public Policy.

Grant, M. & Hallman, K. (2006). *Pregnancy-related school dropout and prior school performance in South Africa.* New York: The Population Inc.

Gross, M. (1994). *Social Equity and Educational Expanssion in Developing Nations.* in Encyclopedia of Education. T. Hussen and T.N. Postlethwait(eds), 2nd edn, Vol.9. New York: Pergmon Press.

Habtamu Wondimu.(2002). *A study of Dropouts in Selected Primary School of Two Regions in Ethiopia:* The Ethiopian Journal of Education. Vol. XXII, No.2.

Hassen Hussen (2006). *Factors that affect Primary school dropout at Semi Arid Woredas of Borena Zone.* Unpublished Master's Thesis AAU.

High school dropouts in America (2007). Retrieved February 16, 2008, from www.all4ed.org

Jimerson, S.R. & Ferguson, P. (2007). *A longitudinal study of grade retention: academic and behavioural outcomes of retained students through adolescence.* School Psychology Quarterly, *22(3),* 314-339. Retrieved from EBSCOHOST on March 16, 2009.

John, M. Brigeland (2006). *Perspectives of High School Dropouts,* Retrieved from http://www. Ec.eu/education/pdf on February 11/2010

Kumar, R. (2005). *Research Methodology: A Step by Step Guide for beginners* (2nd ed.) India: SAGE Publication Ltd.

Levin, H.; Lockheed, M. (1993). *Effective schools in developing countries.* London (U.K.): Falmer Press.

Lockheed, M. and Hanushek, E. (1994). *Educational Efficiency and Effectiveness* in T. Husen and T.N. Postlethwaite (Eds.), *The International Encyclopedia of Education.* Vol.3, Great Britain: BPC Wheatons Ltd.

Lockheed,M.E. and Verspoor, M.A (1991). *Improving Primary Education Developing Countries:* Washington D.C.: World Bank Publication.

Lissanu Ashebir (2004). *Factors affecting the internal efficiency of rural primary schools in Tigray Region*: Unpublished Master's Thesis, AAU

Manlove, J. (1998). *The influence of high school dropout and school disengagement on the risk of school-age pregnancy. Journal of Research on Adolescence, 8(2),* 187-220. Retrieved on March 16, 2007 from EBSCOHOST database.

Masitsa, G.(2006). *Drop-out in township secondary schools*: *educators' perspectives.* Acta Academica, 36(3)/ 165-191. Retrieved on February, 2008 from SAePublications.

Matthews, D. (1996). *An investigation of learning styles and perceived academic achievement for high school students. Clearing House, 69*(4), 249-255.

McIntosh, K, Flannery, K.B., Suggai, G., Braun, DH. & Cochrane, K.L(2008). *Relationships between academics and problem behavior in the transition from middle school to high school:* Journal of Positive Behaviour Interventions. 10(4) 243-254. Retrieved from EBSCOHOST database on March 18,2009

McWhirter, J.J., McWhirter, B.T., McWhirter, E.H& McWhirter, R.J.(2007). *At Risk Youth:* United States of America: Thomson Brooks/Cole.

Misganu (2010): *Analysis of the internal efficiency of government Primary schools of East Arsi Zone:* Unpublished Master's Thesis AAU.

MOE (2008): *Education Statistics Annual Abstract,* Addis Ababa, Hy, International Printers. `

MOE (2009): *Education Statistics Annual Abstract,* Addis Ababa, up printing press

MOE (2010): *Educational Statistics Annual Abstract,* Addis Ababa, Up printing Press.

Natriello, G. Mc Dill. E.L. and Pallas, A.M.(1985). *Raising Standards and Retaining Students:* The Impact of the Reform Recommendations on Potential Dropouts. Educational leadership, Vol.43,No.1.

OEB (2009): *The Millennium Education Statistics annual abstract,* Addis Ababa, Eth-cana ple.

Ou, S. & Reynolds, A.J. (2008). *Predictors of educational attainment in the Chicago longitudinal study.* School Psychology Quarterly, *23(2,* 199-229. Retrieved on March 16, 2009.

Paulson, A. (2006, March 3). *Dropout rates high, but fixes under way. Christian Science Monitor.* Retrieved February 14, 2008 from http//www.csmonitor.com/2006/0303/p01s02-legn.html

Pillay, J. & Nesengani, R.I. (2006). *The educational challenges facing early adolescents who head families in rural Limpopo Province.* Faculty of Education, Dept of Educational Psychology, University of Johannesburg. Retrieved March 16, 2007 from EBSCOHOST database.

Progress Report to the Minister of Education (October, 2007). *Ministerial Committee on Learner Retention in the South African Schooling system.*

Psacharopoulos G. and Maureen Woodhall (1985): *Education for development: An analysis of investment choices:* Washington D.C. World Bank.

Ratele, K. (2007). Poverty: Contextualizing community Psychology in South Africa. Pretoria: Van Schaik Publishers.

Rumberger, R.W. (1987). *Which school Drop out: A Review of Issues and Evidence.* Review of Educational Research Vol. 57. No.2.

Simmons, J. (ed.) (1980). *The education dilemma: Policy Issues for Developing countries in the 1980's.* Oxford: Pergamon Press.

Shiefelbein, E. and Wolff, L. (1992). *Repetition and inadequate achievement in Latin America's primary schools: a review of magnitudes, causes, relationships and strategies.* Paper n. 31. Washington: World Bank.

Taddese Mengesha (1974). *Primary school drop outs in rural Ethiopia: Planning and policy implication.* Unpublished Ph.D dissertation, University of Wiston

Tamiru Jote (2006). *A study on the internal efficiency of primary schools in Jimma zone,* Unpublished Master's Thesis AAU

Tanguiane, S.(1990). *International year Book of Education: Literacy and Illiteracy in the world:* Situation Trends and Prospects. Vol.42. Paris: UNESCO.

Terry, M (2003). *The effects that family members and peers have on students' decision to drop out of school.* Cape Town: University of Cape Town Press (Pty) Ltd.

Tilaye Kassahun (1997). *Gender specific investigation into the problem of high school drop outs in the Amhara region.* Unpublished Master's Thesis AAU

Tilaye Kassahun (1999). *The problems of Secondary School Drop outs in East Gojjam.* The Ethiopian Journal of Education. Vol. XIX. No. 1

Transitional Government of Ethiopia (1994). *Education and Training Policy: Addis Ababa: EMPDA.*

Tsang, Mun C.(2002). *Economic Analysis of Educational Development in Developing Nations:* An article prepared for the forthcoming second edition of Education. Macmillan.

UNESCO (1998). *Wasted Opportunities: When Schools Fail: Repetition and dropout in primary Schools.* Paris. UNESCO

_____(2000). *Education for Nomads in Eastern Africa.* Paris: UNESCO/IIEP

_____(2002). *Financing education- Investment and returns:* Analysis of the World Education indicators. Paris: UNESCO Publishing

UNESCO (2003). *Gender and Education for All:* The leap to equity. Paris: UNESCO Press

_____ (2006). *Grade Repetition:* IIEP 75116 Paris France and IAE 1000 Brussels Belgium

UNICEF (1992). *Strategies to Promote Girls' education Policies and programs that Work.* New York: UN Children's Fund Programme Publications.

U.S., Department of Education (2007). The Condition of Education 2006 (NCES 2006-071). Retrived on from http//nces.ed.gov/aso?id=16

Wanna Leka, and Tsion Dessie, (1994). *Educational Wastage: The Case of Female Students in Selected Primary and Secondary Schools of Ethiopia:* Unpublished research Report, AAU, CERTWID.

World Bank (1980). *Education Sector Policy Paper.* Washington D.C: World Bank.

Zimmerman, R., Khoury, E., Vega, W., Gil, A., & Warheit, G. (1995). *Teacher and parent perceptions of behavior problems among a sample of African American, Hispanic, and non-Hispanic white students. American Journal of Community Psychology, 23*(2), 181-197.

Appendix - A

Addis Ababa University

School Of Graduate Studies

College Of Education

Department of Educational Planning and Management

Questionnaire to be filled by Secondary School Drop outs/Repeaters

Dear Respondent;

This questionnaire is designed for you to describe why you repeat a grade or left school before completing.

It is important that you answer each question as thoughtfully and frankly as possible if this questionnaire is to be helpful and accurate in identifying the major reasons behind your dropout and repeating a grade. So please, try to respond honestly.

Thank you for your co-operation

Instruction. 1. You don't have to write your name

2. Please put (✓) mark in the space provided for your answer.
3. Give short answer in the space provided

1. Address: Name of the school_____
2. Sex: A) Male ☐ B) female ☐
3. What is your age? _____
4. Martial status
   A) Un married ☐ C) Promised ☐
   B) Married ☐ D) Divorced ☐
5. Why do you go to school?
   A) Because I like learning ☐ B) I meet my friends ☐
   C) I like the school ☐ D) My parents force me to go ☐
6. How long did it take you to walk from home to school you were attending?
   A) Less than30 minutes ☐ B) 30-60 minutes ☐ C) 1hr-1 $\frac{1}{2}$ hr ☐
   C) 1 $\frac{1}{2}$ hr – 2hr ☐ E) More than 2hr ☐

7. How often did you arrive at school in time?

a) Always ☐ b)Often ☐ c) Sometimes ☐ d) Never ☐

8. How many days a semester did you absent from school?

a) 1-5 days ☐ b) 6-10 days ☐ c) 11-15 days ☐ d) 16-20 days ☐

9. What is the educational back ground of your parents?

Father	**Mother**
a) Illiterate ☐	a) Illiterate ☐
b) Grade 1-4 ☐	b)Grade 1-4 ☐
c) Grade 5-8 ☐	c)Grade 5-8 ☐
d) Completed primary education ☐	d) Completed primary education ☐
e) Grade 9-10 ☐	e) Grade 9-10 ☐
f) Completed GSE ☐	f)Completed GSE ☐
g) Above GSE ☐	g) Above GSE ☐

10. What is yours parent occupation?

Father	**Mother**
a) Farmer ☐	a) Farmer ☐
b) Civil servant ☐	b) Civil servant ☐
c) Private business ☐	c) Private business ☐
d) Daily laborer ☐	d) Daily laborer ☐

11. How many children do your parents have?

a) 1-3 children ☐ b) 4-5 children ☐ c) above 5 children ☐

12. With whom did you live at the time when you repeat a grade/ drop out?

a) With both my parents ☐
b) With one of my parents ☐
c) With my relatives ☐
d) Live alone ☐
e) With my spouse ☐

13. How many days a semester did you absent from school?

b) 1-5 days ☐ b) 6-10 days ☐ c) 11-15 days ☐ d) 16-20 days ☐

14. From the possible factors to repetition listed in boxes 14.1-14.6, I would like you to judge the potential seriousness of the influence of each of these factors as they are applied up on you. Note that below are the keys for the responses value written on the top of each box.

5= Extremity serious **4**= Very serious **3**= Some what serious

2= Observed but not serious and **1**= Not observed at all

14.1. Student related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Failure in studying hard					
2	Lack of interest in education					
3	Low future success expectation					
4	Low self conception due to previous failure in examination					
5	Yours health problem					

14.2. Teacher related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Low qualification of teachers					
2	Shortage of teachers					
3	Assignment of less experienced teachers					
4	Lack of encouragement of pupils from teachers					
5	Inappropriate evaluation of pupils' performance					

14.3. School related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Lack of school facilities and services					
2	Overcrowded classrooms					
3	Difficulty in the language of instruction					
4	Inflexible school calendar					

14.4. School administration related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Poor school management					
2	Lack of guidance and counseling service					
3	Poor school-community relationship					

14.5. Socio-economic factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Need for child labor					
2	Lack of financial and material support					
3	School distance					
4	Unstable home environment					

14.6. Socio-cultural factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Early marriage					
2	Gender role stereotype					
3	Growing with single parent					
4	Teenage pregnancy					
5	Peer group influence					

15. From the possible factors to drop out listed in boxes 15.1-15.6, I would like you to judge the potential seriousness of the influence of each of these factors as they are applied up on you. Note that below are the keys for the responses values written on the top of each box.

5= Extremity serious **4**= Very serious **3**= Some what serious

2= Observed but not serious and **1**= Not observed at all

15.1. Student related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Failure in studying hard					
2	Lack of interest in education					
3	Low future success expectation					
4	Low self conception due to previous failure in examination					
5	Yours health problem					

15.2. Teacher related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Low qualification of teachers					
2	Shortage of teachers					
3	Assignment of less experienced teachers					
4	Lack of encouragement of pupils from teachers					
5	Inappropriate evaluation of pupils' performance					

15.3. School related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Lack of school facilities and services					
2	Overcrowded classrooms					
3	Difficulty in the language of instruction					
4	Inflexible school calendar					

15.4. School administration related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Poor school management					
2	Lack of guidance and counseling service					
3	Poor school-community relationship					

15.5. Socio-economic factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Need for child labor					
2	Lack of financial and material support					
3	School distance					
4	Unstable home environment					

15.6. Socio-cultural factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Early marriage					
2	Gender role stereotype					
3	Growing with single parent					
4	Teenage pregnancy					
5	Peer group influence					

16. What were the special efforts made by the school to discourage dropping out or repeating grades?

a) _____

b) _____

c) _____

d) _____

17. What measures would you recommend to be taken by school, parents, and education officers to reduce (abate) the rate of school dropouts/ repetition?

A) Measures to be taken by the Zone and woreda Education Officer

i. _____

ii. _____

iii. _____

iv. _____

B) Measures to be taken by School

i. _____

ii. _____

iii. _____

iv. _____

C) Measure to be taken by the parents

i. _____

ii. _____

iii. _____

iv. _____

Appendix - B

Addis Ababa University

School Of Graduate Studies

College Of Education

Department of Educational Planning and Management

Questionnaire to be filled by Secondary School Home Room Teachers

Dear respondents;

The purpose of this questionnaire is to assess the status of Guji Zone secondary schools internal efficiency and to identify the major causes so that solutions may be looked for by all those who are concerned and responsible. To this end, your cooperation in completing this questionnaire is of paramount importance. In addition to this, the result of this work requires your genuine response to the question. So please try to respond honestly.

Thank you for your co-operation

Instruction. 1. You don't have to write your name

2. Please put (✓) mark in the space provided for your answer.
3. Give short answer in the spacc provided.

1. Address: name of your school _____
2. Sex: Male ☐ Female ☐
3. What is your age _____
4. Educational status/your qualification _____
5. Field of study a) Major _____ Minor_____
6. Years of service as a teacher _____

a) 1-3 years ☐ b) 4-6 years ☐ c) 7-9 years ☐

d) 10-12 years ☐ e) more than 12 years ☐

7. From the possible factors to repetition listed in boxes 7.1-7.6, I would like you to judge the potential seriousness of the influence of each of these factors as they are applied up on students. Note that below are the keys for the responses value written on the top of each box.

5= Extremity serious **4**= Very serious **3**= Some what serious

2= Observed but not serious and **1**= Not observed at all

7.1. Student related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Failure in studying hard					
2	Lack of interest in education					
3	Low future success expectation					
4	Low self conception due to previous failure in examination					
5	Yours health problem					

7.2. Teacher related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Low qualification of teachers					
2	Shortage of teachers					
3	Assignment of less experienced teachers					
4	Lack of encouragement of pupils from teachers					
5	Inappropriate evaluation of pupils' performance					

7.3. School related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Lack of school facilities and services					
2	Overcrowded classrooms					
3	Difficulty in the language of instruction					
4	Inflexible school calendar					

7.4. School administration related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Poor school management					
2	Lack of guidance and counseling service					
3	Poor school-community relationship					

7.5. Socio-economic factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Need for child labor					
2	Lack of financial and material support					
3	School distance					
4	Unstable home environment					

7.6. Socio-cultural factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Early marriage					
2	Gender role stereotype					
3	Growing with single parent					
4	Teenage pregnancy					
5	Peer group influence					

8. From the possible factors to drop out listed in boxes 8.1-8.6, I would like you to judge the potential seriousness of the influence of each of these factors as they are applied up on students. Note that below are the keys for the responses values written on the top of each box.

5= Extremity serious **4**= Very serious **3**= Some what serious

2= Observed but not serious and **1**= Not observed at all

8.1. Student related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Failure in studying hard					
2	Lack of interest in education					
3	Low future success expectation					
4	Low self conception due to previous failure in examination					
5	Yours health problem					

8.2. Teacher related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Low qualification of teachers					
2	Shortage of teachers					
3	Assignment of less experienced teachers					
4	Lack of encouragement of pupils from teachers					
5	Inappropriate evaluation of pupils' performance					

8.3. School related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Lack of school facilities and services					
2	Overcrowded classrooms					
3	Difficulty in the language of instruction					
4	Inflexible school calendar					

8.4. School administration related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Poor school management					
2	Lack of guidance and counseling service					
3	Poor school-community relationship					

8.5. Socio-economic factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Need for child labor					
2	Lack of financial and material support					
3	School distance					
4	Unstable home environment					

8.6. Socio-cultural factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Early marriage					
2	Gender role stereotype					
3	Growing with single parent					
4	Teenage pregnancy					
5	Peer group influence					

9. What were the special efforts made by the school to discourage dropping out or repeating grades?

a) _____

b) _____

c) _____

d) _____

10. From your school experience and observation, mention the possible effects (consequences) of dropping out of high school/ grade repetition?

Dropout	Repetition
a)_____	a)_____
b)_____	b)_____
c)_____	c)_____

11. As a professionalist, what measures would you recommend to be taken by school, parents, and education officers to reduce (abate) the rate of school dropouts/ repetition?

a) Measures to be taken by the Zone and woreda Education Officer

i. _____

ii. _____

iii. _____

iv. _____

b) Measures to be taken by School

i. _____

ii. _____

iii. _____

iv. _____

c) Measure to be taken by the parents

i. _____

ii. _____

iii. _____

iv. _____

Appendix - C

Addis Ababa University

College of Education

School of Graduate Studies

Department of Education Planning and Management

Questionnaire Prepared for Principals

Dear respondent: the main purpose of this questionnaire is to identify major factors that contribute to students dropout and grade repetition in secondary school, and then to propose possible measures to be taken to reduce the problem. Hence, since your sincere response to the question has a great contribution for the success of this study, your cooperation in answering the questions will be highly appreciated.

Direction: Give appropriate answer to the following questions by putting (✓) mark in the box or by writing in the space provided.

1. Address: Name of school_____
2. Sex: A) Male ☐ B) Female ☐
3. What is your age?_____
4. Qualification:_____
5. Filled of study:_____
6. Please write three of recent short term training you participated,
   i)_____
   ii)_____
   iii)_____
7. How many years have you served as a school principal in general?
   A) 1-3 years ☐ D) 10-12 years ☐
   B) 4-6 years ☐ E) More than 12 years ☐
   C) 7-9 years ☐

8. From the possible factors to repetition listed in boxes 8.1-8.6, I would like you to judge the potential seriousness of the influence of each of these factors as they are applied up on students. Note that below are the keys for the responses value written on the top of each box.

5= Extremity serious **4**= Very serious **3**= Some what serious

2= Observed but not serious and **1**= Not observed at all

8.1. Student related factors

No.	**Item**	**Rating Scales**				
		5	**4**	**3**	**2**	**1**
1	Failure in studying hard					
2	Lack of interest in education					
3	Low future success expectation					
4	Low self conception due to previous failure in examination					
5	Yours health problem					

8.2. Teacher related factor

No.	**Item**	**Rating Scales**				
		5	**4**	**3**	**2**	**1**
1	Low qualification of teachers					
2	Shortage of teachers					
3	Assignment of less experienced teachers					
4	Lack of encouragement of pupils from teachers					
5	Inappropriate evaluation of pupils' performance					

8.3. School related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Lack of school facilities and services					
2	Overcrowded classrooms					
3	Difficulty in the language of instruction					
4	Inflexible school calendar					

8.4. School administration related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Poor school management					
2	Lack of guidance and counseling service					
3	Poor school-community relationship					

8.5. Socio-economic factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Need for child labor					
2	Lack of financial and material support					
3	School distance					
4	Unstable home environment					

8.6. Socio-cultural factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Early marriage					
2	Gender role stereotype					
3	Growing with single parent					
4	Teenage pregnancy					
5	Peer group influence					

9. From the possible factors to drop out listed in boxes 9.1-9.6, I would like you to judge the potential seriousness of the influence of each of these factors as they are applied up on students. Note that below are the keys for the responses values written on the top of each box.

5= Extremity serious **4**= Very serious **3**= Some what serious

2= Observed but not serious and **1**= Not observed at all

9.1. Student related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Failure in studying hard					
2	Lack of interest in education					
3	Low future success expectation					
4	Low self conception due to previous failure in examination					
5	Yours health problem					

9.2. Teacher related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Low qualification of teachers					
2	Shortage of teachers					
3	Assignment of less experienced teachers					
4	Lack of encouragement of pupils from teachers					
5	Inappropriate evaluation of pupils' performance					

9.3. School related factor

No.	Item	Rating Scales				
		5	4	3	2	1
1	Lack of school facilities and services					
2	Overcrowded classrooms					
3	Difficulty in the language of instruction					
4	Inflexible school calendar					

9.4. School administration related factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Poor school management					
2	Lack of guidance and counseling service					
3	Poor school-community relationship					

9.5. Socio-economic factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Need for child labor					
2	Lack of financial and material support					
3	School distance					
4	Unstable home environment					

9.6. Socio-cultural factors

No.	Item	Rating Scales				
		5	4	3	2	1
1	Early marriage					
2	Gender role stereotype					
3	Growing with single parent					
4	Teenage pregnancy					
5	Peer group influence					

10. What were the special efforts made by the school to discourage dropping out or repeating grades?

a) _____

b) _____

c) _____

d) _____

11. As a professional, what measures do you suggest to be taken by schools, parents and education officers to reduce repetition and dropout rates in school?

a) Measures to be taken by the Zone and woreda Education Officer

i. _____

ii. _____

iii. _____

iv. _____

b) Measures to be taken by School

i. _____

ii. _____

iii. _____

iv. _____

c) Measure to be taken by the parents

i. _____

ii. _____

iii. _____

iv. _____

Appendix – D_1

Addis Ababa University

College of Education

School of Graduate Studies

Department of Educational Planning and Management

Guiding Questions for Interview

1. How many children do you have?
2. How many of them are attending education?
3. How do you perceive grade repetition/school drop out?
4. Would you please, describe the mechanism that you used to follow your children?
5. What did you feel when your children drop out of school/repeat a grade?
6. Do you know the reason why your children drop out from school/repeat a grade?
7. How do you describe the mechanism that school used to help students before drop out/ repeat a grade?

Appendix – D_2

Addis Ababa University

College of Education

School of Graduate Studies

Department of Educational Planning and Management

Guiding Questions for Focus Group Discussion

1. How do you perceive school dropout and grade repetition?
2. What the trends of school drop out and grade repetition in your school look like in the last five years?
3. Which sex (boys or girls) are more affected by the problem? Why?
4. What are the major reasons in your school that influence students either to drop out of school or repeat a grade?
5. Do you think that, the rate of school drop out or grade repetition will be minimized? How?

Appendix - E

Addis Ababa University

College of Education

School of Graduate Studies

Department of Educational Planning and Management

Check List

Name of school_____

1. Data on students enrolled, drop out and repeats

Pupils	Grades	1998 Ec (2005/06)			1999 Ec (2006/07)			2000 Ec (2007/08)			2001 Ec (2008/09)			2002 Ec (2009/10)		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Enrolled	9															
	10															
	11															
	12															
Repeaters	9															
	11															
Dropouts	9															
	10															
	11															
	12															

2. Student section ratio

Grade	1998 Ec (2005/06)	1999 Ec (2006/07)	2000 Ec (2007/08)	2001 Ec (2008/09)	2002 Ec (2009/10)	1998 Ec (2005/06)
9						
10						
11						
12						
Total						

3. Student teacher ratio

Grade	1998 Ec (2005/06)	1999 Ec (2006/07)	2000 Ec (2007/08)	2001 Ec (2008/09)	2002 Ec (2009/10)
9					
10					
11					
12					
Total					

4. Availability of school facilities

No	Facilities	Extent of Availability		
		Adequately Available	Inadequately Available	Not Available
1	School library			
2	Latrine for male and female students and teachers separately			
3	Laboratories			
4	Recreational areas			
5	Clean drinking water			

Declaration

I, the undersigned, declare that this is my work and it has not been presented before in any University. Moreover, I declare that all the sources of materials used for this thesis have been duly acknowledged.

Name: Muktar Bedewi Mohammed

Signature: _____

Date 19-05-2011

THE EFFECTIVENESS OF EDUCATION INFORMATION SYSTEM (EIS) IN THE MANAGEMENT OF SECONDARY SCHOOLS: THE CASE OF JIMMA ZONE

BY

MASHO JIMA

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

April 2011

THE EFFECTIVENESS OF EDUCATION INFORMATION SYSTEM (EIS) IN THE MANAGEMENT OF SECONDARY SCHOOLS: THE CASE OF JIMMA ZONE

BY

MASHO JIMA

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirement for the Degree of Master's of Arts in Educational Leadership

April 2011

THE EFFECTIVENESS OF EDUCATION INFORMATION SYSTEM (EIS) IN THE MANAGEMENT OF SECONDARY SCHOOLS: THE CASE OF JIMMA ZONE

By

Masho Jima

Approved By Board of Examiners:

1.	Yekunoamlak Alemu (PhD)		13/06/2011
	Chairman, Dept's Graduate Committee	Signature	Date
2.	Jaleta D.		6/6/2011
	Advisor	Signature	Date
3.	Yekunoamlak Alemu (PhD)		13/06/2011
	Examiner	Signature	Date

Acknowledgement

First I would like to express my distinguished advisor Dr. Jeilu Oumer, vice president of the university, who had painstakingly gone through all my work. He offered me meticulous and constructive feedback, encouragement, and providing resources like books, journals, supplementary websites, and the like all the time.

Special thanks are due to my genuine sister Sewunat Bora who provided me with precious advice and an enormous support like typing, editing, grammatical corrections and in facilitating conditions in general.

I wish to admire generous academic support like materials, and encouragements of Ato Daniel Daba, Ato Tefera Intele, Ato Habtewold Deti, Ato Gemechis File, and Adula from Jimma University staff.

Lastly, valuable thanks go to my best sister Mena Workineh who helped me at home by providing and facilitating conditions for this study.

Table of Contents

CONTENTS PAGE

List of Tables

Tables Page

Abbreviations and Acrimonies used

EIS	Education Information System
EMIS	Education Management Information System
ICDR	Institute of Curriculum Development and Research
ICT	Information Communication Technology
Km	Kilo Meter
PPS	Preparatory School
PTA	Parent Teacher Association
SCL	School Leaders
SS	Secondary Schools
SV	School Supervisors
UL	Unit Leaders
VP	Vice Principals
WEOCPO	Woreda Education Office Core Process Owner (Vice)
WEO	Woreda Education Office
WS	Woreda supervisors
ZEOCPO	Zone Education Office Core Process Owner (Vice)
ZEH	Zone Education Head
ZEO	Zone Education Office

Abstract

This study was aimed at examining the effectiveness of Education Information System (EIS) for the Management of secondary schools. The study was conducted on education system of Jimma Zone and its respective woredas. A total of 162 stakeholders from zone education office, Woreda Education Personnel and school were treated inline of EMIS. Jimma zone was selected as per the seriousness of the problem. Woredas were randomly selected from three cluster classes namely class A, class B, and class C by using stratified sampling technique. All secondary schools, preparatory schools, and woreda education offices' personnel were included in the study by using availability sampling. Purposive sampling technique was applied for the collection of data/information. In-depth interview, focus group discussion, personal observation, and questionnaire were used as the tools to gather all the necessary data/information both quantitatively and qualitatively. The data were subjected to analysis by using descriptive presentation, arithmetic mean, standard deviation, one way ANOVA, chi-square, and T-test, together with qualitative analysis. The findings disclosed at EMIS are impeded and handicapped by different factors such as; ICT materials, trained manpower, IT support, data management system, and employee readiness. The effectiveness of EMIS is measured through the efficient utilization of IT resources. The employee satisfaction in line with the training given was also treated and as a result the trainee was disappointed due to many forces like: absence of need assessment on the area that the personnel needs to get training. The schools and the education system of the zone are suffering from absence of communication to make the flow of information faster in terms of content, timelines, and form. The findings suggested that, the basic problem of this education system was the little link of the schools, NGOs, and the school community. All these key stakeholders are the parts and parcel of the system. Thus, they have to work in collaboration with one another.

CHAPTER ONE

1.The Problem and Its Setting

This chapter introduces the problems and its approaches, the concept of EMIS, objectives of the study, delimitation of the study, definition of operational terms, significance of the study, limitation of the study, and organization of the study.

1.1. Background

There is no universally-accepted definition of EMIS in popular use throughout the region. The acronym, EMIS, means different things to different people. The annual school census conducted in all countries is typically associated with EMIS, but aside from this, people's understandings of what an EMIS is and the vision of what EMIS could be can be quite different from one country and one person to the next. For some people any effort to improve the quality of data and information is associated with EMIS. For some an EMIS is simply an updated, computerized statistical information system. Others refer to any administrative, function-specific database system as an EMIS, e.g., personnel management systems, financial management systems, project monitoring systems, municipal education database systems, etc. For some EMIS is all about computers and computerization (Cassidy, 2005).

The acronym EMIS stands for "Education Management Information System". It is a system for organizing information base in a systemic way for the management of educational development. It is an information center in the ministry of education responsible for collection, processing, analyzing, publication, distribution, rendering information services for users of educational information.

It is important to realize that statistics is part of the EMIS system. Hence, statistics of formal, non-formal, early childhood, higher education, teacher training institutions and technical and vocational institutions all are under the responsibility of EMIS. Hence, the collection, processing, analyzing and reporting of statistics in these areas remain the responsibility of EMIS center of the Ministry of Education. In the event that each department and sections of the ministry collects and compiles its own statistics, EMIS can obtain final products from each department or section for publication and use.

EMIS is also responsible to give a substantial support in the efforts made to assess the performance of the education system and monitor the distribution of resources, deployment of teachers, student performance assessment and review of internal efficiency of the education system etc. moreover, render technical support for research unit of the ministry of education (Tegegn, 2003).

Under current practice, Education Management Information Systems (EMIS) are typically limited to centralized databases containing basic, school level data: pupil data (enrollment, age, repetition), teacher data (experience, placement), school inventory data (location, number of classrooms, equipment etc.). EMIS typically does not formally include: Performance Data, School finance information (often managed by another Ministry – Finance or Planning), cost accounting, provisioning of materials (textbooks etc.), monitoring of internal management initiatives (e.g. special projects).

Jimma is a Zone in the Ethiopian Region of Oromia. Jimma is named for the former Kingdom of Jimma, which under the former province of Kaffa in 1932. Jimma is bordered on the south by the Southern Nations, Nationalities and Peoples Region, the northwest by Illubabor, on the north by East Welega, and on the northeast by West Shewa; part of the boundary with East Shewa is defined by the Gibe River. The highest point in this zone is Mount Maigudo (2,386 m).

The 1994 national census reported a total population for this Zone of 1,961,262 in 432,101 households, of whom 979,708 were men and 981,554 women; 190,395 or 9.71% of its population were urban dwellers at the time. The five largest ethnic groups reported in Jimma were the Oromo (81.57%), the Yem (5.28%), the Amhara (4.95%), the Kullo (2.9%), and the Kafficho (1.78%); all other ethnic groups made up 3.52% of the population. (Based on research performed in the early 1990s, as many as 500,000 inhabitants may be members of the Yem). Oromiffa was spoken as a first language by 85.96%, 7.86% Amharic, 1.95% spoke Kullo, 1.45% spoke Yemsa, and 1.19% spoke Kafa; the remaining 1.59% spoke all other primary languages reported. The majority of the inhabitants were Muslim, with 82.57% of the population having reported they practiced that belief, while 15.78% of the population said they professed Ethiopian Orthodox Christianity, and 1.47% were Protestant.

The Central Statistical Agency (CSA) reported that 26,743 tons of coffees were produced in this zone in the year ending in 2005, based on inspection records from the Ethiopian Coffee and Tea authority. This represents 23.2% of the Region's output and 11.8% of Ethiopia's total output, and makes Jimma one of the three top producers of these goods, along with the Sidama and Gedeo Zones (Jimma zone-Wikipedia, the free encyclopedia: Dec, 2010).

As with primary education, a substantial expansion of secondary education also took place under ESDP I and II. Consequently, the total enrollment in secondary education (Grades 9 to 12) increased from 426,495 in 1996/97 to 953,217 in 2004/05, a rise of 123%. This increase was facilitated by an increase in the number of secondary schools from 369 in 1996/97 to 706 in 2004/05, which represents an increase of 91%. Previously, secondary schools were mainly concentrated in urban areas. However, during ESDP-I and ESDP-II the percentage of secondary schools in rural areas increased from 7.0% in 1996/97 to 12.7% in 2004/05(ESDP-III). Moreover, as stated by Lasonen and others (2005) Educational administration faces the challenge of managing an information system at woreda and zone levels and of facilitating community participation in school governance. This shows how complexity of management is enhancing and enhanced. So, this paper tries to identify the problems as per the statements of the problem.

1.2. Statement of the Problem

Increasing number of countries have adopted the concept of Education Management Information System and the title of EMIS. However, many have already failed. Simply adopting a new name, obtaining funds for computers, making study visits and having project cars will not create a new system(Tegegn, 2003).

The increasing demand for better data and information is a very promising development for EMIS. The lack of significant local demand for better data and information has often been cited, in assessments from around the world, as one critical explanation for why earlier efforts to build comprehensive, integrated EMIS have not been very successful.

A lot of money, time and other resources have been invested in efforts to improve data quality, to computerize many administrative and management functions, to build EMIS and to encourage more data-driven decision making over the past 15 years. The results of these efforts have been mixed. While there have been some notable successes in computerizing administrative

management functions in ministries throughout the region, despite years of effort and considerable investment, development of comprehensive, integrated computer-based EMISs have been slower than anticipated. Data and information operations continue to be diffused across a number of divisions and departments with little coordination of operations and limited use of data and information standards. It is not uncommon to find one division or department using different software and hardware platforms as well as different data definitions and coding schemes. Further, while some operations have been computerized, many continue to be maintained manually, which further slows processing and data integration (Cassidy, 2005). Although most education systems require schools to record information on paper, the failure of many systems to enter that information in DBMS, to analyze that information, or to share results with school leadership has reinforced poor reporting practices at many levels (survey of ICT and education in the Caribbean – Volume I: Regional Trends and analysis, n.d).

The number of secondary school teachers increased from 12,106 in 1996/97 to 17,641 in 2004/05, which is a 45% increase. The percentage of qualified teachers at this level was 40.6% in 2004/05. The target set for ESDP-II was 73.2%, which is higher than the achievement at the end of ESDP-II, 2004/05. To enhance the quality of education at secondary level, ICT infrastructures were provided to schools to receive satellite education transmission. Moreover, with the objective of improving the quality of education and supporting teachers, the process has started to make use of School Net service for the 161 preparatory schools (grade 11-12). The objective of the School Net program is to support the country's education system with ICT. This involves providing personal computers to schools to set-up internet laboratories, organizing training for teachers, digitization of existing video-based educational contents for web access and eventually facilitating community access to ICT (MoE:ESDP-III, 2005:15).

Repetition rate for Grade 9 decreased to 10% in 2003/04 from 23.2% 1996/97. The gender disaggregated data for 2003/04 indicates that the repetition rates for boys and girls were 9.1% and 11.6% respectively. In 1996/97 the repetition rate for boys was 17.9% while for girls it was 29.7%. Unlike repetition rate, the dropout rate for the same grade increased during the same period from 9.2% to 19.3%. Disaggregated by gender this figure rose from 8.9% to 16% for girls, whilst for boys it increased from 9.5% to 21% (MoE: ESDP-III, 2005:21).

According to the MoE(2004), MDG goal 2 and 3 of the millennium declaration is to achieve UPE by 2015 for boys and girls eliminate gender disparity in primary and secondary education; preferably by 2005. Net enrolment ratio is an indicator that measure performance or goal achievement. A good education indicator system is expected to provide accurate and precise information to illuminate the condition of education and contribution to its improvement. This is highly related with that of the success of EMIS.

Implementation capacity at woreda level is not yet at the level expected to carry out their responsibilities. Woreda capacity building programs have been initiated: deployment of staff at regional level was undertaken as a first step in building the capacity at other levels. However, there is still a huge need for training on supervision, strategic planning and budgeting, education management information systems etc (GOE, 2007).

The government made a great effort to facilitate conditions to make EMIS functional. But as it is mentioned on Mekonen (2010) the EMIS outputs of the Oromia Region lack quality in terms of accuracy, presentation and timeliness; hence it had the problem of reliability. This is the basic problem that has initiated the researcher to conduct this study.

1.3. Basic Questions

In order achieve the stated objectives, and examine the status and the problems encountered in Education Information System (EIS) for the Management of secondary schools, the study was conducted to attempt the answer for the following basic questions.

1. What information secondary schools needs at large?
2. What information are supplied to secondary schools by EIS?
3. To what extent information is sufficient, valid, and consistent for decision making?
4. What measures are taken for the implementation of EIS for decision making?
5. What are the problems, and challenges that impedes/hinders/ the development of EMIS?
6. What procedures are in place for collection and dissemination of education information system?

1.4. Objective of the study

1.4.1. General Objective

The general objective of the study is to assess the effectiveness of Education Information System (EIS) for the Management of secondary schools in Jimma zone.

1.4.2. Specific Objectives:

The study has the following specific objectives:

1. To assess the supply and demand of information for the management of secondary schools.
2. To assess the effectiveness of EMIS in line with time, relevance, and reliability.
3. To assess the extent of information utilization to manage secondary schools.
4. To assess efforts made to improve EIS to support decision making process in education system.
5. To identify the major problems and challenges of EMIS.

1.5. Significance of the Study

This research is significant for the following reasons:

1. The study may help to provide timely and relevant information for planners and decision makers.
2. It may help the concerned bodies at different levels of the system to take corrective actions to complete the annual education census in timely base.
3. The study may assist school leaders, and all stakeholders to establish effective and efficient EMIS functional units.
4. The study may site all the possible solutions for the needy.
5. The study may indicate ways for proper collection, recording, and reporting of educational information.
6. It may lay foundation for other researchers to conduct further investigation.

1.6. Delimitation of the Study

Education Information System (EIS) has both quantitative and qualitative measurements in the management of secondary school. However, in this study measuring (EIS) in the management of secondary schools were more analyzed quantitatively. This is mainly because of the difficulty of quantifying the qualitative aspects of EIS is attached to social and other psychological costs of the participants of the study.

As far as the study setting is concerned, the coverage of this study was Jimma zone. Because Oromia Education Bureau clearly reported the severity of the problem of EIS in this area (OEB, 2009). Time wise, the study tries to examine the EIS and decision making strategies of the schools and education offices of two consecutive years (2009/10 and 20010/11) because it is almost three years that BPR was in functional and the education system was restructured newly to be supported to EMIS.

The study does not cover all the education offices of Jimma zone rather it is delimited to eight woredas of the zone because of time, manpower and budget constraints of the researcher. These eight woredas were selected randomly from the three strata; class A, class B, and class C. To make the distribution fair and good representative of the study, two woredas were selected from stratum A, and two woredas were from stratum B, and four woredas were selected from stratum C since there are nine woredas which are included in this stratum (Class C).

Moreover, this study was delimited to 14 secondary schools out of 28 schools and two preparatory schools out of 7. Again the study was delimited to the school principals, all vice principals, all unit leaders, PTA members and external and internal supervisors in the assumption that they are the main role play of EMIS. The study also included all woreda education officers, WEOCPOs, ZEOCOP, woreda supervisors, woreda and zone statisticians, and zone education officers because they are the main actor of EIS and decision making processes.

Finally, the study was delimited to government secondary and preparatory schools because the problem of EIS and decision making problem may seriously visible. Government schools are less committed than that of private schools due to many factors like low salary and others.

1.7. Limitation of the Study

The study was challenged with some unforecasted situations such as non response on subjective questions of the questionnaire and interview was challenging and tiresome. Principals, vice principals, unit leaders were not willing to cooperate as needed, and even those who showed cooperation were creating delaying tactics by giving appointment for various reasons, some filled the questionnaire carelessly, and few failed to return the questionnaires. These conditions made the researcher consume more time than previously allocated for data collection. Therefore, since those conditions made the study very difficult, the data and explanations given could not be considered as comprehensive as possible; and hence, may result in limited generalizability.

1.8. Organization of the Study

The study is divided into five chapters. The first chapter deals with introduction, statement of the problem and its approach, significance of the study, delimitation of the study, limitation of the study, operational definition of terms, and organization of the study.

The second chapter deals with the review of related literature on analyzing "the effectiveness of Education Information System (EIS) for the Management of secondary schools". This part would give a highlight of the theoretical framework of the topic under study like: EMIS, MIS, EMIS and Training, Information Management Lifecycle, School Management Information Systems, EMIS success Factors.

The third chapter focuses on research design and methodology. The fourth chapter, namely the presentation analysis part of the study diagnosis the data collected through questionnaire, interview, document analysis, FGD, and personal observation. The fourth and final chapter is dedicated to summary, conclusion, major findings, and recommendations of the overall study. Appendixes were attached at the end.

CHAPTER TWO

2. Review of Related Literatures

This chapter deals with the review of related literature which comprises information system, EMIS, MIS, life cycle of information system, ABM, Integration of ICT with EMIS.

2.1. Education Management Information System (EMIS)

A management information system informs management. An education management information system (EIMS) informs the management of education process. Managing education through informed decision- making requires the availability of accurate and timely information, which links together resource input to education teaching and learning. An Educational Management Information System is therefore, the basis of management, planning and evaluation of an education system (Carizo et al, 2003).

EMIS is demand responsive, which means that it serves the needs of the consumers or the users of information. Thus, to serve one's clients, conducting surveys of the information needs of consumers and the capacity needs of the producers; and produce according to user-friendly and interpretable information products and services. To develop and maintain such a vast demand responsive and user-friendly system, various kinds of knowledge and skills are required in different areas, such as system development, quality assurance training, technical support, and national reports

2.1.1. Management Information System (MIS)

An MIS is a collection of interacting information systems that provide information for both operations and managerial needs. The most important aspect of this definition is its inclusiveness. An MIS encompasses all the information-providing systems at all levels of the organization; however, it must be stressed that is a collection of information systems rather than one "total" system.

In theory, a computer is not necessarily an ingredient of an MIS, but in practice it is unlikely that a sophisticated MIS could exist without the processing capabilities of a computer. Nevertheless, every MIS includes non computer elements. The word "interacting" in the definition implies some degree of integration of the multiple information systems involved. This conception of an

MIS, though broader than that of many experts, is fully justified because the information systems of all the organization's functions are increasingly tied together in a supra system of quasi-independent information systems, such that no one information system can be viewed as entirely separate from the others (Tegegn, 2003).

2.1.2. EMIS and Training

As stated by Tegegn (2003), Training is one of the essential components of EMIS. Because the field of technology is changing fast and manpower turnover is high, training must be viewed as continues activity, and one that management needs to pay greater attention to. It is also an all round activity because the system is powered by each components working with the other in achieving environment to make the vision happen.

On the other hand, training aimed at broadening participants' perspective is generally targeted at middle- and senior-level decision-makers and tends to be short-term (a few days to a few weeks at a time). The rationale for this type of training is that, quite often, senior officials have little understanding of how national education data can be of use to support planning, and decision-making. They do not see the ways that data can be of use to them or improve their own job performance. When intended users do not know to interpret and use quantitative data, they tend to ignore them (Chapman and Mahlck).

Tegegn (2003), summarized the general content of EMIS training as follows: Survey administration, systems development and programming, policy related data analysis, and presentation, compiling reports, publication, and dissemination, networking and communication, maintenance of hardware and software, documentation, EMIS management and innovative leadership, planning and programming, and monitoring and evaluation.

To summarize, training is learning experience in that seeks a relative permanent change in individual that will improve the ability to perform on the job. Every organization needs to have well-trained and experienced people to perform the activities that have to be done. Therefore, EMIS personnel have to get training in order to perform their duties efficiently and effectively and to cope up themselves with the changing situations and the new technology.

2.1.3. Objectives and Functions of EMIS

There is an inevitability about the increased importance assigned to data based planning and management (Chapman & Mahlck, 1993). Information determines the knowledge base from which critical decisions are made and provided current as well as projected scenarios of the system for which decisions are being made. It is with this ground that, Tegegn (2003) has observed information as an additional knowledge the users' desire about the functions under their responsibilities. Information indicates knowledge about how are the goals and objectives set are achieved, how efficiently the resources provided are being utilized and how far the governing rules and regulations are being followed. Authorities in the field, put the function of information in different ways through the central essence appears the same.

For instance, Telem (1990) has put the function of information into four main types: (i) analysis of accumulated historical information, (ii) what has happened information, (iii) why did it happen information, and (iv) what would happen-if information. When one looks at the functions listed above, it becomes apparent that information serves the functions of showing the status and past trends of the sector's performance, and of forecasting in the process of planning. Curt and others, (2006) broadly have categorized the functions of information into two: facilitating communication between different stakeholders and providing basis for informed decision-making at all levels of organizations. The main objective of an EMIS is to integrate information related to management of educational activities, and to make it available in comprehensive yet succinct ways to variety of users. The most direct operational application of EMIS is to support ongoing management, planning, and monitoring and evaluation activities of the education system.

The overall concept of an EMIS has given to provide information for users in the following functions: Management and administration of the education system, planning of the education system (Macro and Micro), and monitoring and evaluation of the education system. (Carrizo and others, 1996).

Therefore, the aim of EMIS is to promote the development and operation of education and training management information systems for accountability, planning and monitoring to achieve quality and effective service delivery in the national education system.

2.2. Information Management Lifecycle

This section consists of data collection, data analysis, reporting, publication, dissemination, and feedback.

2.2.1. Data Collection and Processing

Most often, data is collected by means of questionnaires. These are prepared in centralized system at the EMIS center or through decentralized regional offices. Irrespective of the method followed, questionnaires are used to collect school data annually. To do this properly, knowledge of the needs of planners, decision-makers, researchers, and other users is required (Tegegn, 2003).

According to UNESCO (2006), educational authorities routinely collect information on schools as part of their regular operations. Such data include location of school, condition of school facilities, number of grade offered, numbers of students by sex and age, numbers of repeaters, numbers of teachers by sex and qualification.

As cited by Carrizo, Saugeot and Bella (2003), data collection must include all the fields covered in EMIS. In addition to education data, it should gather and assemble other information indispensable to EMIS: in particular the demographic and financial data which are necessary for the calculation of enrolment rates, and financial indicators (for example, education expenditures in relation to GDP); and also quantitative and contextual data necessary for the analysis, comprehension, and the interpretation of trends in education.

As Mulugeta (2001) further explained, if there is any problem with the quality of data, it is unthinkable to obtain precise results by applying sophisticated methods of analysis. A pre-requisite to obtain quality data is a good design of the data collection instrument. This includes a good questionnaire design and a good sampling design.

It is obvious that school is the main source of data for EMIS functions. The way records are kept at school level matters hugely when it comes to data collection. School heads, teachers, or record officers complete the questionnaire by filling in the necessary data according to the questionnaires. Most often schools have data in a list form, un aggregated, which is easy for the school head or record officer to complete but difficult when it comes to extracting specific information as it is not aggregate (Tegegn, 2003).

Once you have collected the data, you need to plan how to organize its many different types so that it is unable for planning purposes (Tegegn, 2003). He also described some of the most important aspects of this activity: monitoring instruments, data entry program design, and data entry, data cleaning, and data compilation. Generally, the data collected from the schools are affected by the following factors: staff members and skills, administrative organization, working procedures and task management, materials facilities and logistical support and financial support for operation.

2.2.2. Data Analysis and Reporting

Data analysis involves looking more closely at the data, and in various ways, in order to extract information useful for planning and decision making. The analysis is done to provide information to planners, decision-makers, researchers, policy-makers, and other users. In other words, the results of the analysis can point decision-makers in the right direction (Tegegn, 2003). Moreover, Wikipedia, the Encyclopedia (2007, online), further described that data processing in any computer process that converts data in to information or knowledge.

As soon as the data processing is finished, and if possible, even before all of them are done, it is necessary to begin analyzing the results obtained. This analysis enables a primary verification through comparison with results of the previous year. If huge differences or in coherencies appear, it is indispensable to proceed to verifications to complete those already carried out at the time of return of the data (Carrizo, Saugeot and Bella, 2003).

Furthermore; data analysis should be done with users in mind. There are several types of users: general users, decision-makers, planners, researchers, information service providers, students, and teachers. As a result, the type of analysis we make is often tuned to the needs of different categories of users, especially policy-makers. It will also guide us in the type of report we subsequently compile (Tegegn, 2003). As he further described, it is always advisable to prepare a short report of the outcome for top decision-makers, who may not have the time to read a long report.

To generalize, data analysis is useful for planners, decision-makers, researchers, policy-makers, and other users to know the current status related to enrolment, teachers, and the level of available facilities, and use for the information for planning and research purposes as well as to find out how the policy they are promoting is working. Moreover, reporting is also important for

top decision-makers and to the general public who need the statistics for reference purposes and for monitoring and evaluation experts, national and international organizations that use statistics to include their background report.

2.2.3. Publication, Dissemination, and Feed-back

The general principle is "publish or perish!" refers to the pressure to publish work constantly to further or sustain a career in academia. Without publishing your findings, the effort you have put in to collecting, processing, and analyzing the data is lost. You may well have printed some reports when asked by higher decision-makers, planners, researchers, and other users (Tegegn, 2003). The publication of information should be carried out as possible in order to provide the services for which EMIS has been set up. The first document must be transmitted to policy and decision-makers and other pertinent users without delay to show them the system's efficiency and the benefits they can expect from it (Carrizo, Saugeot and Bella, 2003).

The dissemination-communication takes different forms according to the people they are addressed to and their needs. As the first level, when the information is intended for the managers of the education system, it is necessary to quickly provide them with the most recent information possible. At the second level, the information is transmitted to a much large circle of users in the education system (Carrizo, Saugeot and Bella, 2003).

According to Hallac (1990) dissemination of information is never a substitute for management skills, but it is an important complement to them. As management control expands, the able manager can administer a wider range of responsibilities if her/his information channels are well oiled.

In practice, dissemination takes a number of forms: Regular distribution of school abstracts, quick references, and indicators' reports to users, distribution of pamphlets and postures to users, reports and briefing provided to planners and decision-makers at different levels of administration-provinces, districts, and school (Tegegn, 2003).

As Tegegn (2003) the assumption is that once produced and distributed, the products will be used or applied. Then feed-back can be collected. Feed-back is a learning process. Through feed-back we will learn of our achievements and where problems need correction. Feed-back also allows us to realize that others know and appreciate what we are doing, that there may be more innovative

ideas that could support our effort to produce timely and accurate information for an overall educational development.

2.3. School Management Information Systems

Being at the beginning stage of the School Management Information Systems, computerization of the school management is the basic subject of today's school management. Principals have started to make use of information systems in the gradually-increasing daily management staffs. Generally speaking, the reasons to use information systems can be stated as increasing effectiveness at work by processing information, increasing managerial effectiveness by meeting the need for information and gaining superiority in competitions by directing strategies (Scott, 1986).

School management information systems aim to provide support for the managing and educational activities of the school managers by processing information. Telem (1990) defines school management information systems as "a management information system designed to match the structure, management task, instructional processes and special needs of the school". As for a broad definition, contributions of the information systems to schools can be defined as making programs more effective, making the teaching process and the changes in learning environment professional, enabling teachers to exchange their experiences in a more systematic way, working in teams, determining the needs of the students (Madley, 1987), supporting the school managers and other staff in doing their duties, developing their performances, effectiveness and efficiencies (Telem and Buvitski, 1990). In other words, school management information systems increase effectiveness and efficiency by saving time and facilitating development of alternative solutions for sophisticated problems.

Introduction of school management information systems to schools have caused significant changes in roles and working styles of managers (Telem, 1990). School management information systems have changed school management in the areas of leadership, decision making, workload, human resource management, communication, responsibility and planning. Strategically school management information systems help the manager in determining the aims of the school, making long term plans, distributing resources, and forming educational methods of future, determining performances of teachers and success of the school (Telem and Buvitski, 1990;

Telem, 1991). In this way, school management information systems can also be used as a tool to initiate and use educational leadership of the manager (Telem, 1990).

School managers can make more efficient decisions when they get correct and up-to-date information by school management information systems. Decision making is the heart of educational management.

2.3.1. Information Age

In this information age, coupled with the complex nature of increasingly large modern organizations such as the universities, there is the need for acquisition of appropriate information equipment to process data into information and disseminate the information for management use, towards effective university administration.

Information is an important resource in the effective management of any organization. Information is any fact or set of facts, which is useful in making a specific decision among alternative courses of action. The information potential of data is enhanced by refinement, which involves selection, processing, sorting, and re-organizing the data into a usable form and transmission to the appropriate end-users.

2.3.2. Activity Based Management (ABM)

Defined as a discipline that focuses on the management of activities as a way to improve customers' value and profit. ABM includes cost driver analysis, activity analysis, and performance measurement. This work describes the benefits of activity-based costing and how to implement it. It shows how to avoid implementation failure and how to sustain the activity-based costing and management system. The unification of time, cost and quality is illustrated, and the text shows how to trace the flow of costs from resources to final cost objectives.

2.3.3. Management

Management is an effort made to coordinate the exertion of human and material input in order to achieve the set objectives. It is an art of coordinating knowledge and skills of people involved in EMIS activities to get the planned objectives and visions accomplished. We will introduce the concept of total quality management (TQM) in the following section. Total quality management approach: The approach we need to adopt is that of total quality management. A philosophy that ensures the quality of data collection instruments, data processing methodology, analysis and dissemination(including good skills to communicate to users), feedback and utilization of

feedback information for future enhancement of acquiring relevant information for decision making. Quality management and leadership of the EMIS unit of the ministry including planning, monitoring and evaluation, and follow up strategy is part of the whole that need attention for total quality management. As David butler puts it "Total quality management is a philosophy that integrates a focus on the user, a focus on the work process, and a focus on continuous learning".

It refers to all the work we do in organizing and systematizing the procedure we follow, the equipment we use, the people involved in building EMIS as well as the relation between EMIS as a center of information and users. Conscious Communication between EMIS staff on the one hand and conscious communication with user on the other is vital in achieving total quality of outputs and services for the development of education.

User focused approach: The user of information is central to EMIS functions and management. There are internal and external users of educational information. Internal users are planners, decision makers, decision support systems, different departments and divisions of the ministry of education. External users are other government and non-government institutions, national and international organizations, donor agencies and civil societies. All are equally important for our work in the efforts made towards quality output (Tegegn, 2003).

Better data leads to better plans and policies, which leads to better practices. Batter data is the necessary input to a decision-making but not a sufficient one. The positive impacts come only as the information is used and used wisely (Chapman and Mahlck, 1993). This requires that users have access to relevant and accurate data, the necessary training to interpret them and an understanding of the larger context in which their decisions will be implemented, and requires users to pay attention to the impacts of their decision-how information contributes to policy, and how policy influences practice.

In sum, it is important to note that all managers of educational information should focus on users' needs and expectations. The nature of the information and the ways in which it is provided should therefore be tailor made for each level in the education system.

2.3.4. Information and Decision-Making

Decision-making is the backbone of administrative functions. This is because decisions direct actions. Good and effective decisions can only be made when right information is made available at the right time to the right recipient. Information for decision-making is dynamic: therefore, it

needs to be constantly up-dated. Decision-making, itself, is a dynamic process. Managers need continuous flow of information in order to make appropriate decisions. Decision-making efficiency of managers can therefore be greatly enhanced by the quality of information they are able to utilize in decision-making. To supply the appropriate information to the right person at the right time, that information is a resource that needs to be managed just like any other resource in the organization. The problem confronting most organizations is the collection and storage of information (Tricker, 1976).

Educational institutions are not only facing complex managerial problems, they are also structurally complex. Modern educational systems, like other modern social and economic systems, have become increasingly complex themselves. The complexities of educational systems and their institutions and other developing countries, tend to be characterized by such phenomena as: student population explosion, diversities in the dimensions of programs and procedures, inadequacy of funds and other material resources even in the face of inflation, and conflicting models and policies adopted for implementation. At the core of the above bewildering list of complex variables is the problem of paucity of information as well as poor capacity for information management.

The demand for appropriate, adequate and timely information for management decisions in educational institutions appears challenging, because the educational system is expanding at an unprecedented rate. As the system and its institutions expand, so do the problems of their planning, organization, administration, monitoring and control. Correspondingly, there is the need for increased information acquisition and information management capacity among educational administrators, planners and policy makers(Chapman and Mahlck, 1993).

Education is one of the key industries in which government invests her scarce resources. Educational institutions, therefore, are expected to justify the resources that government invests in them for the educational development of the society and the nation. The already scarce resources need to be judiciously utilized. The educational planners, administrators and policy makers need more than ever before accurate, up-to-date and timely information to make appropriate decisions. Right decisions give direction for a right course of action. When an organization is designed to provide correct information to managers, decision processes work extremely well and tasks will be accomplished. However, when information is poorly designed,

problem-solving and decision processes will be ineffective and managers may not understand why.

A good management information system is, therefore, needed in all the educational institutions to handle more efficiently such administrative matters as providing government reports, justification and accountability, handling of increasing enrolment, students records and timely release of results. Educational institutions today need to pay more attention to management of their data and information for efficiency and effectiveness. Information reduces uncertainties and facilitates decision-making (Tricker, 1976).

Information is one of the resources which a manager controls apart from human resources, materials, money and machines. Moreover, researches in various countries confirm that school management information systems increase organizational and managerial effectiveness. After studies done with American school managers, efficiency has increased in decision making at schools where school management information systems are used. In his study where examined effects of school management information systems on working of primary school managers in Australia, managers stated that use of school management information systems has introduced them information technologies and the facilities, lessened their workload and made management process more efficient, helped them use time more efficiently, made teachers feel themselves more important, made them and the teachers wish to improve themselves more, made important changes in education and teaching, and increased the quality of in-school communication. In their study with school managers, Telem and Buvitski (1990) found that school managers believed that school management information systems lead to important changes at school.

According to school managers, this application has increased school standards, helped decisions on the level of control and strategy, increased the quality of teaching programs, facilitated student-teacher interaction, increased the coordination between teachers, facilitated systematic and continuous information transfer to parents, and increased communication with other institutions and the central organization. In his study effects were examined as information systems on school managers of local schools, determine that information systems have largely changed roles of school managers. Managers stated that a manager who does not use the information systems is not able to achieve his duties sufficiently anymore. Lastly, in their studies

they determined that technology leadership of school managers is more important than background in the efficient use of technology at schools (Chapman and Mahlck, 1993).

However, in literature there are researches that show that school managers had problems in using school management information systems. Managers and teachers indicated that while school management information systems had positive effects on evaluation of efficiency of the school, development of using sources, quality of educational programming and in school communication, it increased their workload and caused stress. The research indicated that this stress is reduced in schools where education is sufficiently given on the system and where innovation is clearly stated as a vision. In addition it was found that the staff that used the system had higher motivation, was keen to take more education, and adopted the vision of the school more. Scholars examined the effects of information systems on educational decision making, he found out that school managers have not taken sufficient education on efficient use of the information technologies. Moreover, they found that education increased the possibility to use the information systems.

As a result, there was a correlation between the amount of education the managers took, and the use of information technologies. As a result, it can be stated that school managers had to take over the responsibility of leadership in an unfamiliar area without sufficient education.

2.3.5. Challenges to the Use of Data

The main challenges to the effective use of data for primary and secondary schools were reported to be: lack of time, particularly time to update and analyze the data, difficulties in applying data to classroom situations, limitations of data, i.e. that the data collected/recorded was too narrow/academic or did not accommodate individual needs, ICT-related issues, e.g. insufficient resources or restricted access. Challenges to the effective use of data for secondary schools were similar to those experienced by primary schools. However, having sufficient trust in the data was also of concern to secondary. Special schools reported two key challenges to the effective use of data: data systems that do not accommodate the complex needs of individual pupils, insufficient comparable data (year-on-year or with similar schools).

2.3.6. Data Management Systems

In order to make more effective use of data schools need systems that are simple to use, are well supported and therefore quickly build levels of confidence and familiarity. All schools wanted data management systems that: are easy to use, produce outcomes that are easy to interpret,

allow flexibility of input, have compatible school management and assessment components, offer comprehensive training and support, are accessible to staff, and encourage engagement and ownership.

For pupils with special educational needs it was considered particularly important to record achievements at a much finer level of detail than was possible with many commercial data management packages, in order to demonstrate and celebrate progress (Telem and Buvitski, 1990).

2.3.7. Information and Communication Technologies (ICTs)

Information and Communication Technologies (ICTs) as defined in the Information & Communication Technology Sector Strategy Paper of the World Bank Group (April 2002) consists of hardware, software, networks, and media for collection, storage, processing, transmission, and presentation of information (voice, data, text, and images).

Used to communicate, create, manage and distribute information, ICTs cover, not only the newer digital technologies of computers, Internet, email, World Wide Web, wireless, etc. but also the older technologies of print, radio and television that have been used extensively in both distance education and classroom instruction. Indeed, as many of the examples illustrate, these "older" technologies are still the mainstay of educational outreach in many parts of the world because the state of infrastructure development has not allowed the same degree of adoption as has taken place in more developed countries. This is often referred to as the "digital divide".

ICTs bring about new opportunities as well as new risks for the goal of sustainable development. Over the last few years the use of ICTs in all sectors of education has increased dramatically – and continues to do so.

Digital technologies have fuelled exponential growth in society's ability to generate, exchange, and consume information. This has had far-reaching effects on economic and social organization. The "knowledge society" is one where growth, development and innovation are driven by the optimal use of information and information products. ICTs are the key enabler of the knowledge society. Those who have easy and affordable access to ICTs and communication networks can participate fully, while those without have fewer opportunities, and remain trapped in pre-knowledge economy forms of economic activity.

Education is, therefore, one of the most important components in creating knowledge societies, economic growth and prosperity. Education is not only the means by which individuals become skilled participants in society and the economy; it is also one of the key drivers in expanding ICT usage.

Seen within the context of the transition to the knowledge society, one of the broad reasons for developing the pervasive use of ICTs within education systems is to address structural problems and deficits in education systems – this can include using ICTs to enhance administrative efficiency. ICT-in-education programs benefit from a strong association with curriculum change processes and other system-wide changes such as moves towards decentralization and school-based management (Tegegn, 2003).

2.3.8. ICTs and Information Systems (IS)

A good understanding of information system concepts requires an appreciation of what a system is: a collection of component parts that include inputs, processes, outputs and feedbacks that are integrated to achieve a specific objective. Thus, an information system (IS) is one that accepts data resources as input, and processes them into information products as output. It refers to 'the collection of computer programs, hardware, people, procedures, documentation, forms, inputs and outputs used to support an organization' (Lassila and Borton, 2004). All information systems use people, hardware, and software to perform input, processing output storage and control activities that transform data resources into information products. The link between an IS (which consists of the elements above and their inter-relationships) and ICT is clear, with the latter being a subset of the former and focuses on the technological component of IS.

Within the organizational context, the boundary or scope of an information system (IS) includes the human component (represented by IS personnel) and the IT component (represented by software, hardware, storage and networking) (Moses, 2001). EMIS management, therefore, invariably makes use of ICT tools. Information system specialists are people who develop and operate information systems.

2.3.9. Types and Elements of Information Systems

Information systems can be classified as Transaction Processing Systems (TPS): computerized system that performs and records the daily routine transactions necessary to conduct the business,

Management Information Systems (MIS): serve the functions of planning, controlling, and decision making by providing routine summary and exception reports. They serve middle management and can include on demand "standard" reports. MIS systems normally draw data from TPS and Decision Support Systems (DSS): those that combine data, analytical tools, and models to support semi-structured and unstructured decision making. Used by all levels in the organization. DSS systems may be stand-alone or they may draw data from TPS and/or MIS systems (Telem and Buvitski, 1990).

2.4.10. The Context and Importance of Capacity Building and Management

From the Agenda 21 plan of action following the United Nations Conference on Environment and Development in 1992, the concept of capacity building has gained increasing acceptance as being of fundamental importance to the delivery of 'development' objectives. Capacity building encompasses a country's human, scientific, technological, organizational, institutional and resource capabilities', in addition to enhancing the ability to evaluate and address the crucial questions related to policy choices and modes of implementation'.

All too often broad definitions of capacity building tend to get reduced in practice to mean enhancing the skills of a particular cadre of people, and in education systems this most usually means the teachers and administrators. However, if successful change management programs involving new technologies are to be introduced, it is of critical importance that all of the key participants are involved.

At the World Education Forum held in Dakar in 2000, one of the key recommendations was to make deliberate efforts in harnessing and using ICTs to support EFA goals at an affordable cost. Since EMIS and EFA are two interlinked processes, by addressing ICTs in EFA, parts of the EMIS aspect are also addressed. One can think about statistical data, infrastructure and quality management and training of administration personnel as just some of the cross-cutting areas. Connectivity to schools is another example – ICTs can substantially improve the efficiency and speed of data collection from schools and reduce the amount of effort spent on administrative functions.

2.4. EMIS Success Factors

Tegegn(2003) identified three important factors for the success of EMIS. These are: political commitment, good governance, and strong management. On top of this EMIS will involve

several things that are critical to success: such as standard for information, set timing, define the level of possible accuracy, reports should be the result of daily activities not special purpose efforts, define formats clearly, so that people get used to and understand how information is presented, ensure that the providers of information quickly see the results of their work, and measure the cost of producing information (Moses, 2001).

On the other hand, Hua and Herstein (2003) identified the three key measures of EMIS success: time and relevance of data and information: data integration and data sharing among departments, effective use of data and information for education policy decisions.

2.4.1. Dimensions and Quality of Data/Information

Source of information used in organizations range from formal to informal, internal to external in varying degrees depending upon individual needs and preferences. However, all types of information sought by managers can be viewed along three dimensions: Content, presentation, and timing (O'Brien, 2003). Curt, and others (2006), however, has extended it into four by adding scope. Since scope included under content: it is not worth treating it separately. The other three were discussed below.

Content: The type of information conveyed and what it tells us. Managers need to be aware of the type of information presented to them so that they can assess its value in the correct context. Content includes accuracy, relevance, completeness, conciseness, scope, and performance.

Form: The form information takes can have significant impact on the way it can be handled by the recipient. The presentation of information needs to consider clarity, detail, order, media, qualitative or quantitative, formal or informal and structured and unstructured.

Timing: Having established the content and presentation of the information there is a need to consider when it is available. Information is produced is required at different time intervals, some on regular basis, and some as the necessity arises. Managers should understand what time period is covered by a piece of information.

It is important that managers understand the nature of the information they receive. By understanding its nature, it is possible to balance its importance and relevance to specific situation. Without such an understanding a manager might give undue weight to inaccurate or irrelevant information.

Having looked at the types of information available in organizations there is a need to consider what characteristic might be desirable in that information, and the data on which it is based. To be useful, information must have essential attributes both as individual items and as set of information. People want information of high quality that is information products whose characteristic attributes or qualities make the information more valuable to them.

Quality is defined as excellence or fitness of the system in serving the purpose for which it was developed (Davis & Olsen, 1985; Ivanol, 1972; & Powell, 1999). Data are of high quality if they are fit for their intended uses in operational decision making and planning. In other words, data/information is deemed of high quality if they correctly represent the real world construct to which they refer. Thus, data quality depends on its actual use.

Data/Information quality attributes are multidimensional. A considerable amount of data quality involves investigating and describing various categories of desirable attributes of data/information. Davis (1994) as well has mentioned data quality characteristics as accessibility, timeliness, accuracy and precision, relevance and validity, and completeness. Wilson (1996) and Oz (2002) also have identified relevance, completeness, accuracy, clarity, and timeliness. As it is apparent from the various authorities' description of data/information quality, all the attributes are more or less the same. Accuracy, completeness, relevance and timeliness seems inclusive and common to all.

Accuracy: A helpful measure of accuracy is error rate and it is essential to keep errors to a minimum, inaccuracy takes two forms: Bias and error. May well be a function of the way original data was generated, gathered, processed or presented. Random error is inaccuracy that arises from inherent variability, but the more accurate the information the more it contributes to decision-making (Curt and others, 2006).

Timeliness: Information must be available when needed. Otherwise it may be considerably less useful or useless. This means that time must be allowed to gather and process the necessary information and data (O'Brien, 2003).

Appropriateness: Above all information should be appropriate for its intended use. There are four main issues to consider: the completeness of information, the level of detail required, the

level of summarization required and the relevance of the information to its recipient (O'Brien, 2003).

Poor data quality can have a severe impact on the overall effectiveness of an organization. Davis and Oslen (1985) have warned that since information is a critical resource, low quality information has adverse effect on organizational performance. The quality of a product depends on the process by which the product is designed and produced. Likewise, the quality of data depends on the design and production process involved in generating data. The authors attribute the cause of poor data quality to activities involved in the process of data/information production. This indicates the need to take care while data/information system activities are implemented. In addition, quality assurance or control of information is critical.

According to Chapman and Mahlch (1993), there are four primary threats to data quality: (i) errors and omission in reporting data, (ii) errors in transferring and summarizing data, (iii) errors in the treatment of missing data, and (iv) Lack of consensus about data definition. Indeed, data quality could be affected by the formats of the questionnaire, personnel involved in completing questionnaire, processing and analysis of data and data flow. These are factors could be categorized as error and bias factors. The source of error could be random or capacity problem. Bias is the one that comes as a result of external factors like incentives or sanctions resulting from figure increment or decrement; and as a result of the existing culture. For instance, there is a prevailing practice of reserving some number of students in each class while the beginning of enrollment report so that it could replace dropouts that could happen in the future. On the contrary, there is a case when student number is increased if budget release is based on student number.

2.4.2. Timely and Reliable Production of Data and Information

According to Hua and Herstein (2003) timely production of data and information requires that there be a shared understanding of the following by all potential data and information producers, users, or clients: EMIS data produced regularly must meet the needs of educational services, such as the logistics unit and other units of school suppliers; the needs of educational monitoring and evaluation, and policy research and guidance in timely fashion and the needs of international collaboration and communication.

The timeliness of meeting these needs within the ministry of education is critically important. Obsolete data, even after produced, may not have much value for user, resulting in missed intervention opportunities and a pervasive distrust from information clients within or outside the organization. To guarantee timely production of data and information to meet these needs, the process of data collection, data entry, data processing, data interpretation, data analysis, and data reporting should be short, efficient, and productive (Oslen, 1985).

Besides, the reliable production of data suggests that EMIS data, once produce, must reliably report a "current reality or status" or "trend of change" of educational development of the country, district, or school. It means that policy-makers, planners, budget-makers, field educational officers, principals, teachers, parents, and students can trust the data and data source. To win such a trust data collection must be treated as a scientific process of fact finding.

Generally, both timelines and reliability can affect the level of information user confidence and trust in the data delay in data production and/or production of unreliable data can easily lead to lack of data use and management frustration, resulting in ineffective planning and budgeting, monitoring and evaluation, policy analysis, and policy making. When data and information users (e.g policy makers, analyst) lose faith in EMIS's ability or credibility, they often discourage support for maintaining, strengthening, and updating the EMIS system (O'Brien, 2003).

2.4.3. Data Integrating and Data Sharing among Departments

According to Hua and Herstein (2003) data integration is one of the most important EMIS development strategies. It means that data from multiple sources (payroll, achievement, and school census), multiple years, and multiple levels (student, teacher, or school level) can be linked, integrated, or merged. Data integration is intended to add value to the data that are already collected and available in various scattered places within the same system. Data integration is a must occur before an educational policy analysis or planner can conduct a high level and high quality policy analysis or planning exercise.

Clearly, we must integrate the data from multiple sources so that we can conduct the right policy questions. Multi-level data from multiple sources and years, once centrally integrated and organized, could have a tremendous value for policy-relevant research and analysis and improvement in education management (O'Brien, 2003).

2.4.4. Effective use of Data and Information for Policy Decisions

One of the most critical factors that contribute to the success of EMIS development is an institutional culture of making policy decisions based on data and information. This culture is a user demand-enabling environment under which the policy research and analysis capacity can be built, strengthen, and further developed. Policy makers, planners, policy analysts, and other high stakeholders are the users of the data and information. The demand for using data and information should stimulate and nurture the healthy development of an information-based decision-making culture and the EMIS system (Hua and Herstein, 2003).

To sum up, different authors classified success factors of EMIS in different ways based on their perspectives. For instance, Tegegn has attempted to classify EMIS success factors related government responsibilities where as Hua and Herstein classified it by relating with information/data production and use. So, various stakeholders can use these success factor based on their interest and the situation.

CHAPTER THREE

3. Research Design and Methodology

This part of the study presents the description of the subject of the study, methodology, procedures of instruments development, the procedures employed in the data collection, variables designation, and methods of the analysis of data.

3.1. Research Method

To realize the objective of the study, descriptive survey method was employed in this study. The reason is that as cited by Best and Khan (1996), surveys concern with the generalized statistics that result when data are abstracted from a number of individual cases. Similarly, Cohen, and Manon (1994) contented that survey inquiry gathers data at a particular point with intention of describing the entire nature of existing conditions. Moreover, Description emerges following creative exploration, and serves to organize the findings in order to fit them with explanations, and then test or validate those explanations. Descriptive research answers the questions who, what, where, when, the status quo, and how... Descriptive research can be either quantitative or qualitative (http://ecommons.txstate.edu/polsfacp/39/, DEC 2010).

To sum up, descriptive research is unique in the number of variables employed. Like other types of research, descriptive research can include multiple variables for analysis, yet unlike other methods, it requires only one variable (Borg, 1985). Moreover, the descriptive function of research is heavily dependent on instrumentation for measurement and observation (Borg, 1985). Researchers may work for many years to perfect such instrumentation so that the resulting measurements were accurate, reliable, and cumbersome.

3.2. Data Sources

Both primary and secondary sources of data were employed in the study. Because triangulation is often used to indicate that more than two methods is used in a study with a view to double (or triple) checking results. This is also called "cross examination". Primary source is obtained directly from the respondents such as directors, vice directors, unit leaders, school supervisors, WEO, WEOCPO, Woreda supervisors, ZEO, ZEOCPO, and Woreda, and zone statisticians. But, secondary data were obtained from documents at each school, woreda, and Zone Education offices.

3.3. Sample and Sampling Technique

The study was intended to include the whole education system of Jimma Zone. However, since it was difficult to consider all education system of the zone due to time, budget, and manpower the target population was selected from secondary schools, preparatory schools, education office of the Zone, the education bureau of 18 woredas in Jimma Zone.

In Jimma Zone there are 18 woredas, one city administration that is Agaro, 28 secondary schools (SS), 7 preparatory schools (PPS). Since the study focus on the effectiveness of Education Information System (EIS) in the management of secondary schools; the target participants of the study were school leaders, vice principals, internal and external supervisors, unit leaders, PTA (Parent Teacher Association) from each schools, woreda education officers and from zone; Zonal education officer, woreda education office core process owners(WEOCPOs), Zone education office statisticians', EIS (ICT department as a whole) were also included in the study.

The sample population was selected according to the following procedures and methods.

In order to reduce the expense of time and cost the sample was made step by step. First, the study area that is Jimma Zone was selected as per the report of OEB(2009) abstract stated in the statement of the problem part above; and the woredas were classified as strata of classes as mentioned on the annual abstract of the zone education office. Then about 8(45%) of woredas in this zone were included that is from Class A (2 woredas), class B (4 woredas), and class C (2 woredas) depending on their job performance, increasing students result, facilitating conducive environment for smooth teaching and learning processes of 2009/10 as mentioned by letter from JZEO issued on date 3/6/2010 ref no. GJ/5-349/67/35. The reason why 2 woredas from class A, 4 woredas from class B, and 2 woredas from class C was to make the distribution fairly proportional. Accordingly, woredas and schools from class A; woredas and schools selected from class B and woredas and schools from class C with their respective education officers, statisticians, ZEO officers, EIS-owners (ICT department), core process owners were included in the study by using purposive sampling method. Because all the available stakeholders on this above mentioned position were included in the study as they were a role play of EMIS.

For this purpose considering strata of woredas made as per a letter from JZEO issued on date 3/6/2010 ref no. GJ/5-349/67/35 is an appropriate method to increase representation of the woredas. By using simple random sampling target woredas were selected from each stratum.

Similarly, Agaro city administration, Dedo, Kersa and Mana were randomly selected from class B. Four woredas were selected from this class because when we compare the number of woredas in their respective classes; class B contains nine woredas that is about 50% of the total woredas in the zone. So, to make the distribution fairly proportional proportionate sampling technique was used thus, four woredas were randomly selected. Since class A and class C holds 25% of the woredas each in the zone; two woredas: Tiro Afata, and Omo Nada were selected randomly from class A, and finally, two woredas namely Seka Chokor and Goma were selected randomly from class C.

All secondary schools, preparatory schools, woreda education officers of the sampled woredas were included purposely in the study using an availability sampling. Although selection may be unguided, it probably is not random, using the correct definition of everyone in the population having an equal chance of being selected. The total number of the sample population was presented in the following Table 1.

Table1: Sample Population for the Study

Rank according to their performance (2009/10)	Class	Sampled Woredas							
		Name of WEO	No of SS	No of PPS	No of SCL	No of VP	No of PTA	No of SV	No of UL
1	A	O/Nada	3	1	4	8	5	2	7
2		Tiro Afata	2	0	2	4	5	2	4
6	B	Agaro City Administration	1	1	2	4	5	2	4
8		Dedo	2	0	2	4	5	2	4
10		Kersa	1	0	1	2	5	2	2
12		Mana	2	0	2	4	5	2	2
15	C	Seka Chekorsa	1	0	1	2	5	2	2
17		Goma	2	0	2	4	5	2	4
Sub Total sample from secondary schools			14	2	16	32	40	16	29
								Total sample from secondary schools	149

In addition to the above mentioned sample all Woreda Education Officer(WEO), Woreda supervisor, Woreda Education Office Core process Owner(WEOCPO) which is the former vice woreda officer, Zone Education Head(ZEH),Zone Education Office Core Process Owner(ZEOCPO), ICT department of ZEO(Zone Education Office), Woreda and zone statisticians, and Zone Planning department were included purposely in the study by using purposive sampling method because, they are the main actors and stakeholders of EIS and decision makers in the education system. The reason why purposive sampling followed by availability sampling were used was that, the researcher had the assumption in his mind that those stakeholders are appropriate to get information/data intended.

3.4. Data Gathering Tools

The researcher used questionnaires, interview, document analysis, FGD, and observation to collect relevant information from sample populations. Because employing multiple data collection helps the researcher to combine the strength and some of the inadequacy of any source of data (Brewer, 1989 and Patton, 1987) in Teshome (1998). Two types of questionnaire: some open ended, and many closed ended were devised. These questionnaires were distributed for schools, WEO, and ZEO to collect in-depth information concerning the effectiveness of EMIS and its challenge. The reason for the selection of questionnaire as a data gathering tool is because

it is the appropriate instrument to obtain variety of opinions within a short period of time from a large population and also helps respondents to express their opinion views freely. The questionnaires' questions consists of characteristics of respondents, demand and supply of information, EMIS and training, school management, and EMIS success factors.

Interview: This instrument was employed to collect further information on the effectiveness of EMIS, and its challenges. A face to face interview with semi-structured questions were held with school principals, vice principals, WEOs, and WEOCPOs. In addition to these respondents PTA members from target schools were also interviewed. In this regard, Kamar (2005) argued that Semi structured interview permits an average flexibility so that the interviewer could make a minor modification where needed.

Focus group discussion (FGD): According to Miller and Brewer (2003) FGD was used because it has a real benefit of sharing views, experiences, stories between participants, and of acquiring the insight full and reach data from participants. So, this instrument was employed to collect data from principals, vice principals, unit leaders, PTA members, and internal supervisors before they get into questioner. This tool was used to get the general information and image of the school, woreda, and zone as a whole. The instrument was also used to aware the purpose and use of the study for the school and the school community.

Document Analysis (DA): Kamar (2005) in his book states that "the analysis of the content of records documents and other printed materials constitutes the second use of survey to collect facts for a research study". Due to this, document analysis was also became one of the instruments of data collection. Documents, records, minutes of meetings were seriously seen to crosscheck the respondents' response validity.

3.5. Procedures of Data Collection

A survey of questionnaire was designed and piloted in three secondary schools such as Jiren secondary school, Seto Semero secondary school, and Jimma University community school. The questionnaire was filled by three principals of these schools, six vice principals, twelve unit leaders, and six internal supervisors. After that, structured questionnaires were tested for content validity by experts of staffs of EDPM department of Jimma University. Interview questions were also given face to face to the target respondents of these schools. The validity of these tools were

calculated by using coefficient of correlation as it was discussed under the sub-title of pilot study part.

3.6. Methods of Data Analysis

Different methods of data analysis which are relevant to each variable or component were used to examine the qualitative and quantitative researches. The data that was collected through closed ended questionnaires was tallied and completed using percentages correlation study, weighted means. Data obtained from open ended questionnaires, interview, and focus group discussion and document analysis were carefully examined and studied qualitatively. The strength of the conclusions about group differences or relationship among variables was supported by different statistical tools. Accordingly chi-square (λ^2), ONE WAY ANOVA, and t-test were applied.

The chi-square (λ^2) analysis was employed to test the significance difference between the proportion of respondents who were favorable and those who were unfavorable towards the variables. Such a test of proportional differences was also carried out between respondents with a positive and negative evaluation of the variables considered (Sudman and Bardburn, 1982). In the other way round ANOVA is used to check the significance difference among the whole groups in general. All differences were tested for statistical difference at 0.05 levels.

Finally, those problems of data manipulation and interpretation were solved by a data analyzing software called SPSS (Statistical Package for Social science), quantitative data were analyzed quantitatively and lastly conclusion and recommendation were given.

3.6. Pilot Testing of the Instrument

Data collection instruments such as questionnaire, and interview were piloted and distributed to secondary and preparatory schools in Jimma city administration which were not included in the study. These schools were Seto Semaro, Jiren secondary school, and Jimma University community schools; to check whether the tools can generate the expected information for the respondents and to consider their consistency to the study. The instrument for pilot study consists of 111 items to be responded on a five point scale. These instruments were tested on 30 (Male=19, and Female=11).

The pearson product moment correlation was calculated for odd and even numbered items of the 111 items for reliability using half method (Yalew, 2006) resulting a coefficient of 0.849. As

regarded to the internal consistency of the items, a reliability estimate was calculated using Spearman-Brown formulae resulted with an index of 0.9183. This clearly indicates that the instruments designed were 91.83% reliable. On the other hand, Spearman-Brown formula is one that empirical researchers strongly support its usefulness and accuracy (Payne, 1992).

CHAPTER FOUR

4. Data presentation, Analysis and Interpretation

This section of the study presents the analysis and interpretation made of the data collected from school directors, vice directors, unit leaders, school supervisors, WEO, WEOCPO, ZEH, ZECPO, woreda and zone statisticians. It is categorized into two major parts. The first part presents the profile of sample respondents in terms of their job experience, educational qualification, specialization, and training received. The second part teats the type of information demanded and supplied adequacy and quality of information, problems of information management, and strategies for employing information management at school.

About 162 questionnaires were distributed and 153 were filled and collected back so, about 94.44% of the questionnaires were returned. From this 9.8% (15) were school directors, 26.1% (40) were woreda supervisors, 19.6% (30) were vice directors, 14.4% (22) were school supervisors, 4.6% (7) were woreda and zone statisticians, 5.2% (8) were WEO, 5.2% (8) WEOCPO, and 15% (23) were unit leaders. Statistical analysis methods like one way ANOVA, t-test, chi square, correlation coefficient, Lickert scale were used to triangulate the data to make the conclusion and recommendation valid and reliable.

4.1. Characteristics of the Respondents

Before going in to the detail analysis of data, the characteristics of respondents has to be summarizing as follows. This section includes group of respondents, age, sex, and working experience of respondents.

Table 2: Group of Respondents

Respondents	Frequency	Percent
Directors	15	93.75
Vice Directors	30	93.75
School Supervisors	22	95.65
Unit Leaders	23	79.3
WEO	8	100
WEOCPO	8	100
Woreda Supervisors	40	100
Statisticians	7	77.8
ZEO	1	100
ZEOCPO	1	100

Table 2 above shows 93.75% of school leaders, 93.75% of vice directors, 95.65% of school supervisors, 77.8% of woreda and zone statisticians, 79.3% unit leaders were filled the questionnaire successfully. EMIS will succeed if and only if the above respondents committed and integrated. EIS is the result of the performances that each and every respondent contribute for the education system. As the percentage mentioned above shows, most of respondents were committed and patient enough to fill the questionnaire thoroughly.

Table 3: Age and Sex Profile of Respondents

s/no	Respondents	Sex of Respondents					Age of Respondents							
		Male		Female			Less than 25 years		26-35 years		36-45 years		≥45 years	
		F	%	F	%	Total	F	%	F	%	F	%	F	%
1	Directors	15	100	0	0	15	1	6.7	3	20	7	46.7	4	26.7
2	Vice Directors	25	83.3	5	16.7	30	0	0	11	36.7	6	20	13	43.3
3	School Supervisors	21	95.4	1	4.5	22	1	4.5	6	27.3	4	18.18	11	50
4	Unit Leaders	20	87	3	13	23	1	4.3	4	17.4	7	30.43	11	47.8
5	WEO	8	100	0	0	8	0	0	2	25	2	25	4	50
6	WEOCPO	7	87.5	1	12.5	8	0	0	3	37.5	1	12.5	4	50
7	Woreda Supervisors	38	95	2	5	40	0	0	12	30	10	25	18	45
8	Statisticians	7	100	0	0	7	1	14.3	2	28.6	2	28.6	2	28.6
9	ZEO	1	100	0	0	0	0	0	0	0	1	100	0	0
10	ZEOCPO	1	100	0	0	0	0	0	0	0	1	100	0	0

As shown in Table 3 above; the sex of respondents, and their age with respect of the position vested indicated as there was great gap. What was surprising here is that there was no female

director, no female woreda or zone statistician, no female WEO, no female ZEH and ZEOCPO. This shows as it needs further study that it doesn't have any significant effect on this study. To sum up, from the respondents filled the questionnaire 141 (92.2%) were male and 12 (7.8%) were female. This also clearly shows that most of the EMIS activities are carried out by male individuals.

Age wise, as it is indicated in Table 3 above there were no vice directors, WEO, WEOCPO, woreda supervisors with age less than 25 years. This indicates that, this position of EMIS needs experience. But one (6.7%) of the directors, one (4.5%) of the school supervisors, one (4.3%) of the unit leaders and one (14.3%) of woreda and zone statisticians were included in the age range less than 25 years.

In other way round, 7 (46.7%) of the directors age were 36-45 years and this clearly shows us that as the directors were experienced. Moreover, about four (50%) of WEO, four (50%) of WEOCPO, 11 (47.8%) of unit leaders, 13 (43.3%) of vice directors, four (26.7%) of directors, 18(45%) of woreda supervisors and two (28.6%) of the woreda and zone statisticians were aged greater than 45 years. This clearly shows almost the respondents for this research study were within the range of active working age. This by itself has high positive influence on the activities of EMIS that it needs employee with high experience.

4.1.1. Educational Qualification, Work Experience of the Respondents

A right person in a right position, in a right time to do the right thing is a backbone of the success of EMIS in any organization. Therefore, this section is designed to asses and evaluates the qualification of a personnel or respondents and job experiences of the sample respondents at different level in line of their field of study. Since EMIS is a system by itself and needs its own specialty, respondents from school such as school directors, vice directors, school supervisors, unit leaders were assessed. Again respondents from woreda and zone education offices were analyzed according to the following Table.

Table 4: View of Respondents in Job Experience and Educational Background.

Experience and qualification			Respondents															
			Directors		Vice directors		School supervisors		Unit leaders		WEO		WEOCPO		Woreda supervisors		Statisticians	
			F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Job experience in years	Experience in teaching	<5	1	6.7	2	6.7	2	9.0	3	13.0	1	12.5	0	0.0	0	0.0	0	0.0
		6 to 10	1	6.7	2	6.7	6	27.3	2	8.7	0	0.0	2	25.0	6	15.0	0	0.0
		11 to 15	3	20	7	23.3	11	4.5	6	26.0	1	12.5	0	0.0	8	20.0	3	42.8
		16 to 20	3	20	4	13.3	5	22.7	4	17.4	3	37.5	2	25.0	12	30.0	1	11.2
		>20	7	46.7	15	50.0	8	36.4	8	34.8	3	37.5	4	50.0	14	35.0	3	42.8
	In current position	<1	2	13.3	4	13.3	1	4.5	1	4.3	1	12.5	1	12.5	0	0.0	1	14.2
		1	0	0	11	36.7	5	22.7	2	8.7	0	0.0	1	12.5	7	17.5	0	0.0
		2	6	40	14	46.7	5	22.7	9	39.0	2	25.0	3	37.5	10	25.0	3	42.8
		3	2	13.3	0	0.0	3	13.6	1	4.3	4	50.0	1	12.5	12	30.0	1	14.2
		4	3	20	0	0.0	2	9.0	3	13.0	0	0.0	1	12.5	7	17.5	0	0.0
		5	0	0.0	0	0.0	1	4.5	2	8.7	0	0.0	0	0.0	3	7.5	0	0.0
		6	0	0.0	0	0.0	0	0.0	1	4.3	0	0.0	0	0.0	1	2.5	0	0.0
		>6	2	13.4	1	3.3	5	22.7	4	17.4	1	12.5	1	12.5	0	0.0	2	28.4
Educational background (qualification)		TTI	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
		Diploma	0	0.0	0	0.0	0	0.0	1	4.3	0	0.0	1	12.5	1	2.5	0	0.0
		BA/BSc	14	93.3	3	100	22	100	22	95.7	7	87.5	7	87.5	38	95.0	6	85.8
		MA/MSc	1	6.7	0	0.0	0	0.0	0	0.0	1	12.5	0	0.0	1	2.5	1	14.2

As shown in Table 4 above, one (6.7%) of directors, two (6.7%) of vice directors, two (9%) of school supervisors, three (13%) of unit leaders and one (12.5%) of WEO were with an experience of less than five years. But there were no WEOCPO, woreda supervisors and woreda and zone statistician with an experience of less than five years. This shows these (WEOCPOs', woreda supervisors', and woreda and zone statisticians') positions needs an experience of at least five years. Moreover, these positions were secured as a result of competition and recommendations by other authorities. But the positions like director, vice director, school supervisor, unit leader and WEO were given simply as a merit. This clearly shows that everybody with BA/BSc/MA/MSc of low experience can be a leader of a school and woreda education officer.

On the other hand, most of the directors six (40%) were of an experience 11-20 years. This contradicts with that of what we have seen in the first paragraph under Table 4. This confirms as those positions need an experience.

Moreover, there were no WEO with an experience of 6-10 years and no WEOCPO with an experience of 11-15 years in this study. But about 20 (50%) of woreda supervisors, 4 (57%) of woreda and zone statisticians, 6 (40%) of school leaders, 11 (36.6%) of vice directors, 10 (43.4%) of unit leaders and 4 (50%) of WEO were with an experience of 11-20 years. As obviously known, an experience is a key and base for any EMIS. So, this clearly shows as experience is very crucial for the success of an organization and the cultivation of EMIS.

As far as the experience of the current position were concerned: two (13.3%) of the directors, four (13.3%) of the vice directors, one (4.5%) of the school supervisors, one (4.3%) of the unit leaders, one (12.5%) of the WEO, one (12.5%) of the WEOCPO, and one (14.2%) of the woreda and zone statisticians were of an experience less than one year experience. So, this clearly shows that they are new and fresh for this position. If an individual is new, therefore the work place and the environment and the system may challenge the individual. As a result of internal and external influences definitely the EMIS will be fruitless. Moreover, 8 (53.3%) of the directors, 14 (46.7%) of the vice directors, 8 (36.3%) of the school supervisors, 10 (43.3%) of the unit leaders, 6 (75%) of the WEO, four (50%) of the WEOCPO, 22 (55%) of the woreda supervisors, and 4 (57%) of the woreda and zone statisticians were with 2-3 years experience in current positions. There were no director, vice directors, WEO, WEOCPO and woreda and zone statistician with a current position with 4-6 years. This implies that the turnover in those positions was highly observed. This turnover is a great loss for education system, and hence EMIS lacks reliability and consistency.

Concerning qualification, even though the position needs MA/MSc; almost all are qualified with BA/BSc/BEd. There was no one with qualification TTI. But one (4.3%) of the unit leaders, one (12.5%) of the WEOCPO, and one (2.5%) of the woreda supervisors were under qualified. Those individuals were graduated with diploma that is not required in these positions. Being under qualification may have its own negative impact on the achievement or success of the goals, and objectives of an organization. Because an individual will be competitive and able to do an activity only if he/she is qualified or a right person at a right place.

Again when we see directors 14 (93.3%) of them, 30 (100%) of the vice directors, 22 (100%) of the school supervisors, 22 (95.7%) of the unit leaders, 7 (87.5%) of the WEO, 7 (87.5%) of the WEOCPO, 38 (95%) of the woreda supervisors, and 6 (85.8%) of woreda and zone supervisors were BA/BSc/BEd holders. Since their current position needs MA/MSc/MEd, still all of these individuals were under qualified.

4.1.2. Field of Study of Respondents

The field that and individual specialize obviously will affect the activities that he/she performs. This indicates that individuals have to be assigned according to the skill and knowledge required. Thus the following Table summarizes the field of study of the respondents.

As it is indicated in Table 5 below, only one (6.7%) of the directors, one (33%) of the vice directors, one (4.5%) of the school supervisors, one (4.3%) of the unit leaders, one (12.5%) of the WEO, two (25%) of the WEOCPO, two (5%) of the woreda supervisors, were trained or graduated in educational planning and management which is highly related with EMIS. This clearly shows us respondents were assigned in those positions or on current positions arbitrarily without considering their area of specialty.

Moreover, matching educational level or field of study and qualification with the task requirement should be the priority consideration in selection recruitment of employees. What was observed from the findings of the study deviated from this principle. Thus, the assignment of personnel in EMIS position does not appear to consider field of study.

Table 5: View of Major and Minor Fields of Respondents

	Subjects they studied	Respondents															
		Director		Vice director		School supervisors		Unit leaders		WEO		WEOCPO		Woreda supervisors		statisticians	
		F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Area of qualification(Major)	Afan Oromo	0	0	5	16.7	1	4.5	2	8.7	0	0	1	12.5	5	12.5	0	0
	Amharic	1	6.7	2	6.7	0	0	3	13	0	0	0	0	3	7.5	0	0
	Biology	1	6.7	1	3.3	3	13.6	4	17.4	0	0	0	0	4	10	0	0
	Bio lab	0	0	0	0	0	0	1	4.3	0	0	0	0	0	0	0	0
	Chemistry	2	13.4	2	6.6	4	18.2	3	13	3	37.5	1	12.5	5	12.5	1	14.3
	Comp Geo	0	0	0	0	1	4.5	0	0	0	0	0	0	0	0	1	14.3
	English	3	20.1	9	30	4	18.2	5	21.7	1	12.5	2	25	5	12.5	3	42.8
	Geography	2	13.4	2	6.6	0	0	0	0	1	12.5	0	0	3	7.5	1	14.3
	History	1	6.7	8	26.7	3	13.6	2	8.7	1	12.5	1	12.5	5	12.5	0	0
	Maths	1	6.7	0	0	1	4.5	2	8.7	0	0	0	0	5	12.5	0	0
	Maths & EDPM	1	6.7	1	3.3	1	4.5	1	4.3	1	12.5	2	25.	2	5	0	0
	Physics	1	6.7	0	0	3	13.6	0	0	0	0	0	0	3	7.5	0	0
	Urban Mgt	2	13.4	0	0	1	4.5	0	0	1	12.5	1	12.5	0	0	1	14.3
Area of qualification (Minor)	Afan Oromo	1	6.7	2	6.6	3	13.6	4	17.4	0	0	0	0	3	7.5	1	14.3
	Amharic	2	13.4	9	30	1	4.5	1	4.3	1	12.5	2	25	4	10	2	28.6
	Biology	0	0	0	0	0	0	0	0	1	12.5	0	0	0	0	0	0
	Chem Phy	1	6.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Chem	1	6.7	1	3.3	3	13.6	4	17	0	0	0	0	4	10	0	0
	English	0	0	5	16.7	1	4.5	5	21.7	0	0	1	12.5	6	15	0	0
	Eng/Phy	1	6.7	0	0	1	4.5	0	0	1	12.5	1	12.5	2	5	0	0
	Geography	1	6.7	8	26.7	3	13.6	2	8.7	1	12.5	1	12.5	5	12.5	0	0
	History	3	20.1	2	6.6	0	0	0	0	1	12.5	0	0	3	7.5	1	14.3
	Infrastructure	1	6.7	0	0	0	0	0	0	1	12.5	1	12.5	0	0	1	14.3
	Maths	3	20.1	2	6.6	7	31.8	3	13	2	25	1	12.5	8	20	1	14.3
	Physics	0	0	1	3.3	1	4.5	3	13	0	0	1	12.5	5	12.5	0	0
	Structure	1	6.7	0	0	1	4.5	0	0	0	0	0	0	0	0	0	0
	Not mentioned	0	0	0	0	1	4.5	1	4.3	0	0	0	0	0	0	1	14.3

4.1.3. EMIS Training Given

As stated by Tegegn (2003), Training is one of the essential components of EMIS. Because the field of technology is changing fast and manpower turnover is high, training must be viewed as continues activity, and one that management needs to pay greater attention to. It is also an all round activity because the system is empowered by each components working with the other in

achieving environment to make the vision happen. The implication is that there is a high need of updating the personnel for dynamism.

Table 6: The Responses of Respondents on EMIS Training Given

Items	Respondents															
	Directors		Vice directors		School supervisors		Unit leaders		WEO		WEOCPO		Woreda supervisors		Statisticians	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Satisfied	4	26.7	7	23.3	5	22.7	6	26.1	3	37.5	3	37.5	10	25	1	14.3
Unsatisfied	7	46.7	13	43.3	11	50	9	39.1	5	62.5	4	50	19	47.5	4	57.1
Kept Silent	4	26.6	10	33.3	6	27.3	8	35	0	0	1	12.5	11	27.5	2	28.6

Table 6 clearly shows us that 98 (64.1%) of the respondents were took different trainings given by ZEO and regional education bureau. As replied by the respondents one (0.7%) of the the areas training given was on disciplinary problem, 17 (11.1%) were replied as training given on EDPM, one (0.7%) were on foundation of management and supervision, three (2%) were on management, 11 (7.2%) were on school management. And also about 12 (7.8%) took training on teaching methodology. But from 153 respondents 99(64.7%) were not replied whether the training was given rather they simply kept silent. As it was indicated on this Table above: about 72(47.1%) responded as they were not satisfied with the training given. But only 39 (25.5%) were satisfied with that of the training given.

In a nut shell, the reason that made respondents not be satisfied was also be collected and analyzed. Their reasons were because they are not trained in leader ship, because of low salary, due to environmental influences, they are not qualified in EDPM, it is difficult activity, it is hard to lead, and lack of facilities were the major reasons. Moreover, the reason why they kept silent was also analyzed through interviews. Most of them were kept silent due to fear that this may lead to some hazardous problems.

In other way round, as indicated in Table above 4 (26.7%) of one the directors, 7 (23.3%) of the vice directors, 5 (22.7%) of the school supervisors, 6 (26.1%) of the unit leaders three (37.5%) of

the WEO, three (37.5%) of the WEOCPO, 10 (25%) of the woreda supervisors, and one (14.3%) of the zone and woreda statisticians were satisfied with the training given.

To sum up, Table 6 clearly shows that most of the respondents were not satisfied with that of the training given. When we compare the figure that shows as the respondents were unsatisfied together with those who have kept silent with satisfied: the figure that shows satisfied is insignificant. So, from this it is possible to extrapolate that due to different factors the training given was not clearly addressed the need of workers in this sector.

4.2. Analysis of Bodies that Demand Information from/to School

It is important to note that all managers of educational information should focus on users' needs and expectations. The nature of the information and the ways in which it is provided should therefore be tailor made for each level in the education system. As cited in Cassidy (2005) educational system database supply information to different stakeholders and similarly demands information from different bodies. So, the following Table tries to analyze those stakeholders who need information from schools, and education system as a whole.

Table 7: Respondents View on Information users Demanded from School

S/No	Respondents	Rating Scales										Statistical Results	
		Very		Low		Medium		High		Very high			
		F	%	F	%	F	%	F	%	F	%	Mean	St.Dev
1	WEO	0	0	4	2.4	36	23.5	76	49.7	37	24.2	3.95	0.764
2	PTA	22	14.4	26	17.0	74	48.4	26	17.0	5	3.3	2.78	1.001
3	Decision-Makers	1	0.7	52	34.0	29	19.0	43	28.1	28	18.3	3.29	1.141
4	Policy Makers(ICDR)	14	9.2	26	17.0	8	5.2	65	42.5	40	26.1	3.59	1.290
5	Zone education office	3	2	1	0.7	67	43.8	63	41.2	19	12.4	3.61	0.787
6	Regional Education Office	2	1.3	3	2	74	48.4	54	35.3	20	13.1	3.57	0.793
7	Parents and Community	38	24.8	2	1.3	54	35.3	51	33.3	8	5.2	2.93	1.247
8	NGOs	70	45.8	18	11.8	24	15.7	24	15.7	17	11.1	2.35	1.461

(1=very low, 2=low, 3=medium, 4=high, 5=very high) Grand mean = 3.3

As it was stated on Cassidy (2005), better data leads to better plans and policies, which lead to better practices. Better data is the necessary input to a decision-making but not a sufficient one: Better data have to be supplied to school and demanded to/from the school. So, the above Table 7 shows the analysis of data/information users /demanded from the school. As it was indicated on this Table about 113 (73.9%) of the respondents responded that Woreda Education office (WEO)

demanded or supplied data to school. This clearly shows as obviously the schools and WEOs are highly related and integrated as a system.

Moreover, no one responded as the demand/supply of information between the school and the WEO was very low. About four (2.4%) responded as low, about 36 (23.5%) responded as medium, about 76 (49.7%) or the most responded as there were high relationship, and about 37 (24.4%) were responded as there were very high relationship between school and Woreda education offices in general. The mean of the responses responded were about 3.95 which means nearly demand/ supply of information highly took place between school and Woreda education offices.

In other way round: about 22 (14.4%), about 26 (17.0%), about 74 (48.4%), about 26 (17.0%), and about five (3.3%) of respondents were responded as very low, low, medium, high, and very high respectively about the relationship between PTA (parent teachers association) and the school on data/information during demand and supply. The mean of this analysis were 2.78 which is nearly medium. This clearly shows that as there were not this much high relationship between the school and PTA. This contradicts with the fact that PTA is the bridge that links the schools and the community. The weak relationship among the school and the PTA resulted in gap of information between school and the community. This highly affects the success of EMIS as a whole.

As stated by different scholars information is the processed data that can be used as a base/guide for decision making. So, concerning decision making about one (0.7%), about 52 (34.0%), about 29 (19.0%), 43 (28.1%), and about 28 (18.3%) of respondents were responded as very low, low, medium, high, and very high respectively. The mean or averages of response concerning decision makers were 3.29 which are nearly medium. This shows that the decision makers were invited on certain issues in medium frequency. This again indicates that decision made were centralized or really democratic.

Even policy makers or ICDR(Institute of Curriculum Development and Research) were also treated inline of the actual EMIS running in grass root level. So, about 14 (9.2%), about 26 (17.0%), about 8 (5.2%), about 65 (42.5%), and about 40 (26.1%) of respondents were responded as very low, low, medium, high, and very high respectively, of demand and supply of

data/information for policy makers on average 3.59 shows the demand and supply of information from school for policy makers were almost high. This shows that schools and EMIS at school level were basic for planers and decision makers.

To sum up, the demand and supply of information from or to schools to different organs were analyzed. When we see Table 7 as a whole, the relationship between school and NGOs were low which is about 2.35 on average. Similarly, on this Table again the relationship among school and parents and community were also almost low or rarely medium. But this much relation is not sufficient for the development of EMIS at school level. The community and parents role in school and education sector as a whole have to be very critical.

As stated on education sector blue print schools are accountable to woreda education offices. Woreda education offices are accountable for zone education office. And similarly zone education offices are accountable for regional education Bureau. When we see the demand and supply of EMIS; about three (2%), and about one (0.7%), about 67 (43.8%), about 63 (41.2%), and about 19 (12.4%) of respondents were responded as very low, low, medium, high, and very high respectively on average about 3.61 of the respondents agreed on the accountability and relationship between these systems and subsystems were high. This indicates that as there were high demand and supply of EMIS along their hierarchy. This again shows that the flow of EMIS data/information flow were smooth and important

4.2.1. Student and Personnel Related Information

According to UNESCO (2006), educational authorities routinely collect information on schools as part of their regular operations. Such data include location of school, condition of school facilities, number of grade offered, numbers of students by sex and age, numbers of repeaters, numbers of teachers by sex and qualification. Inline of these the following Table is intended to summarize student related, teacher related, class size with respect to the standards set.

Table 8: View of Respondents on Student and Personnel Related Information

S/no	Items Data/information Student Related	Statistical measure Mean	St.Dev
1	Information on leaning achievement	4.08	1.167
2	Information on student performance	4.00	1.230
3	Information of repeaters	3.41	1.216
4	Standardized students' achievement	3.69	1.108
5	School age population	3.80	0.772
6	Students' promotion policy	3.65	1.258
7	Disabled students' manual	2.90	1.304
8	Ground rules and regulations	4.01	0.997
9	Students dropout	4.02	0.971
10	Information on politics	3.34	1.299
No	**Personnel or teacher related**	Grand mean=3.69	
1	Supervisors report	3.88	0.83
2	Teachers' qualification, experience etc	4.21	0.816
3	Teachers efficiency	3.84	0.773
S/no	**Class size(standard ratio)**		
1	Class size with respect to standard	3.39	1.283
2	Student class ratio	3.58	0.894
3	Student teacher ratio	3.67	1.155
4	Student text ratio	3.93	0.822

As per the result in Table 8, it could be possible to analyze different types of information are needed by the school and other organs. Information related to students were analyzed as about 13 (8.5%), about two (1.3 %), about 14 (9.2%), about 55 (35.9%), and about 69 (45.1%) respondents replied very low, low, medium, high, and very high respectively on information on learning achievement of children by subject, grade, etc. The mean= 4.08 or almost 4 shows that information on learning achievement of children by subject and grade were high. This indicates more that as the objective (high) priority was given for learning-teaching process.

Information on repeaters by grade, sex, and age is also another dimension that has to be seen. So, about 13 (8.5%), about 9 (5.9%), about one (6.5%), about 54 (35.3%), and about 67 (43.8%) of respondents replied as very low, low, medium, high, and very high respectively on information on repeaters by age, sex, and grade, on average =3.41 or almost the demand and supply of EMIS particularly information on repeaters were high and very high because these information is base for any planning of EMIS, since it is a loss or opportunity cost in education system. As it was

analyzed more through interview concerning repeaters is that most of the students want to repeat to score good grade which is not good because of wastage of time, material, and the like.

Concerning standardized students' document about 11 (7.2%), about 32 (20.9%), about 23 (15%), about 58 (37.9%), and about 29(19%), replied as very low, low, medium, high, and very high respectively, on average=3.69 which clearly shows that the students' standardized documents were demanded or/and supplied almost highly. But surprisingly the schools had their own formats to collect or to send data for stakeholders. But as far as this study was concerned there were no standardized or predefined format that was given for students or woreda education offices to demand or/and supply of information.

Ground rules and regulations inline of EMIS were also analyzed in this study. The study, however has found out that about one (0.7%), about three (2%), about 60 (39.2%), about 19 (12.4%), and about 70 (45.8%) were responded as very low, low, medium, high, and very high respectively on average= 4.01 which is almost high and very high. This clearly shows that rules and regulations are very important for schools and education system to enhance or facilitate EMIS. Even though rules and regulations are very important for the success of EMIS, about 4 (2.7%) of respondents knowingly or unknowingly responded as rules and regulations were very low and low in priority.

Dropout case is familiar activity of education sector of Jimma zone as per the cash crop area of the land. Most of the students quit their education and involved in other transactions of goods and services. Table 8 clearly shows that about three (2%), eight (5.2%), 23 (15%), 57 (37.3%), and 51 (33.3%) of respondents replied as very low, low, medium, high, and very high respectively concerning information on students' dropouts by grade, sex, and age. With the average mean value of 4.02 which indicates that information on dropout of students were demanded or and supplied highly or very highly. This more indicates that as it is needed in day to day activities of EMIS.

To sum up, the analysis of Table 8 student related data part, the grand mean of this Table is 3.69 which approximately 4. Thus this indicates that information's demanded or/and supplied to or from school and other organs was high. This shows us EMIS demand and supplies were high.

Personnel and teacher related information were also analyzed the Table 8 above shows that about one (0.7%), one (0.7%), 54 (35.3%), 57 (37.3) and about 40 (26.1%) responded as very low, low, medium, high, and very high respectively information on supervisors' report. The average= 3.88, and the standard deviation =0.83 indicates that almost the information (report) of supervisors are moderately high. This further indicates that the reports by the supervisors were the inputs for decision making in any EMIS issues.

Information on teachers numbers by subject, qualification, experience, sex, and age has also analyzed the response was about one (10.7%), 35 (22.9%), 48 (31.4%), and 69 (45.1%) were responded as low, medium, high, and very high respectively. On average the analysis shows 4.21 almost high and very high. This and the result analyzed through interview indicate that something surprising. That was even there were schools and WEO that does not have any organized record or information about teachers and their personnel in general. This by itself highly affects the demand/or supply of data/information and will affect even the carrier structure of and promotion of personnel.

Information on teachers' performance or efficiency per semester /quarterly/ yearly was also analyzed. As a result as it were analyzed on Table 8, about two (1.3%), 10 (6.5), 18 (11.8%) 104 (68.0%), and 19 (12.4%) of respondents replied as very low, low, medium, high, and very high respectively. Moreover, the average= 3.84 and the standard deviation =0.773 clearly indicates that almost the respondents agreed on the issue that the information about teachers performance is almost highly demanded. But, the reality obtained through interview indicates that there was even no annual teachers' appraisal (efficiency) document at all. They prepare easily as per the request of individual teacher for career structure (salary increment) or for other competitions.

Schools' class size (standard) and student class ratio were also analyzed. As a result of interviews, FGD, and document analysis on average the class-student ratio was 1:76. This is to say that within one class about 76 students attend teaching learning process. But as it was stated clearly on Oromia regional education bureau annual abstract the standard for secondary school must be 1:40. Again the Table 8 clearly indicates that about 14 (9.2%), 26 (17.0%), 39 (25.5%), and 35 (22.9%)of respondents were replied as very low, low, medium, high, and very high respectively-on average=(3.39). The information shows that the attention given for class – student ratio was moderate (medium). On the other way round, the relationship between schools

and other stakeholders like NGO, community, and parents were very low as it was analyzed on other Tables above (See Table 7). This clearly shows that as students were crowded and highly suffocated. This indeed highly affects during the instruction or teaching learning EMIS in general.

Moreover, the information about teachers-students ratio, and students' book ratio, is also seen seriously. The respondents gave their responses as 1:53 (student-teacher ratio), and 1:1 (student-text book ratio). Student text ratio was almost succeeded that one student can use (have) one book. These support the students to get necessary information on time when they required. This also facilitates good chances for learning, studying and doing exercises and home work as required. Again the analysis on Table 8 (see standard and ratio) indicates that about one (0.7%), 48 (31.4%), 55 (35.9%), and 41 (26.8%) of respondents responded as very low, medium, high , and very high, about 96 (26.7%) of the respondents said student-class ratio, student teacher ratio, and student text ratio are highly or very highly demanded or/and supplied. This further indicates that these ratios are very important and base for teaching learning and quality of EMIS in general.

4.2.3. Extent of Data/Information Utilization

The effectiveness of EMIS is measured in terms of the usage and utilization of data' information from time to time. The extent of data usage was analyzed by using t-test and standard deviation. The following Table 9 below displays the differences and similarities of responses given by directors and vice directors on the extent of data tool for collection and dissemination of information to/from needy.

Table 9: View of Respondents on Utilization of Data Information

S/No	Items	Test of respondents among directors and vice directors	Descriptive Statistics			ANOVA Test Levenes test for Equality of variances		T-Test t- test for equality of means
			Mean	St.dev	St Error	f	Sig	t
1	Assessment of effective data in improving student learning	Directors (N=15)	2.93	0.20	0.067	1.907	0.174	-1.977
		Vice directors (N=30)	3.13	0.346	0.063			
2	Collection of evidence of progress in leaning from school	Directors (N=15)	3.47	0.516	0.133	0.446	0.508	-0.836
		Vice directors (N=30)	3.60	0.498	0.091			
3	Record each pupil's progress in learning each term	Directors (N=15)	3.13	0.516	0.133	2.665	0.110	0.918
		Vice directors (N=30)	2.83	1.206	0.220			
4	Review each students' achievements in comparison	Directors (N=15)	3.20	0.676	0.175	0.438	0.512	0.360
		Vice directors (N=30)	3.10	0.960	0.175			
5	Compare achievements in particular year group	Directors (N=15)	3.27	0.594	0.153	0.039	0.844	-1.372
		Vice directors (N=30)	3.50	0.509	0.093			
6	Compare pupils' achievement with similar local schools	Directors (N=15)	2.47	0.834	0.215	2.146	0.150	-.652
		Vice directors (N=30)	2.87	0.730	0.133			
7	Compare pupils' achievement with similar nationalities	Directors (N=15)	3.40	0.507	0.131	0.000	1.000	-.262
		Vice directors (N=30)	3.60	0.498	0.091			
8	Each pupil's achievements in comparison with targets set.	Directors (N=15)	2.67	0.724	0.187	2.243	0.141	-1.333
		Vice directors (N=30)	2.93	0.583	0.106			
9	Summative teacher assessment outcomes over time	Directors (N=15)	2.53	0.743	0.192	4.797	0.034	-0.358
		Vice directors (N=30)	2.60	0.498	0.091			

The computed mean, standard deviation, standard error, and, f and t values shows almost as there were no significant difference among the response given by the directors, and vice directors. Specially both respondents agreed or almost agree as they compare pupils' achievement with that of similar schools.

On top of that both respondents almost review each pupils' achievements in comparison with targets set or standards set by regional education bureau. When we compare the dimensions or the extents of usage of data (tools) responded by both directors and vice directors: even though there were no significant difference among the groups; there were a little pick relatively (high signal) where t=1.977, t=1.372, t=1.652, t=1.333. As collected and analyzed above negative t-value cannot have any further interpretation thus the researcher took only the magnitude.

On the other way round, on issues (see Table 9) where t-values t=0.836, t=0.918, t=0.360, and t=0.358 the respondents almost all in all agreed and responded in a similar observation or perspectives

To sum up, the information collected from both groups (directors, and vice directors) were supporting each other-on issues concerning the extent of usage of data or tools. As it was triangulated from these groups, the researcher honestly admitted the consensus of their idea that was converged to reality.

4.2.4. General View of Respondents on Utilization and Usage of Information

On Table 9 above the argument of responses of directors, and vice directors were analyzed by using t-test with significance level f≤ 0.05. Now the following Table (Table 10) shows the detailed analysis of all respondents of this study using one way ANOVA. This analysis was needed to see whether the ideas responded by different groups were converges or diverges.

Table 10: Respondents View on Utilization and Usage of Data/Information

S/No	Items	Descriptive Statistics Measures				One Way ANOVA	
	data input	Mean	St.dev	Sum of squares	Mean square	F-value	Sign
1	Analysis has positive impact on learning outcome	2.93	0.446	2.708	0.387	2.040	0.054
2	Data management tools simplify the process	3.46	0.659	2.161	0.309	0.702	0.671
3	It is difficult to translate the information generated	2.92	0.811	5.487	0.784	1.204	0.304
4	Do not feel the potential for using data	3.05	0.652	1.421	0.203	0.465	0.858
5	The analysis of data does not improve teaching	3.31	0.702	2.746	0.392	0.788	0.599
6	The analysis of data makes performance of school	2.50	0.926	17.481	2.497	3.211	0.003
7	Data analysis has helped to identify areas of teaching	3.20	0.642	8.892	1.270	3.422	0.002
8	Data analysis identify students' under performing	2.66	0.771	6.525	0.932	1.613	0.136
9	Data analysis helped to identify need to be addressed	2.41	0.847	2.751	0.393	0.536	0.806

According to the Table 10 above the mean ranges from 2.41 to 3.46 and with of the grand mean=2.94. These shows generally there were significant difference among different groups. Specifically, when we treat each item individually one by one we will obtain the following detailed analysis.

In their woreda (respective woredas) the way they (respondents) assess the effectiveness of their data tools in improving pupils' learning had significant differences. Since expected or standard f=2.95 and the computed f=2.04, significance level <0.05 and the obtained sig value 0.054. This clearly shows us there were significant differences. But this result contradicts with that of the value computed and analyzed under Table 9 above that there was no significant difference among directors, and vice directors. But the difference seen or observed as a result of the responses of other respondents or groups.

On other way round; the way they collect evidence of progress in learning from different schools and other sources of information were also analyzed on this Table (Table 10). As can be seen from Table 10 f=0.702 which is less than the standard value= 2.95, the calculated sig=0.671 which is greater than 0.05. This calculated information clearly gives us the input to decide as there were no significant differences among the groups of respondents. Absence of significant difference mean do not leads us to say EMIS was enhanced and facilitated. Even though the respondents agree on their response the way they collect evidence and information from school and other sources were traditional and disappointing.

4.3. Data Input for EMIS

In order to obtain good EMIS, the input that we use in school and other education systems need greater attention. If the input is distorted miss leading/then the output or resulting EMIS will also be highly affected. To see this, the following Table is trying to come with the analyzed information that responds to the current situation of EMIS.

Table 11: Respondents' View on Data Input

S/No	Items	Statistical test		
		Mean	St.dev	Chi-sq
1	Data has positive impact on learning	1.65	0.621	118
2	Data management and school target setting	1.80	0.876	69.876
3	Difficulty of translation of data into school plan	3.73	1.021	1.127
4	Fully potential data analysis in school	2.50	1.107	52.327
5	The analysis does not improve learning	3.95	1.330	61.196
6	Data analysis makes the discussion easier	1.58	0.958	2.172
7	Data analysis identify training need assessment	1.67	1.105	2.113
8	Data analysis helps to identify underperforming students	2.05	0.822	1.968
9	Data analysis helps to identify areas of teaching addressed	1.95	0.768	66.163
10	Teachers have no data management system	3.57	0.887	1.220
11	Data supports continuous assessment	1.62	0.896	1.853
12	Training is needed	1.55	0.980	2.466
13	Data is used in the school at all levels	3.42	1.151	80.562
14	Data analysis tells us nothing	3.49	1.341	32.977

The computed standard deviations for each item revealed that the difference among the respondents is just about 0 to1 standard deviations for all items, implying that the opinion of respondents towards the inputs of EMIS was consistent. In addition to this, one way chi-square was employed to test if there is any gap or discrepancy between the groups of respondents on the input data for the improvement of EMIS development. The computed f-value of Chi-square=17.118 which is greater than the actual standard f-value= 2.97. This clearly shows that there is no significant difference among treated groups that analysis has had a positive impact on

learning outcomes in their woreda. Similarly there was no significant difference on data management tools simplify the process of setting woreda targets.

Generally the computed f-value of the chi-square and its asymptote significance level=0.000 clearly shows as there is no significant difference among the groups.

4.3.1. Adequacy and Quality of Information EMIS.

An increase in demand of users implies an increase in level of data driven decision making. How quality of data information measured is the question of many institutions. Indeed, measuring quality has remained difficult in many production as well as service giving organizations. However, literatures existing around data information quality use content, time lines and the format of presentation as indicators to evaluate quality (Obrien, 1998). This section also tries to investigate EMIS out puts quality in terms of content, form, and timeliness in doing so, the respondents were supplied with three major indicators and nine minor indicators to rate in a likert scale involving very high (5), high (4), medium (3), low (2), and very low (1).

The figures in Table 12 below shows that, the computed means of respondents' response on quality of data /information from zone education office to school level of woredas of Jimma.

Table12: Respondents' Views on the Quality of EMIS Data/Information.

Indicators of quality		Mean score of respondents								ANOVA	
Major	Minor	Directors	Vice directors	School sup	Unit Lead	WEO	WEO CPO	Wor sup	Stat	F value	Sig
Content	Relevance	4	4	3	4	4	4	4	3	1.965	0.064
	Completeness	3	3	3	3	4	4	4	3	1.714	0.110
	Accuracy	3	3	3	3	3	4	3	3	0.555	0.791
Form	Deathliness	3	4	3	3	3	3	3	3	1.470	0.182
	Presentation	3	3	3	3	3	3	3	3	0.500	0.834
	Clarity	3	4	3	3	3	3	3	3	2.680	0.012
Time lines	Frequency	3	3	3	3	3	3	3	3	0.08	0.999
	Currency	3	3	3	3	3	3	3	3	1.139	0.995
	Timeliness	3	3	3	3	3	4	3	3	0.356	0.926

The calculated ANOVA show the quality of indicators of content has no significant difference on relevance and accuracy. But concerning the completeness it shows as there exists a significance difference among respondents. This more shows that the information had a problem since it was not completed. Being incompleteness shows it will highly affects the whole EMIS.

On top of this the mean score of respondents on the content specifically on relevance shows almost 4. The grand mean of relevance =3.75 which show that the input or indicators of EMIS success is highly important. But the grand mean that was observed on accuracy of information as the indicator of success were almost 3. This shows the information demanded and supplied were medium. This shows inaccurate information leads the decision-maker to undesired conclusions.

Forms of information in terms of detainees, presentation and clarity were also analyzed on this Table. As the figures on this Table tells us that value of detainees of data=1.470, sig=0.182 which both values of presentation of information were 0.5, and 0.834-respectively. This shows that there is no significant difference among responses of respondent from all groups. This further indicates that the information collected about detailness and presentation was consistent. In accordance ANOVA calculated value; the grand mean of this two issues were 3. This shows the detailness, and presentation of data/ information were medium. But on the other way round the value for clarity of information=2.680 and its respective sig=0.012. As the figure shows f-value is less than the actual value. This ANOVA shows as there was significant difference among the respondents' responded from different perspectives.

Lastly timelines of data/information as the indicator of EMIS were also analyzed and the results were registered. So, under timelines three minor dimensions were evaluated and the figures displayed as follows. Value for up-to-datedness of information=0.356, and its respective sig=0.926, value for currency of information/data=0.139 and its respective sig=0.995, and value for frequency of information=0.081, and its respective sig=0.999. These three values were less than the standard value=2.95 and the three sig. were also greater than the actual significance interval ≤ 0.05. This clearly indicates that there were no significant difference among the responses replied by different groups. This further shows that the information collected on timelines was consistent.

To sum up, concerning the timelines of information collected shows consistency. But this consistency does not mean that the status of data /information/ as the indicator of success of EMIS were not up-to-date. As the information on this agenda were triangulated through interview shows that there were no data/ information received/ sent/ on time from/to different factors like ICT equipments, means of transfer of data/ information and due to lack of educated manpower on computer and ICT. Artfield, and others (2002) have expressed this problem as "in Ethiopia one

would not normally find computers at education offices below region". No internet services are also there almost throughout woreda.

4.3.2. Information and Computers

As analyzed on Table 14 above the respondents mentioned that as there were lack of educated manpower on computers and ICT. To confirm this information were collected and analyzed whether the computers and other related materials were hindering the effectiveness of the success of EMIS.

Table 13: View of Respondents on the Existence of Computer

Existence of Computer			
Yes		No	
F	%	F	%
119	77.8	34	22.2

As the figure on Table 13 above indicates about 119 (77.8%) replied that there were computers in their school or organization. Even though computers are available still the told to have in problem. One group says there is shortage of commuters and other ICT equipment. The computers available are limited only to directors/WEO officers' office. This made them not to use even the available computer. The other groups responded that even they don't have a single computer and computer related equipments. Even if the computers were available the other groups responded as there was no trained man power in this area.

To sum up, it is possible to say computers and computer related EMIS functions are not as such functional. So, this by itself affects the success of EMIS and decision makers. It is possible to see the functionality of computers inline of the timely, accuracy, detailness, completeness, frequency and other major and minor indicators of information/EMIS. Absences of computers, absences of trained manpower on computer and computer related an issue highly affects EMIS. Computer performs billions of instructions with a second even if the tasks are routine. So, this supports individuals to send and receive data/ information timely.

4.3.3. Purpose of Computers Used in Schools and WEO

Even though the numbers of computers available at school level and WEO were limited, the usage of these computers was also analyzed as follows.

Table 14: View of Respondents on the Purpose of Computer Used

S/No	The purpose of computers used	F	%
1	For writing and storage	70	58.8
2	For internet	12	10
3	Internet, teaching process	14	11.7
4	Storage	13	10.9
5	Internet & storage	10	8.4

As per the Table 14 above about 70 (50.8%) of respondents replied that they were using the computers for writing word processing's like letters, reports, memos, etc. About 12 (10%) of respondents responded that as they have been using for internet connections. What the researcher wants to remind here is that the schools responded about internet were preparatory schools. As far as this study was concerned, not even one school and woreda education office had an internet access at all except preparatory schools. Those preparatory schools had internet not right now where these study was conducted. There was internet access for preparatory schools that related with that of plasma broadcast. But in 2003 E.C since there was no plasma access due to change of students text book as a country wise; there were no any internet access observed in this academic calendar.

The major challenges that were related to computer and EMIS were also shown in this study. The interview made with the respondents revealed that the main problems related to computer and computer technology were: all teachers were not trained on usage of technology, the transmission of plasma were not consistent, connection failed, one computer for about hundred staffs, shortage of skilled manpower, plasma guide and other problems.

4.4. EMIS Materials Available

In addition to the above ICT and computer related analysis the following Table tries to list the supportive material or devices that enhance the management of information were also analyzed.

Table 15: Respondents' View of EMIS Materials

S/N	EMIS materials Available	Status of the material					
		Functional		Non-functional		We don't have	
		F	%	F	%	F	%
1	Computers (desktop)	127	83.0	5	3.3	21	13.7
2	Laptops	0	0	19	12.4	134	87.6
3	Plasma TV	123	80.4	23	15.0	7	4.6
4	Television	85	55.6	8	5.2	60	39.2
5	Internet	2	1.3	49	32.0	102	66.7
6	CDS, Floppy, flash disk	50	32.7	10	6.5	93	60.8
7	Copier Machine	54	35.3	13	8.5	86	56.2
8	Type writer	50	32.7	69	45.1	34	22.2
9	Binding Machine	0	0	3	2.0	150	98.0

As can be observed from Table 15, about 127 (83%) of respondents responded that their desktop computers were functional. But about five (3.3%) of responds responded as their desk top computers were non functional. Meanwhile about 21 (13.7%) of respondents replied that they do not have desktop computers at all. This shows that most of the available computers were functional without the problems of trained man power and lack of technical support.

Concerning laptop computers, the existence and functionally was unexpected. But about 19 (12.4%) of respondents gave response that their laptop computers were non-functional. But about 134 (87.6%) of respondents replied that they do not have laptop at all.

Concerning plasma TV, about 123 (80.4%) of respondents replied that their plasma TV were functional. About 23 (15%) of respondents said that their plasma televisions were mal-functional.

Even there were the respondents that replied as they do not have plasma televisions in their school. This contradicts with the reports generated by MOE that no secondary schools exist without the access of plasma television.

Concerning internet access about two (1.3%) of respondents replied as their internet connection were functional. But about 49 (32%) and about 102 (66.7%) of respondents gave response as their internet was non functional and even they do not have internet access respectively. This seriously affects the existence of EMIS. This is obviously termed as information age but the reality is opposite to what was expected.

4.5. Problems of Information Management

Problems observed were analyzed in different Tables above. On top of that the problems of educational information and decision making and means of dissemination of educational information. So the following Table tries to analyze the education information and decision making strategies.

Table 16: Respondents' View on Educational Information and Decision

no	Indicators of success of EMIS	Mean	St.de	ANOVA	
				F-value	Sign
1	Sound decision making	3.26	1.317	1.378	0.219
2	School planning & begetting	3.23	1.238	1.940	0.067
3	Evaluating the normal functioning of school	3.42	1.049	2.222	0.036
4	Monitoring the outgoing process of the school	3.58	1.098	3.188	0.004
5	For enrollment projection	2.83	1.037	3.075	0.005
6	policy making	3.20	1.502	1.070	0.386
7	Conducting study in the school	2.64	1.030	3.710	0.001
8	For project implementation	2.34	1.165	3.770	0.001
9	For sack of report	3.83	1.018	1.586	0.144

The findings in the above Table 16 with confidence interval ≤0.05 shows as there is no significant difference among respondents concerning sound decision. Calculated ANOVA for sound decision making strategy f-value=1.378 which is less than 2.95 and sig=0.219 which is greater than 0.05. This indicates as there were no significance differences among respondents. On top of that mean=3.26 and standard deviation=1.317 which shows the response given was consistent on sound decision making strategy. Again the calculated f-value=1.940 for school planning and budgeting which is less than the actual standard f-value 2.95. but sig=0.067 which is greater than 0.05 which indicates that there were no significant difference among the group of respondents. Similarly the mean=3.23 and the standard deviation=1.238 which clearly shows that the information provided by respondents were consistent.

Concerning the evaluation of the normal functioning of the school; the calculated ANOVA f-value=2.222 which is less than the actual f-value=2.95 and also the collated sig=0.036 which is less than the confidence interval=0.05. This clearly implies that there were significant differences between the groups of respondents. This further indicates that the idea was diverged or extended among the respondents. This again indicates that the normal functioning and evaluation of school varies from school to school and from woreda to woreda. This explains that each school or

woreda had its own tools and formats for evaluating the normal functioning of the school. This by itself creates a problem on decisions that made at zone level. EMIS analysis of all woreda varies from place to place and this variation by itself is a challenge for zone education offices.

Monitoring the outgoing process of the school was also analyzed on this Table. The calculated ANOVA for monitoring f-value=3.188 which is less than the actual f-value and the calculated sig=0.004 which is less than 0.05. This clearly shows that there is no significant difference among the respondents. It is possible to infer at 95% confidence level that the information provided on monitoring the outgoing process of the school was consistent. In other way round information for enrollment projection were also analyzed and he calculated ANOVA and the mean together with the mean shows the information provided were consistent.

Information on policy makers in line of that of the school and woreda education offices was also analyzed by using ANOVA. Similarly, the result clearly shows the information provided by respondents were consistent. The information provided converges to the same range of ideas. This clearly shows that, the schools and woreda education offices have similar or the same understanding on information on policy makers. Similarly information about conducting study in the school were also analyzed and the result shows that there is no significant difference among respondents. It is possible to infer or conclude that the information about conducting study in the school converges or consistent at confidence level 95%.

Project implementation is also the base that has to be analyzed. So, the calculated ANOVA indicates that there is no significant difference among respondents' group. Similarly, the information collected with no significant difference clearly shows that information was collected for the sake of report only.

Table 17: View of Respondents on Means of Dissemination of Educational Information

no	Means of communication	Existence			
		Yes		NO	
		F	%	F	%
1	Webpage	0	0	153	100
2	Electronically (softcopy)	0	0	153	100
3	Meeting (PTA, staff, and others)	153	100	0	0

The figures on Table above shows that there is no means of communication like webpage, Electronic (soft copy) and the like to dissemination of data. All respondents responded that there is no these means in schools and woreda education offices. But all respondents replied that they have been using meeting to disseminate information with PTA, staff, and other stockholders. This clearly shows one of the defects of EMIS.

4.6. Improve EMIS Capacity and their Challenges

Training is one way of improving the management skill of individual and the performance of the organization in general. Regarding this barriers of information were collected and analyzed according to the following Table.

Table 18: View of Respondents of Improve EMIS Capacity and their Challenges

s/n	Items	Statistical Measures		One Way ANOVA	
	EMIS functions	Mean	St.dev	F	Sign
1	Statistical publication through CD Rom	2.98	1.558	0.426	0.885
2	Communication through internet	2.49	1.829	0.605	0.751
3	Design internet webpage	2.45	1.832	0.672	0.696
4	Our record management is paper based	4.01	1.192	1.337	0.237
5	School record management computerized	3.61	1.514	1.143	0.340
6	Data base design, development, and maintenance	3.05	1.607	0.348	0.930
7	Survey management at school level	2.74	1.454	0.431	0.881
	Improved HR training for capacity building				
1	Training given to the staff on computer application	2.05	1.346	1.290	0.259
2	Training given to administrative staff	2.36	1.244	2.085	0.049
3	Work procedure and task management	2.23	1.238	1.028	0.414
4	Leadership style and quality management	2.73	1.230	1.310	0.249
5	Good governance	3.19	1.297	1.629	0.132
6	Effective and maximum use of it	2.06	1.461	1.167	0.325

As indicated on Table 18 above concerning means of communication like electronic communication were analyzed, statistical publication through CD-ROM were evaluated with f-value=0.426 which is less than the actual value and sig=0.885 which is greater than 0.05. So, this shows that there is no significant difference among respondents. On top of this mean 2.98 and standard deviation= 1.558. This shows that there is a little bit or about one standard deviation. It is possible to conclude with the confidence level 95% that the idea collected converges to certain point/range.

Communication through internet was analyzed and the result clearly shows that almost inexistence in function. Again Table 18 further indicates on this issue that f-value 0.605 which is

less than the actual f-value and sign=0.751 which clearly reveals that again the response collected had no any significant difference. This is again convergent to the idea that totally there is no any internet access. This blocks or serves as the barrier of communication between the school and woreda education offices.

Concerning designed WebPages this issue were analyzed and interpreted and the result was not promising. f-value=0.672 which is less than the actual f=value=2.95 and sig 0.696 which is greater than the residue of confidence level=0.05. So, this shows that there is no significant difference. This further indicates that the idea collected and analyzed were convergent. If this is the case, school record management system were also analyzed and the result indicates with confidence level=95% were paper based record management system. Calculated ANOVA with f-value= 0.431 which is less than 2.95 and sig=0.881 on survey management at school and woreda level. This shows the similarly of ideas collected from respondents in different groups.

Improved human resource (HR) training for capacity building is very important for the success of EMIS and even success of any organization. Information were collected and analyzed with the standard deviation information were collected and analyzed with the Standard deviation = 1.346, mean=2.05 and the calculated ANOVA with f-value=1.29 and sig=0.259. These all clearly shows that there were no significant differences among the respondents of different groups concerning the training given to staff on computer application. As data/information was collected and analyzed through interview, there were no training was given concerning computer application. This clearly indicates and further confirms us there were lack of skilled manpower on computer and ICT.

As the calculated ANOVA indicates most of the time the training was given for administrative staffs. But as it was analyzed through interview the training given were on different management, good governance, and the like but there were no training given on computer applications for these administrative staff. Work procedure and task management at school level, and woreda education office were also treated. The calculated ANOVA with f-value=1.028 which is less than 2.95, and sign=0.414 which is greater than 0.05. This shows that there is no significant difference on information collected from different groups.

Leadership style and quality management together with good governance were also analyzed in Table above. So, the result shows that ANOVA with f-value= 1.310 and sig= 0.249, and f-value=1.297 and sig=0.132 for leadership style, and quality management respectively. In both cases the information collected is supporting each other. From this it is possible to conclude with confidence level 95% that the information is convergent. In other way round, effective and maximum usage of it was also analyzed and the result was surprisingly disappointing. There is no effective usage of ICT due to the reasons and factors analyzed in Table above.

4.6.1. Challenges Facing EMIS Development

Even though, we are in information age and most of the activities and tasks are computerized; steal our school systems are suffering from different challenges facing EMIS administrative procedure. Concerning these issue different indicatives like poor coordination, and leadership is one challenging factor.

Table 19: Challenges Facing EMIS Development

s/n	Challenges facing EMIS Administrative/procedure	Statistical Measure		Chi-square test		One Way ANOVA
		Mean	St.dev	Chi-sig	F	Sign
1	Poor coordination and leadership	2.78	1.000	124.48	2.129	0.044
2	Lack of system and program monitoring and evaluation	2.88	1.357	13.503	1.849	0.082
3	Poor record keeping	2.93	1.098	57.621	2.518	0.018
4	Lack of organizational readiness	3.33	0.953	89.843	1.041	0.405
	Facilities (materials)					
1	Lack of computer	2.41	1.315	41.477	0.843	0.554
2	Lack of CD Rom, Flash, Hard disk	2.22	1.375	73.307	0.96	0.504
3	Lack of training to use it effectively	1.65	1.029	185.007	0.990	0.441
	Data related challenges					
1	Lack of data integration	2.56	1.302	50.889	0.798	0.591
2	Supplication and overlapping data	2.56	1.351	39.974	3.154	0.004
3	Lack of feedback to data	2.25	0.780	212.71	3.455	0.002
4	In accurate and incomplete information	2.88	1.038	94.68	1.198	0.308
	Finance Related problems					
1	Budget constraint	2.01	1.156	92.781	1.041	0.405
2	Unfair budget allocation	2.26	0.817	113.699	0.899	0.509
3	Unable to allocated during planning	2.45	0.760	75.157	1.277	0.446

For chi-squ=confidence level =99% or sig< 0.01 (Monte Carlo sig). For ANOVA= confidence level= 95% or sig. < 0.05

The calculated ANOVA with f-value =2.129 which is less than 2.95, and sig=0.044 which is less than 0.05. So, it is possible to infer clearly that there is significance difference among response of respondents. This further depicts that the idea diverges to some common points.

Lack of system and program monitoring and evaluation is also another factor that challenged the development of EMIS. The computed ANOVA with f-value =1.849 which is less than 2.95, and sig=0.0.082 which is greater than 0.05. This clearly indicates that the idea converges to a point. In other words, poor record keeping is also another disaster. Concerning this issue the computed ANOVA shows ANOVA with f-value =2.518 which is less than 2.95, and sig=0.18. This clearly shows that respondents' ideas were divergent and it is impossible to judge the case.

Employees of the organization have to get ready for the development of any organization. Lacks of organizational readiness were also organized and the ANOVA as there is no significance difference among the respondents' response. As the data/information were collected through interview indicates that most of teachers and woreda education office workers were not ready to perform tasks. This highly impedes the success and development of EMIS.

Facilities and materials for EMIS were also analyzed and the following detail justified interpreted results are obtained. As it is analyzed and interpreted in other Tables above concerning lack of computers the calculated ANOVA with f-value =0.843 and its respective sig=0.554. This indicates the idea replied converge to common agenda. So, it is possible to infer with ANOVA confidence level 95% and chi-square with confidence level 99% that there is shortage of computers in education system of Jimma Zone.

Duplication and overlapping of data is also analyzed and the result reveals that there is no significant difference among the respondents' response. This clearly shows that the ideas obtained were similar. Mean while lack of feedback to data, and inaccurate and incomplete information are also another dimension that has to be analyzed. The figure on the Table clearly shows that in both cases the ideas obtained were similar.

CHAPTER FIVE

5. Summary, Conclusion and Recommendation

This chapter presents summary of the major investigated findings, the conclusion drawn from the findings, and the recommendations forwarded, that may help to improve the development and success of Education Information System (EIS) of Jimma Zone. The main objective of the study were to investigate the development of EMIS and to assess the efforts made to improve to quality of data to support decision- making, monitoring, and evaluation of the system, to examine the information demanded and supplied. In addition to this the study tries to identify the challenges that impede the development of EMIS. To this end the following six basic questions were formulated in order to achieve the stated objectives and examine the shortcoming encountered in the development of EMIS.

1. What information are supplied to secondary schools by EIS?
2. What information secondary schools needs at large?
3. To what extent information is sufficient, valid, and consistent for decision making?
4. What measures are taken for the implementation of EIS for decision making?
5. What are the problems, and challenges that impedes/hinders/ the development of EMIS?
6. What procedures are in place for collection and dissemination of education information system?

In order to give appropriate conclusion and recommendation for the above six basic questions the specific objectives for target were:

1. To assess the supply and demand of information for the management of secondary schools.
2. To assess the effectiveness of EMIS in line with time, relevance, and reliability.
3. To assess the extent of information utilization to manage secondary schools.
4. To assess efforts made to improve EIS to support decision making process in education system.
5. To identify the major problems and challenges of EMIS.

To address these objectives with respective questions, relevant and related literatures were reviewed. Descriptive survey was employed to assess the development of EMIS and its

challenges. Schools and WEOs were the primary sources of data/information for the study. The secondary sources of data such as meetings' minutes, annual statistics of the school, woreda, and Zone education offices were also reviewed and analyzed. For this study 8 WEOs, 15 secondary and preparatory schools, one ZEO were included and the necessary information were collected and analyzed. Set of questionnaires were used to collect necessary information for EMIS from school directors, vice principals, school supervisors, and unit leaders. With the same taken information were collected from WEO, WEOCPO, woreda supervisors, ZEO, ZEOCPO, and woreda and zone statisticians.

5.1. Summary

In the study, extensive efforts were made to examine the situation from different perspectives. So, as to suggest possible recommendations that may help for the development of EMIS, the data/information obtained from sample respondents were analyzed and interpreted by using percentage, frequency distribution Table, pie chart, mean, grand mean, standard deviation, t-test, Likert scale, chi-square, and one way ANOVA.

5.1.1. Characteristics of Respondents

The respondents of this study were school principals, vice principals, unit leaders, school supervisors, WEOs, WEOCOP, Woreda supervisors, and zone and woreda statisticians. Of this 141 (92.2%) were male, and 12 (7.8%) were female. For this study 162 questionnaires were distributed, but 153 were correctly filled and returned. In other way round nine (5.56%) of questionnaires were lost due to certain factors while distribution and filling of data were 153 (94.44%) succeeded.

5.1.2. Major Findings of the study

Characteristics of the respondents were analyzed in line of their age, sex, educational qualification, job experience, training received. The major findings of the study are summarized as follows.

The sex of respondents with respect of the position vested indicated as there was great gap. What was surprising here is that there was no female director, no female woreda or zone statistician, no female WEO, no female ZEH and ZEOCPO. This shows as it needs further study that it doesn't have any significant effect on this study. To sum up, from the respondents filled the questionnaire 141 (92.2%) were male and 12 (7.8%) were female.

Age wise, as it is indicated in Table 3 there were no vice directors, WEO, WEOCPO, woreda supervisors with age less than 25 years. This indicates that, this position of EMIS needs experience. But one (6.7%) of the directors, one (4.5%) of the school supervisors, one (4.3%) of the unit leaders and one (14.3%) of woreda and zone statisticians were included in the age range less than 25 years. This contradicts with the idea that EMIS needs more experiences. In other way round, 7 (46.7%) of the directors age were 36-45 years and this clearly shows us that as the directors were experienced. Surprisingly, there were no WEO with an experience of 6-10 years and no WEOCPO with an experience of 11-15 years in this study.

Concerning qualification, even though the position needs MA/MSc; almost all are qualified with BA/BSc/BEd. There was no one with qualification TTI. But one (4.3%) of the unit leaders, one (12.5%) of the WEOCPO, and one (2.5%) were under qualified. Those individuals were graduated with diploma that is not required in these positions. In other way round, the reason that made respondents not be satisfied was also be collected and analyzed. Their reasons were because they are not trained in leadership, because of low salary, due to environmental influences, they are not qualified in EDPM, it is difficult activity, it is hard to lead, and lack of facilities were the major reasons.

As analyzed in chapter 4 about 98 (64.1%) of the respondents were took different trainings given by ZEO and regional education bureau. As replied by the respondents One (0.7%) of the respondents replied that the areas training given was on disciplinary problem. 17 (11.1%) were on EDPM, one (0.7%) were on foundation of management and supervision, three (2%) were on management. 11 (7.2%) were on school management. And also 12 (7.8%) took training on teaching methodology. But from 153 respondents 99 (64.7%) were not replied where the training was given rather they simply kept silent. As it was indicated in Table 6 above about 72 (47.1%) responded as they were not satisfied with the training given. But only 39 (25.5%) were satisfied with that of the training given.

Moreover, no one responded as the demand/supply of information between the school and the WEO was very low. The mean of the responses responded were about 3.95 which mean that nearly demand/supply of information highly took place between school and Woreda education offices.

Dropout case is familiar activity of education sector of Jimma zone as per the cash crop area of the land. Most of the students quit their education and involved in other transactions of goods and services.

The result shows that PTA is participating in school and education systems. This indicates that other stakeholders are involved highly in education system. But the schools had their own formats to collect or to send data for stakeholders. But as far as this study was concerned there were no standardized or predefined format that was given for students or woreda education offices to demand or/and supply of information.

Information on teachers' performance or efficiency per semester /quarterly/ yearly was also analyzed. As a result as it were analyzed the average= 3.84 and the standard deviation =0.773 this clearly indicates that almost the respondents agreed on the issue that the information about teachers performance is highly demanded. But, the reality obtained through interview indicates that there was even no annual teachers' appraisal (efficiency) document at all. They prepare easily as per the request of individual teacher for career structure (salary increment) or for other competitions.

The respondents gave their responses as 1:53 (student-teacher ratio), and 1:1 (student-text book ratio). Student text ratio was almost succeeded that one student can use (have) one book.

The calculated information clearly gives us the input to decide as there were no significant differences among the groups of respondents. Absence of significant difference mean do not leads us to say EMIS was enhanced and facilitated. Even though the respondents agree on their response the way they collect evidence and information from school and other sources were traditional and disappointing.

The calculated ANOVA show the quality of indicators of content has no significant difference on relevance and accuracy. But concerning the completeness it shows as there exists a significance difference among respondents. This more shows that the information had a problem since it was not completed. Being incompleteness shows it will highly affects the whole EMIS.

Concerning means of communication like electronic communication like internet. WebPages. statistical publication through CD-ROM are considered as dream issues.

The analyzed information indicates that the normal functioning and evaluation of school varies from school to school and from woreda to woreda.

5.2. Conclusions

EMIS of Jimma zone of education sector were analyzed and interpreted. So, it is the right time to draw the following conclusions.

EMIS with no question supports individual workers and enhances the performance of any organization specifically education sectors. Automated systems support workers in terms of time, cost, clarity, and the like. But the result of the study clearly shows as EMIS was non functional in this zone concerning education system. The factors that impede the development of EMIS. Such factors are trained manpower, material services, willingness, readiness of workers for change and development, etc.

The training given for works of education sector was also seen and most of the respondents were unsatisfied. Even there are individuals that hate their current position. In other way round, most of the respondents were male. This creates a challenge and gender gap and this by itself affects the functionality of EMIS. Record management system and way of decision making strategies are also endanger. Their record management system was totally flat (manual and paper based) system. This is challenging during searching of different information from the existing files. When we say EMIS is functional we have to see everything inline of time, accuracy, clarity, and the like. Concerning these issues the education system of Jimma zone and the like are weak.

Means of communication that they use was meeting to obtain or disseminate information from school staffs, PTAs, and other stakeholders. Imagine how the meeting is boring, and time consuming. There were no internet and other electronic means of communication to receive or send data/information. As different scholars stated information is useful, meaningful, vital, and is power. Even there were the respondents that replied as they do not have plasma televisions in their school. This contradicts with the reports generated by MoE that no secondary schools exist without the access of plasma television.

EMIS materials like computers and the like are insufficient. One computer for one school or no computer for one school principle exists in the area covered. From this ratio it is clear that even there is no computer in Jimma zone education system and schools in particular. With the

absence of computers and other electronics internet and electronic means is unthinkable.Demand and supply of data/information is from school to different stakeholders like WEO, PTA, community, etc. Generally, an activity that has been taking place concerning EMIS in this particular zone was traditional in trend.

5.3. Recommendations

Depending on the major findings and conclusions the following recommendation are forwarded.

This age is obviously an information age in which information and information management is crucial agenda. Individuals have to run inline of time, and technologies. Even the government of Ethiopia announced that 70% of students of higher institutions and preparatory schools have to assigned in the technology faculty whereas about 30% of student remained in social science. This indicates that how much attention is given for technologies. Meanwhile, almost all education sectors from school to higher zone education are not automated. Still the record management system, filing system, even registration of personnel, teachers, and students registration are traditional. EMIS decision support is no available. Even there is no enough materials together with trained manpower in the system studied. So, these issues are crucial and serious events that we cannot put it aside. Authorized individuals, communities, parents, NGOs, together with government have to take serious consideration on this issue.

It is known that EMIS supports teaching and learning activities at school, woreda, and zone education. If this is the case when we say one computer for one school or even there are schools that cannot have computers; the ratio may be 1:100 and more. This is not expected within this age. In other way round we are trying to boost up technology and EMIS. In other way again the school and woreda education offices kept the agenda aside. So, the government and concerned body have to plan vertically and horizontally about EMIS.

Education sector is currently running the six education quality packages. From these packages ICT is one and the base for other five packages. Without the presence of computers, ICT materials and manpower; this package is simply theoretical and meaningless.

Most of the time as it was clarified in the study; different training were given for different staffs and administrators of schools and WEOs' workers. But most of the workers were unsatisfied

with that of the training given. This is due to the absence of need assessment on the area on which training is given. As a result the need and interest of the workers were no clearly addressed. So, to solve such problem SWOT analysis has to be done well.

Even though most of the respondents were degree (BA/BSc/BEd) holders, still there are individuals who are diploma holders and leading even woreda education offices of certain woredas. Assume in the presence of many BA/BSc/BEd holders; under qualified individuals are leading these qualified individuals. This by itself demoralizes and reduces the motivation and readiness of individual workers in school and woreda. So, it is good and important if we follow the principle of scientific management that is "a right person in a right place to do a right thing.

The schools demands information from different stakeholders and supplies to needy as daily activities. This sending and receiving or giving and taking is an activity that performed spontaneously. What is surprising is that each woreda and respective schools are using different formats to collect similar information. These different formats are challenging for analysis at zone level. So, the zone education and woreda together have to prepare standardized formats for data collection. Moreover, policy makers are also intended to plan on EMIS and its implementation.

Reference:

Aiyepeku, W.O. (1978): **The information component in decision-making**: a framework for analysis. *Quarterly Journal of Administration* P. 127-139.

Alexander. (2001): **Triangulation of Quantitative and Qualitative Data in Typological Social Research** Volume 2, No. 1

Anderson, G.(1980): **Fundamentals of Education Research**. London: The Falmer Press

Best, J.W. and Kahn, J.V.(2003):**Research in Education**, 7th ed, New Delhi: Prentice-Hall of India.pvt. Ltd.

Borg, W.P. (1985): **Education Research**. An Introduction, New York: David McKay Company Inc.

Brewer, J.D. and Miller, R.L. (2003): The A-Z of Social Research. London:Sage Publishing.

Clare, C. & Stutele, G.(1995): **Information systems strategy to design**. London: Chapmann & Hall, pp. 18-25.

Carrizo,L.,Sauvageeot C. and Bella N. (2003) :**Information Tools for the preparation and monitoring of education plans.** Paris:UNESCO

Cassidy, T.(2005): **Education Management Information Systems(EMIS) in Latin America and the caribbeans**. Lessons and challenges. Retrieved Oct 15, 2010, from http://www.iadb.org/IDBDOCS.cfm

Cassidy, T.(2006): **Education Management Information Systems(EMIS) in Latin America and the caribbeans**. Lessons and challenges. Retrieved Oct 15, 2010, from http://www.iadb.org/IDBDOCS.cfm.

Chapman, D.W & Mahlck, L.O(Eds)(1993): **From Data to Action**: Linking Data to Action. Paris: UNESCO

Cohen, L. and L. Manon(1994): **Research Methods in Education**. (4th Ed). New York: Rutledge

Currt, A. Flett, P. and Hollings Worth, I. (2006): **Management Information System**: The Business Perspective. London: RutledgeTaylor and Francis Group

Davis,G.B&Olsen, M.H(1985): **Management Information Systems**:Conceptual foundation, structure and development 2nd Edition. New York:McGRAW,.HOL Book Company.

Dennis, A.R. (1996,) **Information exchange and use in small group decision-making**. *Small Group Research, 27*(4) 532-550. Univ. of Georgia, Terry College of Business, Athens, G.A. (From Psychological Abstracts 1997, Jan-Dec, 84 Abstract NO. 30356.

Education Bureau (2007): **Education Statistics Annual Abstract**.2005/06 Addis Ababa

Erwat & Fabunmi (2006): **Information acquisition and managementcapacity as correlates of administrators' decision-making effectiveness in tertiary institutions in Southwestern Nigeria.** Journal of Sociology and Education in Africa, 5(2).

Fernandez, Jorge Max.(2005.) **Information, "Assessement and Decision-Making in the Carribbean Region;** An Analysis." A report prepared for the IADB Carribbean Sub-regional policy dialogue meeting. Washington, D.C.

Global ICT Department. (2002): **Information and Communication Technologies:** A World Bank Group Strategy. *The International Bank for Reconstruction and Development / The World Bank:* Washington, DC 20433.

GOVERNMENT OF ETHIOPIA (2007): **Report on Progress in Implementing the World Fit for Children Plan of Action in Ethiopia**, Addis Ababa.

Hallack, J.(1990): **Planning The Location of Schools: An Instrument of Education Policy**. Paris: UNISCO

http://ezinearticles.com/?How-a-Balanced-Scorecard-For-Education-Evaluation-Should-Be&id=1485354 Retrieved on *Dec 21/2010*

http:// ecommons.txtstate.edu/polsfacp/39/. Retried on Dec 2010

Hua, H. and Heristein, J.(2003): **Education Management Information Systems (EMIS): Integrated Data and Their Implication in Education Management.** Harvard University: New Orleans, LA

Infoshare (n,d). **ICT policies in Education**: Retrieved on 11 October 2010 from http://www.netsoftware.com

Islam, B. (2005): **Creating an Outer Circle in the Digital World:** Participation of Women in the e-Government System. *Economic Commission for Africa.*

Jeilu Oumer(2001): **Decentralization of Education Management**: A case study in Oromia. Addis Ababa Unpublished Master's Thesis

Jimma Zone Education Bureau (2007): **Education Statistics Annual Abstract**. 2009/10 Jimma

Kamar. J. (2005): **Research Methodology**: A step by step guide for beginners. London: Sage Publishing, Inc.

Lassila, K. S. and Borton, J. D. (2004). **Managing Information Technology for Performance: Information Systems Education for Executives**.*Eric database: ED431424.*

Madley, K.(1987): **Management Information System**. Planning and Decision Making. New Delhi: Parentice-Hall

Mengistu Amare(2010): **An Assessment of the Development of EMIS and its Challenges in Addis Ababa City Administration**, Addis Ababa, Unpublished Master's Thesis

Ministry of Education and Culture, Tanzania. (2004). **Education Sector Development Programme: Information and Communication Technology (ICT). Education Management Information System (EMIS) Development** Plan 2004-2007.

MoE(1987): **Education Statistics Annual Abstract**, Addis Ababa.

MoE(1993): **Education Statistics Annual Abstract**, Orion Printing press, Addis Ababa

MoE(1996): **Education Statistics Annual Abstract**, Bole Printing press, Addis Ababa

MoE(1998): **Education Sector Development Program Implementation Manual,** Unpublished Material, MoE.

MoE(2001): **Education Statistics Annual Abstract**, Artistic Printing press, Addis Ababa.

MoE(2003): **Education Statistics Annual Abstract**, Commercial Printing press, Addis Ababa.

MoE(2005): **Education Sector Development Plan(ESDP III).** Addis Ababa.

MoE(2007): **Education Statistics Annual Abstract**, Bole Printing press, Addis Ababa.

MoE(2008): **Education Statistics Annual Abstract**, HY International Printing press, Addis Ababa.

Mekonnen Kajela(2010): **The Practices and Problems of Education Information System (EIS) Management in Oromia**, Master's these, Addis Ababa.

Moses; K. (2001):**EDUCATION MANEGEMENT INFORMATION SYSTEM**:What is it and why do we not have more of it? TechKnowLogia. J accessed from www.techknowlogia.org on December , 2010.

Mulugeta, Abebe(2001): **The Problem of Policy Implementation in the Education Sector.** Cases from selected regions. In Amare Asgedom and others(Eds): Quality of primary Education in Ethiopia. Preceding of National Conference Held in Adama Ras Hotel, November 9-11. Institute of Educationnal Research, Addis Ababa.

O'Brien, J.(2003): **Introduction to Information System**(2nd ed). Boston: Mcgraw, Hill Irwin.

OEB(2005/6): **Education Statistics Annual Abstract**. Finfine: Finfine Printing and publishing S.C.

OEB(2006/7): **Education Statistics Annual Abstract**. Finfine: Finfine printing and publishing S.C.

OEB(2007/8): **The Millennium Education Statistics Annual Abstract**. Finfine: Eth-Cana PLC.

OEB(2009/10): **Education Statistics Annual Abstract**. Finfine: Finfine Printing and publishing S.C.

Oromia National Regional State(2000): **Oromia's Almanac**(Vol.1).Finfinne Reho Printers

Oz, E.(2002): **Management Information System** (3rd ed).New Delhi:Vikas publishing house.

Payne, D.A. (1992): **Measuring and Evaluator Educational Outcomes**.New York: Macmillan Publishing Company.

Ross, K & Mahlck, L.(Eds)(1990): **Planning the Quality of Education the Collection and Use of Data for Informed Decision Making**. UNESCO/IIEP: Pergaman press

Scott, G.M.(1986): **Principles of Management Information Systems**. New York: McGraw-Hill Book Company.

Sudman, S. and Bardburn, N. (1982): **Asking Questions**. A Practical Guide to Questionnaire Design. San Francisco: Jossey-Bass Press

Tegegn N.(2003) :**Education Management Information System:** An overview. Harare: UNESCO

Telem (1990): **The EMIS Structural Framework**. In the international encyclopedia of education, (2nd ed, vol.5, pp. 2828-2831). Great Britain: BPC Whealtons Ltd, Exeter

Telez, (n.d): **Education Management Information Systems (EMIS):**Available Software and Guidelines for Selection.

Teshome Yizengaw(2007): **The Ethiopian Higher Education**. Creating Space for Reform. Addis Ababa: St. Mary's UC Printing Press.

Tricker, Robert I. (1976): **Management Information and Control Systems**. New York: Wiley Plc.

UNESCO (1961): **Manual of Educational Statistics**. Nether Lands: NUESC

UNESCO (2003): **Information Tools for the Preparation and Monitoring of Education Plans, Education Policies and Strategies**. Paris: UNESCO

UNESCO (2006): **Information Systems and Educational Policies**: A framework for Indicators. Addis Ababa: UNESCO

UNESCO (2008): **Education Management Information System:** Retrieved Oct 20,2010 from http://www.unesco.org/iiep

Wilson, A.D (1996): **Managing Information**. Better Worth, Oxford:Heinemann Ltd.

World Education Forum(2000): **Education For All**: Meeting our collective comments. Held in Dakar, Senegal, from 26-28, April 2000. Retrieved on Jan 29, 2011 from http://www.un- documents.net/dakarfa.html

www.tojet.net/articles/526.pdf Retrieved on *Dec 16/2010*

www.eastafricauniversity.net/Files/medicine/bbainner3.html Retrieved on *Dec 16/2010*

www.learningexpert.net/chris/Publication/paper_3.pdf Retrieved on *Nov 12/2010*

Yalew.E.(2006): የምርምር መሠረዊ ምርጫዎች አተገባበር. ባህር ዳር ዩኒቨርሲቲ.

APPENDICES

Appendix A
Addis Ababa University
College of Education and Behavioral Studies
Department of educational Planning and Management
Area of Specialty: Educational Leadership

Questionnaire to be filled by school principals (directors) and vice principals (Vice Directors)

General Direction:

I would like to express my heart-felt appreciation and respect for your precious time and sincere cooperation, in advance, to fill this questionnaire. This questionnaire is designed to collect data/information to investigate the effectiveness of Education Information System (EIS) in the management of secondary schools, typically the status of EMIS (Education Management Information system). The findings could be used for planning, and improving the quality of education system in Jimma zone.

All information will be treated as confidential and no individual or school or Woreda Education Office (WEO) will be identified in any report rather than academic purpose. This requests respondents to follow the questionnaire with honest and sensible manner because your response matters on the findings.

Note that:

1. No need of writing your name.
2. Please put 'X' or '√' mark in the box provided where alternatives are provided when alternative are given.
3. If you have additional or different opinion or for open ended questions, please don't hesitate to given us precise answer.
4. What you respond is taken into account and it may support or affect the conclusions; so as much as possible be patient to fill the questions.
5. Your fast response will contribute to the successful completion of the study.

Part I: Personal information

1. Woreda _____ city/town _____
2. total no of secondary schools in your woreda including preparatory schools _____
3. Position: _____
4. Job experience in year:
   _____ In teaching, _____ In current position
   If others, specify _____ Total experience=_____
5. Sex: Male ☐ Female ☐
6. Age:
   ≤ 25 ☐ 26-35 ☐ 36-45 ☐ ≥ 45 ☐
7. Educational qualification:
   TTI ☐ College Diploma/TVET ☐ BA/BSc/BEd ☐ MA/MSc ☐

   If other, specify _____
8. Area of qualification/specialization:
   Major: _____ Minor: _____
9. Have you took any training related to management?
   Yes ☐ No ☐
10. If your answer to Q.1 is 'yes', the training was:
    Satisfactory ☐ Unsatisfactory ☐
11. Would you list down the areas in which you taken training?
    _____
    _____
12. Are you interested in your current position?
    Yes ☐ No ☐
13. If your answer to Q.4 is 'No', please list the cause made you to hate or dissatisfied in this position.
    _____
    _____
14. If your answer to Q.4 is 'Yes', please reason out why you like the position.
    _____
    _____
15. If an opportunity or chance to learn/upgrade your self is given for you in which field of specialty you need to learn for higher education?
    Management/leadership ☐ Your major area ☐
    If any other, specify _____.

Part II: Types of information demanded and supplied

2.1 Data management tools can be used to guide improvements in pupils' learning. The extent you consider that your woreda use of data management tool(s) improves pupils' learning: Please tick on one of the following:

To great extent =4, to some extent=3, not sure = 2,

To a limited extent =1 not at all=0

Extent of Data tool(usage)	0	1	2	3	4
2.1.1. In your woreda, how do you assess the effectiveness of your data tool(s) in improving pupils learning?					
2.1.2. We collect evidence of progress in learning from the school.					
2.1.3. We record each pupils' progress in learning each term.					
2.1.4. We review each pupil's achievements in comparison with targets set.					
2.1.5. We compare achievements in particular year groups with those of previous cohorts in the schools					
2.1.6. We compare pupils' achievement with that in similar local schools.					
2.1.7. We compare pupils' achievement with that in similar schools nationality					

If any other , please specify _____.

2.2 Please indicate the extent of your agreement with the following statements as: ***5= strongly disagree, 4= disagree, 3= neither agree nor disagree, 2=agree, 1=strongly agree.***

2.2. **Data input**	1	2	3	4	5
2.2.1. Analysis has had a positive impact on learning outcomes in my woreda.					
2.2.2. Data management tools simplify the process of setting woreda targets.					
2.2.3. It is difficult to translate the information generated by data analysis into woreda for education plan.					
2.2.4. Do not feel the potential for using data is being fully released in this woreda.					
2.2.5. The analysis of data does not improve teaching and learning.					
2.2.6. The analysis of data makes it easy to discuss the performance of the school with members of staff.					
2.2.7. Data analysis has helped to identify training needs in my woreda.					
2.2.8. Data analysis has helped to identify pupils who are under-performing.					
2.2.9. Data analysis has helped to identify areas of teaching/learning that need to be addressed in this woreda.					
2.2.10. Classroom teachers have no time to be invited to look at the information generated by our data management system.					
2.2.11. The area of data is supporting assessment for learning.					
2.2.12. More training is needed to help staff interpret and use the information generated.					
2.2.12. Data analysis tells us nothing that we don't already know.					

2.3 Types of Educational information needed by the school and other organs. In your perspective to what extent the following list of information are needed at school level and in the system of education?

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	Types of Educational information needed	Rating Scale				
2.3.1	**Students related information:**	1	2	3	4	5
	2.3.1.1. Information on learning achievement of children by subject, grade					
	2.3.1.2. Information on student members, performance achievement by subject, grade					
	2.3.1.3. Information on Repeaters by grade, sex, and age.					
	2.3.1.4. standardized students' achievement documents.					
	2.3.1.5. School age population.					
	2.3.1.6. Students' promotion policy.					
	2.3.1.7. Disabled students' manuals					
	2.3.1.8. Ground rules and regulations					
	2.3.1.9. Information on students' dropouts by grade, sex, and age.					
	2.3.1.10. Information on political activities by age, sex, and grade level.					
2.3.2	**Personnel, and teacher related information**	1	2	3	4	5
	2.3.2.1. Information on supervisor's report					
	2.3.2.2. Information on teachers numbers by subject, qualification, experience, sex, and age					
	2.3.2.3. Information on teachers' performance or efficiency per semester/quarterly/yearly.					
2.3.3	**Schools' class size(standard), and ratio**	1	2	3	4	5
	2.3.3.1. Information about class size with respect to standard.					
	2.3.3.2. Information about student class ratio					
	2.3.3.1. Information about teachers student ratio					
	2.3.3.1. Information about student text ratio					

2.4 Data/information users/demanded from school

Please rank (rate) the following by tick :

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	Data demanded or supplied by	1	2	3	4	5
2.4.1	Woreda Education Office					
2.4.2	PTA (Parent teachers association)					
2.4.3	Decision Makers					
2.4.4	Policy Makers					
2.4.5	Zone education office					
2.4.6	Regional Education Office					
2.4.7	Parents and community					
2.4.8	NGOs					

Part III: Adequacy and Quality of Information/EMIS

3.1 To what extent does data/information in your woreda satisfy the following quality criteria? Please rate them using the numbers indicated as follows:

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

1. Is there computer in your office?
   Yes ☐ No ☐
2. If the answer of Q.1 above is 'yes' for what purpose you use it?
   Please list here _____
3. If the answer for 'No' 1 above is 'yes' again what are the main problem that is related with effective usage of computer/plasma? Please list the problems in their degree of seriousness.
   1. _____ 3. _____
   2. _____ 4. _____
   If others specify _____

4. Is their plasma manual for teaching/ learning activities per subject?
   A. Yes ☐ B. No ☐ C. for certain subjects ☐
5. If the answer for Q.4 is 'C' for which subject the manual exists in your schools? Please identify in their categories.

Subjects that have a plasma manual	**those cannot have manual**
A._____	A._____
B._____	B._____

3.2 EMIS- Materials available

Lists below are the supportive materials or devices that will enhance the management of information; please indicate the exact status of the material device

No	Item	Current status of the device In your woreda/schools/		We don't have (not exist)	Remark
		Functional	Non functional		
3.2.1.	Computers (desktop)				
3.2.2	Laptops				
3.2.3.	Plasma TV				
3.2.4.	Television				
3.2.5.	Internet				
3.2.6.	CDs. floppy, flash...				
3.2.7	Copier Machine				
3.2.8.	Type writer				
3.2.9.	Binding machine				

Part IV: Problems of Information Management

4.1. Educational Information and decision-making

To what extent the following educational information are demanded or used in the woreda? Please rate them by using the numbers indicated below.

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	***Purpose for which educational information is demanded/needed***	**Rating scale**				
		1	**2**	**3**	**4**	**5**
4.1.1	Sound decision-making					
4.1.2	School planning and budgeting					
4.1.3	Evaluating the normal functioning of school					
4.1.4	Monitoring the ongoing process of the school					
4.1.5	For enrollment Projection					
4.1.6	Policy making					
4.1.7	Conducting study in the school					
4.1.8	For project implementation					
4.1.9	For sack of report to the needy/near by edu.office					

4.2. Dissemination of educational information through:

No	Means of communication	Existence		Comment or remark
		Yes	No	
4.2.1	Web-page			
4.2.2	Electronically (soft copy)			
4.2.3	Meeting (PTA, staff, and others)			

Part VI: Improve EMIS capacity and their challenges

5.1 In your opinion, what strategic should be taken to improve ENIS capacity in at woreda level? Please rate them as:

5= very high, 4= high, 3= Medium, 2= low, 1= very low

No	EMIS Capacity	*Rating Scale*				
	Electronic Communication	*1*	*2*	*3*	*4*	*5*
	5.1.1.1 Statistical publication through CD-ROM					
	5.1.1.2 Communication in internet					
	5.1.1.3 Designing internet web-pages					
5.1.1	5.1.1.4 our record management paper based					
	5.1.1.5 school record management computerized					
	5.1.1.6 Data base design, development and maintenance					
	5.1.7 Survey management at school level					
	Improved Human Resource (Training given) for capacity building	*1*	*2*	*3*	*4*	*5*
	5.1.2.1 Training given to the staff on computer application					
5.1.2	*5.1.2.2* Training given to administrative staff					
	5.1.2.3 Work procedure and task management					
	5.1.2.4 Leadership style quality management					
	5.1.2.5 Good governance					
	5.1.2.6 Effective and maximum use of IT					

5.2 Challenges Facing EMIS Development

(Problems that impede the development of EMIS)

Listed below are problems related to development of EMIS. Please rate them by using numbers indicated bellow.

1= Very serious problem 3= Medium problem 5= No problem
2= Serious problem 4= Rare case problem

No	Challenges facing EMIS Administrative/ Procedure	1	2	3	4	5
5.2.1	5.2.1.1 Poor coordination and Leadership					
	5.2.1.2 Lack of system and program monitoring and evaluation					
	5.2.1.3 Poor record keeping					
	5.2.1.4 Lack of organizational readiness					
5.2.2	**Facility(material shortage)**	1	2	3	4	5
	5.2.2.1 Lack of computer					
	5.2.2.2 Lack of CD-ROM, Flash, Hard disk...					
	5.2.2.3 Lack of training to use IT effectively					
	5.2.2.4 Lack of computer					
	5.2.2.5 Lack of CD-ROM, Flash, Hard disk...					
5.2.3	**Data related challenges**	1	2	3	4	5
	5.2.3.1 Lack of data integration					
	5.2.3.2 Duplication and overlapping data					
	5.2.3.3 Lack of feedback to data					
	5.2.3.4 Inaccurate and Incomplete information					
5.2.4	**Finance Related problems**	1	2	3	4	5
	5.2.4.1 Budget Constraint					
	5.2.4.2 Unfair budget allocation					
	5.2.4.3 Un able to allocate during planning					

If any, please specify_____

_____

Thank you for taking your time to complete this questioner!

Appendix A
Addis Ababa University
College of Education and Behavioral Studies
Department of educational Planning and Management
Area of Specialty: Educational Leadership

Questionnaire to be filled by school principals (directors) and vice principals (Vice Directors)

General Direction:

I would like to express my heart-felt appreciation and respect for your precious time and sincere cooperation, in advance, to fill this questionnaire. This questionnaire is designed to collect data/information to investigate the effectiveness of Education Information System (EIS) in the management of secondary schools, typically the status of EMIS (Education Management Information system). The findings could be used for planning, and improving the quality of education system in Jimma zone.

All information will be treated as confidential and no individual or school or Woreda Education Office (WEO) will be identified in any report rather than academic purpose. This requests respondents to follow the questionnaire with honest and sensible manner because your response matters on the findings.

Note that:

1. No need of writing your name.
2. Please put 'X' or '√' mark in the box provided where alternatives are provided when alternative are given.
3. If you have additional or different opinion or for open ended questions, please don't hesitate to given us precise answer.
4. What you respond is taken into account and it may support or affect the conclusions; so as much as possible be patient to fill the questions.
5. Your fast response will contribute to the successful completion of the study.

Part I: Personal information

1. Woreda_____ school _____ city/town_____
2. School level: grade 9-10 ☐ grade 9-12 ☐ grade 11-12 ☐
3. Position _____
4. Job experience in year:
   _____ In teaching, _____ In current position

   If others, specify _____ Total experience=_____
5. Sex: Male ☐ Female ☐
6. Age:
   ≤ 25 ☐ 26-35 ☐ 36-45 ☐ ≥ 45 ☐
7. Educational qualification:
   TTI ☐ College Diploma/TVET ☐ BA/BSc/BEd ☐ MA/MSc ☐

   If other, specify _____
8. Area of qualification/specialization:
   Major: _____ Minor: _____
9. Have you took any training related to management?
   Yes ☐ No ☐
10. If your answer to Q.1 is 'yes', the training was:
    Satisfactory ☐ Unsatisfactory ☐
11. Would you list down the areas in which you taken training?
    _____
    _____
12. Are you interested in your current position?
    Yes ☐ No ☐
13. If your answer to Q.4 is 'No', please list the cause made you to hate or dissatisfied in this position.
    _____
    _____
14. If your answer to Q.4 is 'Yes', please reason out why you like the position.
    _____
    _____
15. If an opportunity or chance to learn/upgrade your self is given for you in which field of specialty you need to learn for higher education?
    Management/leadership ☐ Your major area ☐
    If any other, specify _____.

Part II: Types of information Demanded and supplied

2.1 Data management tools can be used to guide improvements in pupils' learning. The extent you consider that your schools use of data management tool(s) improves pupils' learning: Please tick on one of the following:

To great extent =4, to some extent=3, not sure = 2,
To a limited extent =1 not at all=0

Extent of Data tool(usage)	0	1	2	3	4
2.1.1. In your school, how do you assess the effectiveness of your data tool(s) in improving pupils learning?					
2.1.2. We collect evidence of progress in learning from teachers in the school.					
2.1.3. We collect relevant examples of pupils' work to demonstrate progress in learning.					
2.1.4. We review summative teacher assessment outcomes over time.					
2.1.5. We record each pupils' progress in learning each term.					
2.1.6. We review each pupil's achievements in comparison with targets set.					
2.1.7. We compare achievements in particular year groups with those of previous cohorts in the school					
2.1.8. We compare pupils' achievement with that in similar local schools.					
2.1.9. We compare pupils' achievement with that in similar schools nationality					

If any other , please specify _____.

2.2 Please indicate the extent of your agreement with the following statements as: ***5= strongly disagree, 4= disagree, 3= neither agree nor disagree, 2=agree, 1=strongly agree.***

2.2. Data input	1	2	3	4	5
2.2.1. Analysis has had a positive impact on learning outcomes in my school.					
2.2.2. Data management tools simplify the process of setting school targets.					
2.2.3. It is difficult to translate the information generated by data analysis into school plan.					
2.2.4. Do not feel the potential for using data is being fully released in this school.					
2.2.5. The analysis of data does not improve teaching and learning.					
2.2.6. The analysis of data makes it easy to discuss the performance of this school with members of staff.					
2.2.7. Data analysis has helped to identify training needs in my school.					
2.2.8. Data analysis has helped to identify pupils who are under-performing.					

2.2.9. Data analysis has helped to identify areas of teaching/learning that need to be addressed in this school.					
2.2.10. Classroom teachers have no time to look at the information generated by our data management system.					
2.2.11. The area of data is supporting assessment for learning.					
2.2.12. More training is needed to help staff interpret and use the information generated.					
2.2.13. Data are used by staff at all levels within this school.					
2.2.14. Data analysis tells us nothing that we don't already know.					

2.3 Types of Educational information needed by the school and other organs. In your perspective to what extent the following list of information are needed at school level and in the system of education?

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	Types of Educational information needed	**Rating Scale**				
2.3.1	**Students related information:**	**1**	**2**	**3**	**4**	**5**
	2.3.1.1. Information on learning achievement of children by subject, grade					
	2.3.1.2. Information on student members, performance achievement by subject, grade					
	2.3.1.3. Information on Repeaters by gradc, sex, and age.					
	2.3.1.4. standardized students' achievement documents.					
	2.3.1.5. School age population.					
	2.3.1.6. Students' promotion policy.					
	2.3.1.7. Disabled students' manuals					
	2.3.1.8. Ground rules and regulations					
	2.3.1.9. Information on students' dropouts by grade, sex, and age.					
	2.3.1.10. Information on political activities by age, sex, and grade level.					
2.3.2	**Personnel, and teacher related information**	**1**	**2**	**3**	**4**	**5**
	2.3.2.1. Information on supervisor's report					
	2.3.2.2. Information on teachers numbers by subject, qualification, experience, sex, and age					
	2.3.2.3. Information on teachers' performance or efficiency per semester/quarterly/yearly.					
	Teachers' Guide/plasma manuals					

	Schools' class size(standard), and ratio	1	2	3	4	5
2.3.3	2.3.3.1. Information about class size with respect to standard.					
	2.3.3.2. Information about student class ratio					
	2.3.3.1. Information about teachers student ratio					
	2.3.3.1. Information about student text ratio					

2.4 Data/information users/demanded from school

Please rank (rate) the following by tick :

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	Data demanded or supplied by	1	2	3	4	5
2.4.1	Woreda Education Office					
2.4.2	PTA (Parent teachers association)					
2.4.3	Decision Makers					
2.4.4	Policy Makers					
2.4.5	Zone education office					
2.4.6	Regional Education Office					
2.4.7	Parents and community					
2.4.8	NGOs					

Part III: Adequacy and Quality of Information/EMIS

3.1 To what extent does data/information in your school satisfy the following quality criteria? Please rate them using the numbers indicated as follows:

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

Indicators of EMIS Quality		Rating Scale				
Major	**Minor**	1	2	3	4	5
Content	Accuracy					
	Relevance					
	Completeness					
	Clarity					

Form	Detail ness					
	Presentation					
Timeliness	Timelines/up to dated/on time					
	Currency					
	Frequency					

1. Is there computer in your school?
   Yes ☐ No ☐
2. If the answer of Q.1 above is 'yes' for what purpose you use it?
   Please list here _____
3. If the answer for 'No' 1 above is 'yes' again what are the main problem that is related with effective usage of computer/plasma? Please list the problems in their degree of seriousness.
   1. _____ 3. _____
   2. _____ 4. _____
   If others specify _____
4. Is their plasma manual for teaching/ learning activities per subject?
   A. Yes ☐ B. No ☐ C. for certain subjects ☐
5. If the answer for Q.4 is 'C' for which subject the manual exists in your school? Please identify in their categories.

Subjects that have a plasma manual	**those cannot have manual**
A._____	A._____
B._____	B._____

3.2 EMIS- Materials available

Lists below are the supportive materials or devices that will enhance the management of information; please indicate the exact status of the material device

No	**Item**	**Current status of the device**		We don't have (not exist)	Remark
		Functional	Non functional		
3.2.1.	Computers (desktop)				
3.2.2.	Laptops				
3.2.3.	Plasma TV				
3.2.4.	Television				

3.2.5.	Internet				
3.2.6.	CDs, floppy, flash...				
3.2.7.	Copier Machine				
3.2.8.	Type writer				
3.2.9.	Binding machine				

Part IV: Problems of Information Management

4.1. Educational Information and decision-making

To what extent the following educational information are demanded or used in the school? Please rate them by using the numbers indicated below.

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	***Purpose for which educational information is demanded/needed***	**Rating scale**				
		1	**2**	**3**	**4**	**5**
4.1.1	Sound decision-making					
4.1.2	School planning and budgeting					
4.1.3	Evaluating the normal functioning of school					
4.1.4	Monitoring the ongoing process of the school					
4.1.5	For enrollment Projection					
4.1.6	Policy making					
4.1.7	Conducting study in the school					
4.1.8	For project implementation					
4.1.9	For sack of report to the needy/near by edu.office					

4.2. Dissemination of educational information through:

No	Means of communication	Existence		Comment or remark
		Yes	No	
4.2.1	Web-page			
4.2.2	Electronically (soft copy)			
4.2.3	Meeting (PTA, staff, and others)			

Part VI: Improve EMIS capacity and their challenges

5.1 In your opinion, what strategic should be taken to improve ENIS capacity in at school level? Please rate them as:

5= very high, 4= high, 3= Medium, 2= low, 1= very low

No	**EMIS Capacity**	***Rating Scale***				
	Electronic Communication	***1***	***2***	***3***	***4***	***5***
	5.1.1.1 Statistical publication through CD-ROM					
	5.1.1.2 Communication in internet					

5.1.1	5.1.1.3 Designing internet web-pages					
	5.1.1.4 school record management paper based					
	5.1.1.5 school record management computerized					
	5.1.1.6 Data base design, development and maintenance					
	5.1.7 Survey management at school level					
5.1.2	**Improved Human Resource (Training given) for capacity building**	***1***	***2***	***3***	***4***	***5***
	*5.1.2.*1 Training given to the staff on computer application					
	*5.1.2.*2 Training given to administrative staff					
	*5.1.2.*3 Work procedure and task management					
	*5.1.2.*4 Leadership style quality management					
	*5.1.2.*5 Good governance					
	*5.1.2.*6 Effective and maximum use of IT					

5.2 Challenges Facing EMIS Development

(Problems that impede the development of EMIS)

Listed below are problems related to development of EMIS. Please rate them by using numbers indicated bellow.

1= Very serious problem 3= Medium problem 5= No problem

2= Serious problem 4= Rare case problem

No	Challenges facing EMIS Administrative/ Procedure	1	2	3	4	5
5.2.1	5.2.1.1 Poor coordination and Leadership					
	5.2.1.2 Lack of system and program monitoring and evaluation					
	5.2.1.3 Poor record keeping					
	5.2.1.4 Lack of organizational readiness					
5.2.2	**Facility(material shortage)**	1	2	3	4	5
	5.2.2.1 Lack of computer					
	5.2.2.2 Lack of CD-ROM, Flash, Hard disk...					
	5.2.2.3 Lack of training to use IT effectively					
	5.2.2.4 Lack of computer					
	5.2.2.5 Lack of CD-ROM, Flash, Hard disk...					
5.2.3	**Data related challenges**	1	2	3	4	5
	5.2.3.1 Lack of data integration					
	5.2.3.2 Duplication and overlapping data					
	5.2.3.3 Lack of feedback to data					
	5.2.3.4 Inaccurate and Incomplete information					
5.2.4	**Finance Related problems**	1	2	3	4	5
	5.2.4.1 Budget Constraint					
	5.2.4.2 Unfair budget allocation					
	5.2.4.3 Un able to allocate during planning					

If any, please specify_____

_____

Thank you for taking your time to complete this questioner!

Appendix C
Addis Ababa University
College of Education and Behavioral Studies
Department of educational Planning and Management
Area of Specialty: Educational Leadership

Questionnaire to be filled by School supervisors, and Unit Leaders

General Direction:

I would like to express my heart-felt appreciation and respect for your precious time and sincere cooperation, in advance, to fill this questionnaire. This questionnaire is designed to collect data/information to investigate the effectiveness of Education Information System (EIS) in the management of secondary schools, typically the status of EMIS (Education Management Information system). The findings could be used for planning, and improving the quality of education system in Jimma zone.

All information will be treated as confidential and no individual or school or Woreda Education Office (WEO) will be identified in any report rather than academic purpose. This requests respondents to follow the questionnaire with honest and sensible manner because your response matters on the findings.

Note that:

1. No need of writing your name.
2. Please put 'X' or '√' mark in the box provided where alternatives are provided when alternative are given.
3. If you have additional or different opinion or for open ended questions, please don't hesitate to given us precise answer.
4. What you respond is taken into account and it may support or affect the conclusions; so as much as possible be patient to fill the questions.
5. Your fast response will contribute to the successful completion of the study.

Part I: Personal information

1. Zone_____ city/town **Jimma**
2. total no of secondary schools in your Zone including preparatory schools _____
3. Position: _____
4. Job experience in year:
   _____ In teaching, _____ In current position
   If others, specify _____ Total experience=_____

5. Sex: Male ☐ Female ☐
6. Age:
   ≤ 25 ☐ 26-35 ☐ 36-45 ☐ ≥ 45 ☐
7. Educational qualification:
   TTI ☐ College Diploma/TVET ☐ BA/BSc/BEd ☐ MA/MSc ☐

   If other, specify _____
8. Area of qualification/specialization:
   Major: _____ Minor: _____
9. Have you took any training related to management?
   Yes ☐ No ☐
10. If your answer to Q.1 is 'yes', the training was:
    Satisfactory ☐ Unsatisfactory ☐
11. Would you list down the areas in which you taken training?
    _____
    _____
12. Are you interested in your current position?
    Yes ☐ No ☐
13. If your answer to Q.4 is 'No', please list the cause made you to hate or dissatisfied in this position.
    _____
    _____
14. If your answer to Q.4 is 'Yes', please reason out why you like the position.
    _____
    _____
15. If an opportunity or chance to learn/upgrade your self is given for you in which field of specialty you need to learn for higher education?
    Management/leadership ☐ Your major area ☐
    If any other, specify _____.

Part II: Types of information demanded and supplied

2.1 Data management tools can be used to guide improvements in pupils' learning. The extent you consider that your Zone use of data management tool(s) improves pupils' learning: Please tick on one of the following:

To great extent =4, to some extent=3, not sure = 2,
To a limited extent =1 not at all=0

Extent of Data tool(usage)	0	1	2	3	4
2.1.1. In your Zone, how do you assess the effectiveness of your data tool(s) in improving pupils learning?					
2.1.2. We collect evidence of progress in learning from the school.					
2.1.3. We record each pupils' progress in learning each term.					
2.1.4. We review each pupil's achievements in comparison with targets set.					
2.1.5. We compare achievements in particular year groups with those of previous cohorts in the schools					
2.1.6. We compare pupils' achievement with that in similar local schools.					
2.1.7. We compare pupils' achievement with that in similar schools nationality					

If any other , please specify _____.

2.2 Please indicate the extent of your agreement with the following statements as: *5= strongly disagree, 4= disagree, 3= neither agree nor disagree, 2=agree, 1=strongly agree.*

2.2. **Data input**	1	2	3	4	5
2.2.1. Analysis has had a positive impact on learning outcomes in my Zone.					
2.2.2. Data management tools simplify the process of setting Zone targets.					
2.2.3. It is difficult to translate the information generated by data analysis into Zone for education plan.					
2.2.4. Do not feel the potential for using data is being fully released in this Zone.					
2.2.5. The analysis of data does not improve teaching and learning.					
2.2.6. The analysis of data makes it easy to discuss the performance of the school with members of staff.					
2.2.7. Data analysis has helped to identify training needs in my Zone.					
2.2.8. Data analysis has helped to identify pupils who are under-performing.					
2.2.9. Data analysis has helped to identify areas of teaching/learning that need to be addressed in this Zone.					
2.2.10. Classroom teachers have no time to be invited					

to look at the information generated by our data management system.					
2.2.11. The area of data is supporting assessment for learning.					
2.2.12. More training is needed to help staff interpret and use the information generated.					
2.2.12. Data analysis tells us nothing that we don't already know.					

2.3 Types of Educational information needed by the school and other organs. In your perspective to what extent the following list of information are needed at school level and in the system of education?

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	Types of Educational information needed	**Rating Scale**				
2.3.1	**Students related information:**	**1**	**2**	**3**	**4**	**5**
	2.3.1.1. Information on learning achievement of children by subject, grade					
	2.3.1.2. Information on student members, performance achievement by subject, grade					
	2.3.1.3. Information on Repeaters by grade, sex, and age.					
	2.3.1.4. standardized students' achievement documents.					
	2.3.1.5. School age population.					
	2.3.1.6. Students' promotion policy.					
	2.3.1.7. Disabled students' manuals					
	2.3.1.8. Ground rules and regulations					
	2.3.1.9. Information on students' dropouts by grade, sex, and age.					
	2.3.1.10. Information on political activities by age, sex, and grade level.					
2.3.2	**Personnel, and teacher related information**	**1**	**2**	**3**	**4**	**5**
	2.3.2.1. Information on supervisor's report					
	2.3.2.2. Information on teachers numbers by subject, qualification, experience, sex, and age					
	2.3.2.3. Information on teachers' performance or efficiency per semester/quarterly/yearly.					
2.3.3	**Schools' class size(standard), and ratio**	**1**	**2**	**3**	**4**	**5**
	2.3.3.1. Information about class size with respect to standard.					
	2.3.3.2. Information about student class ratio					
	2.3.3.1. Information about teachers student ratio					
	2.3.3.1. Information about student text ratio					

2.4 Data/information users/demanded from school

Please rank (rate) the following by tick :

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	Data demanded or supplied by	1	2	3	4	5
2.4.1	Zone Education Office					
2.4.2	PTA (Parent teachers association)					
2.4.3	Decision Makers					
2.4.4	Policy Makers					
2.4.5	Zone education office					
2.4.6	Regional Education Office					
2.4.7	Parents and community					
2.4.8	NGOs					

Part III: Adequacy and Quality of Information/EMIS

3.1 To what extent does data/information in your Zone satisfy the following quality criteria? Please rate them using the numbers indicated as follows:

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

Indicators of EMIS Quality		**Rating Scale**				
Major	**Minor**	**1**	**2**	**3**	**4**	**5**
Content	Accuracy					
	Relevance					
	Completeness					
Form	Clarity					
	Detail ness					
	Presentation					
	Timelines/up to dated/on time					

Timeliness	Currency					
	Frequency					

1. Is there computer in your office?
   Yes ☐ No ☐
2. If the answer of Q.1 above is 'yes' for what purpose you use it?
   Please list here _____
3. If the answer for 'No' 1 above is 'yes' again what are the main problem that is related with effective usage of computer/plasma? Please list the problems in their degree of seriousness.
   1. _____ 3. _____
   2. _____ 4. _____
   If others specify _____
4. Is their plasma manual for teaching/ learning activities per subject?
   A. Yes ☐ B. No ☐ C. for certain subjects ☐
5. If the answer for Q.4 is 'C' for which subject the manual exists in your schools? Please identify in their categories.

Subjects that have a plasma manual	**those cannot have manual**
A._____	A._____
B._____	B._____

3.2 EMIS- Materials available

Lists below are the supportive materials or devices that will enhance the management of information; please indicate the exact status of the material device

No	**Item**	**Current status of the device In your Zone/schools/**		We don't have (not exist)	Remark
		Functional	Non functional		
3.2.1.	Computers (desktop)				
3.2.2.	Laptops				
3.2.3.	Plasma TV				
3.2.4.	Television				
3.2.5.	Internet				
3.2.6.	CDs, floppy, flash...				
3.2.7.	Copier Machine				

3.2.8.	Type writer				
3.2.9.	Binding machine				

Part IV: Problems of Information Management

4.1. Educational Information and decision-making

To what extent the following educational information are demanded or used in the Zone? Please rate them by using the numbers indicated below.

5=very high, 4= High, 3= Medium, 2= Low, 1= very low

No	***Purpose for which educational information is demanded/needed***	**Rating scale**				
		1	**2**	**3**	**4**	**5**
4.1.1	Sound decision-making					
4.1.2	School planning and budgeting					
4.1.3	Evaluating the normal functioning of school					
4.1.4	Monitoring the ongoing process of the school					
4.1.5	For enrollment Projection					
4.1.6	Policy making					
4.1.7	Conducting study in the school					
4.1.8	For project implementation					
4.1.9	For sack of report to the needy/near by edu.office					

4.2. Dissemination of educational information through:

No	Means of communication	Existence		Comment or remark
		Yes	No	
4.2.1	Web-page			
4.2.2	Electronically (soft copy)			
4.2.3	Meeting (PTA, staff, and others)			

Part VI: Improve EMIS capacity and their challenges

5.1 In your opinion, what strategic should be taken to improve ENIS capacity in at Zone level? Please rate them as:

5= very high, 4= high, 3= Medium, 2= low, 1= very low

No	**EMIS Capacity**	***Rating Scale***				
	Electronic Communication	***1***	***2***	***3***	***4***	***5***
5.1.1	5.1.1.1 Statistical publication through CD-ROM					
	5.1.1.2 Communication in internet					
	5.1.1.3 Designing internet web-pages					
	5.1.1.4 our record management paper based					
	5.1.1.5 school record management computerized					

	5.1.1.6 Data base design, development and maintenance					
	5.1.7 Survey management at school level					
5.1.2	**Improved Human Resource (Training given) for capacity building**	***1***	***2***	***3***	***4***	***5***
	*5.1.2.*1 Training given to the staff on computer application					
	*5.1.2.*2 Training given to administrative staff					
	*5.1.2.*3 Work procedure and task management					
	*5.1.2.*4 Leadership style quality management					
	*5.1.2.*5 Good governance					
	*5.1.2.*6 Effective and maximum use of IT					

5.2 Challenges Facing EMIS Development

(Problems that impede the development of EMIS)

Listed below are problems related to development of EMIS. Please rate them by using numbers indicated bellow.

1= Very serious problem 3= Medium problem 5= No problem

2= Serious problem 4= Rare case problem

No	Challenges facing EMIS Administrative/ Procedure	1	2	3	4	5
5.2.1	5.2.1.1 Poor coordination and Leadership					
	5.2.1.2 Lack of system and program monitoring and evaluation					
	5.2.1.3 Poor record keeping					
	5.2.1.4 Lack of organizational readiness					
5.2.2	**Facility(material shortage)**	1	2	3	4	5
	5.2.2.1 Lack of computer					
	5.2.2.2 Lack of CD-ROM, Flash, Hard disk...					
	5.2.2.3 Lack of training to use IT effectively					
	5.2.2.4 Lack of computer					
	5.2.2.5 Lack of CD-ROM, Flash, Hard disk...					
5.2.3	**Data related challenges**	1	2	3	4	5
	5.2.3.1 Lack of data integration					
	5.2.3.2 Duplication and overlapping data					
	5.2.3.3 Lack of feedback to data					
	5.2.3.4 Inaccurate and Incomplete information					
5.2.4	**Finance Related problems**	1	2	3	4	5
	5.2.4.1 Budget Constraint					
	5.2.4.2 Unfair budget allocation					
	5.2.4.3 Un able to allocate during planning					
	5.2.4.4 Budget Constraint					
	5.2.4.5 Unfair budget allocation					
	7.3.4.6 Un able to allocate during planning					

If any, please specify_____

_____

Thank you for taking your time to complete this questioner!

Appendix F-1

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Department of Educational Planning and Management

RELIABILITY TEST RESULTS OF DIRECTORS AND V/DIRECTORS

```
RELIABILITY
/VARIABLES=Q2.1.1 Q2.1.2 Q2.1.3 Q2.1.4 Q2.1.5 Q2.1.6 Q2.1.7 Q2.1.8 Q2.1.9
Q2.2.1 Q2.2.2 Q2.2.3 Q2.2.4 Q2.2.5 Q2.2.6 Q2.2.7 Q2.2.8 Q2.2.9 Q2.2.10
Q2.2.11 Q2.2.12 Q2.2.13 Q2.2.14 Q2.3.1.1 Q2.3.1.2 Q2.3.1.3 Q2.3.1.4
Q2.3.1.5 Q2.3.1.6 Q2.3.1.7 Q2.3.1.8 Q2.3.1.9 Q2.3.1.10 Q2.3.2.1 Q2.3.2.2
Q2.3.2.3 Q2.3.3.1 Q2.3.3.2 Q2.3.3.3 Q2.3.3.4 Q2.4.1 Q2.4.2 Q2.4.3 Q2.4.4
Q2.4.5 Q2.4.6 Q2.4.7 Q2.4.8 Q2.4.9 Q3.1.1 Q3.1.2 Q3.2.3 Q3.2.4 Q3.2.5
Q3.2.6 Q3.2.7 Q3.2.8 Q3.2.9 Q3.3.1 Q3.3.2 Q3.3.3 Q3.3.4 Q3.3.5 Q3.3.6
Q3.3.7 Q3.3.8 Q3.3.9 Q4.1.1 Q4.1.2 Q4.1.3 Q4.1.4 Q4.1.5 Q4.1.6 Q4.1.7
Q4.1.8 Q4.1.9 Q5.1.1.1 Q5.1.1.2 Q5.1.1.3 Q5.1.1.4 Q5.1.1.5 Q5.1.1.6
Q5.1.1.7 Q5.1.2.1 Q5.1.2.2 Q5.1.2.3 Q5.1.2.4 Q5.1.2.5 Q5.1.2.6 Q5.2.1.1
Q5.2.1.2 Q5.2.1.3 Q5.2.1.4 Q5.2.2.1 Q5.2.2.2 Q5.2.2.3 Q5.2.3.1 Q5.2.3.2
Q5.2.3.3 Q5.2.3.4 Q5.2.4.1 Q5.2.4.2 Q5.2.4.3
/SCALE('ALL VARIABLES') ALL/MODEL=SPLIT.
```

Reliability

```
[DataSet1] F:\Mas.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	9	100.0
	Excluded(a)	0	.0
	Total	9	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.932
		N of Items	55(a)
	Part 2	Value	.937
		N of Items	56(b)
	Total N of Items		111
Correlation Between Forms			.870
Spearman-Brown Coefficient	Equal Length		.931
	Unequal Length		.931
Guttman Split-Half Coefficient			.929

a The items are: Q2.1.1, Q2.1.2, Q2.1.3, Q2.1.4, Q2.1.5, Q2.1.6, Q2.1.7, Q2.1.8, Q2.1.9, Q2.2.1, Q2.2.2, Q2.2.3, Q2.2.4, Q2.2.5, Q2.2.6, Q2.2.7, Q2.2.8, Q2.2.9, Q2.2.10, Q2.2.11, Q2.2.12, Q2.2.13, Q2.2.14, Q2.3.1.1, Q2.3.1.2, Q2.3.1.3, Q2.3.1.4, Q2.3.1.5, Q2.3.1.6, Q2.3.1.7, Q2.3.1.8, Q2.3.1.9, Q2.3.1.10, Q2.3.2.1, Q2.3.2.2, Q2.3.2.3, Q2.3.3.1, Q2.3.3.2, Q2.3.3.3, Q2.3.3.4, Q2.4.1, Q2.4.2, Q2.4.3, Q2.4.4, Q2.4.5, Q2.4.6, Q2.4.7, Q2.4.8, Q2.4.9, Q3.1.1, Q3.1.2, Q3.2.3.

b The items are: Q3.2.3, Q3.2.4, Q3.2.5, Q3.2.6, Q3.2.7, Q3.2.8, Q3.2.9, Q3.3.1, Q3.3.2, Q3.3.3, Q3.3.4, Q3.3.5, Q3.3.6, Q3.3.7, Q3.3.8, Q3.3.9, Q4.1.1, Q4.1.2, Q4.1.3, Q4.1.4, Q4.1.5, Q4.1.6, Q4.1.7, Q4.1.8, Q4.1.9, Q5.1.1.1, Q5.1.1.2, Q5.1.1.3, Q5.1.1.4, Q5.1.1.5, Q5.1.1.6, Q5.1.1.7, Q5.1.2.1, Q5.1.2.2, Q5.1.2.3, Q5.1.2.4, Q5.1.2.5, Q5.1.2.6, Q5.2.1.1, Q5.2.1.2, Q5.2.1.3, Q5.2.1.4, Q5.2.2.1, Q5.2.2.2, Q5.2.2.3, Q5.2.3.1, Q5.2.3.2, Q5.2.3.3, Q5.2.3.4, Q5.2.4.1, Q5.2.4.2, Q5.2.4.3.

Appendix F-2

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Department of Educational Planning and Management

RELIABILITY TEST RESULTS OF SCHOOL SUPERVISORS ANS UNIT LEADERS

```
RELIABILITY
  /VARIABLES=Q2.1.1 Q2.1.2 Q2.1.3 Q2.1.4 Q2.1.5 Q2.1.6 Q2.1.7 Q2.1.8 Q2.1.9
  Q2.2.1 Q2.2.2 Q2.2.3 Q2.2.4 Q2.2.5 Q2.2.6 Q2.2.7 Q2.2.8 Q2.2.9 Q2.2.10
  Q2.2.11 Q2.2.12 Q2.2.13 Q2.2.14 Q2.3.1.1 Q2.3.1.2 Q2.3.1.3 Q2.3.1.4
  Q2.3.1.5 Q2.3.1.6 Q2.3.1.7 Q2.3.1.8 Q2.3.1.9 Q2.3.1.10 Q2.3.2.1 Q2.3.2.2
  Q2.3.2.3 Q2.3.3.1 Q2.3.3.2 Q2.3.3.3 Q2.3.3.4 Q2.4.1 Q2.4.2 Q2.4.3 Q2.4.4
  Q2.4.5 Q2.4.6 Q2.4.7 Q2.4.8 Q2.4.9 Q3.1.1 Q3.1.2 Q3.2.3 Q3.2.4 Q3.2.5
  Q3.2.6 Q3.2.7 Q3.2.8 Q3.2.9 Q3.3.1 Q3.3.2 Q3.3.3 Q3.3.4 Q3.3.5 Q3.3.6
  Q3.3.7 Q3.3.8 Q3.3.9 Q4.1.1 Q4.1.2 Q4.1.3 Q4.1.4 Q4.1.5 Q4.1.6 Q4.1.7
  Q4.1.8 Q4.1.9 Q5.1.1.1 Q5.1.1.2 Q5.1.1.3 Q5.1.1.4 Q5.1.1.5 Q5.1.1.6
  Q5.1.1.7 Q5.1.2.1 Q5.1.2.2 Q5.1.2.3 Q5.1.2.4 Q5.1.2.5 Q5.1.2.6 Q5.2.1.1
  Q5.2.1.2 Q5.2.1.3 Q5.2.1.4 Q5.2.2.1 Q5.2.2.2 Q5.2.2.3 Q5.2.3.1 Q5.2.3.2
  Q5.2.3.3 Q5.2.3.4 Q5.2.4.1 Q5.2.4.2 Q5.2.4.3
  /SCALE('ALL VARIABLES')  ALL/MODEL=SPLIT.
```

Reliability

```
[DataSet1] F:\Mas.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	15	100.0
	Excluded(a)	0	00
	Total	15	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.777
		N of Items	55[a]
	Part 2	Value	.604
		N of Items	56[b]
	Total N of Items		87
Correlation Between Forms			.736
Spearman-Brown Coefficient	Equal Length		.848
	Unequal Length		.848
Guttman Split-Half Coefficient			.848

a The items are: Q2.1.1, Q2.1.2, Q2.1.3, Q2.1.4, Q2.1.5, Q2.1.6, Q2.1.7, Q2.1.8, Q2.1.9, Q2.2.1, Q2.2.2, Q2.2.3, Q2.2.4, Q2.2.5, Q2.2.6, Q2.2.7, Q2.2.8, Q2.2.9, Q2.2.10, Q2.2.11, Q2.2.12, Q2.2.13, Q2.2.14, Q2.3.1.1, Q2.3.1.2, Q2.3.1.3, Q2.3.1.4, Q2.3.1.5, Q2.3.1.6, Q2.3.1.7, Q2.3.1.8, Q2.3.1.9, Q2.3.1.10, Q2.3.2.1, Q2.3.2.2, Q2.3.2.3, Q2.3.3.1, Q2.3.3.2, Q2.3.3.3, Q2.3.3.4, Q2.4.1, Q2.4.2, Q2.4.3, Q2.4.4, Q2.4.5, Q2.4.6, Q2.4.7, Q2.4.8, Q2.4.9, Q3.1.1, Q3.1.2, Q3.2.3.

b The items are: Q3.2.3, Q3.2.4, Q3.2.5, Q3.2.6, Q3.2.7, Q3.2.8, Q3.2.9, Q3.3.1, Q3.3.2, Q3.3.3, Q3.3.4, Q3.3.5, Q3.3.6, Q3.3.7, Q3.3.8, Q3.3.9, Q4.1.1, Q4.1.2, Q4.1.3, Q4.1.4, Q4.1.5, Q4.1.6, Q4.1.7, Q4.1.8, Q4.1.9, Q5.1.1.1, Q5.1.1.2, Q5.1.1.3, Q5.1.1.4, Q5.1.1.5, Q5.1.1.6, Q5.1.1.7, Q5.1.2.1, Q5.1.2.2, Q5.1.2.3, Q5.1.2.4, Q5.1.2.5, Q5.1.2.6, Q5.2.1.1, Q5.2.1.2, Q5.2.1.3, Q5.2.1.4, Q5.2.2.1, Q5.2.2.2, Q5.2.2.3, Q5.2.3.1, Q5.2.3.2, Q5.2.3.3, Q5.2.3.4, Q5.2.4.1, Q5.2.4.2, Q5.2.4.3.

Appendix F-3

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Department of Educational Planning and Management

RELIABILITY TEST WEO WORKERS

```
RELIABILITY
  /VARIABLES=Q2.1.1 Q2.1.2 Q2.1.3 Q2.1.4 Q2.1.5 Q2.1.6 Q2.1.7 Q2.1.8 Q2.1.9
  Q2.2.1 Q2.2.2 Q2.2.3 Q2.2.4 Q2.2.5 Q2.2.6 Q2.2.7 Q2.2.8 Q2.2.9 Q2.2.10
  Q2.2.11 Q2.2.12 Q2.2.13 Q2.2.14 Q2.3.1.1 Q2.3.1.2 Q2.3.1.3 Q2.3.1.4
  Q2.3.1.5 Q2.3.1.6 Q2.3.1.7 Q2.3.1.8 Q2.3.1.9 Q2.3.1.10 Q2.3.2.1 Q2.3.2.2
  Q2.3.2.3 Q2.3.3.1 Q2.3.3.2 Q2.3.3.3 Q2.3.3.4 Q2.4.1 Q2.4.2 Q2.4.3 Q2.4.4
  Q2.4.5 Q2.4.6 Q2.4.7 Q2.4.8 Q2.4.9 Q3.1.1 Q3.1.2 Q3.2.3 Q3.2.4 Q3.2.5
  Q3.2.6 Q3.2.7 Q3.2.8 Q3.2.9 Q3.3.1 Q3.3.2 Q3.3.3 Q3.3.4 Q3.3.5 Q3.3.6
  Q3.3.7 Q3.3.8 Q3.3.9 Q4.1.1 Q4.1.2 Q4.1.3 Q4.1.4 Q4.1.5 Q4.1.6 Q4.1.7
  Q4.1.8 Q4.1.9 Q5.1.1.1 Q5.1.1.2 Q5.1.1.3 Q5.1.1.4 Q5.1.1.5 Q5.1.1.6
  Q5.1.1.7 Q5.1.2.1 Q5.1.2.2 Q5.1.2.3 Q5.1.2.4 Q5.1.2.5 Q5.1.2.6 Q5.2.1.1
  Q5.2.1.2 Q5.2.1.3 Q5.2.1.4 Q5.2.2.1 Q5.2.2.2 Q5.2.2.3 Q5.2.3.1 Q5.2.3.2
  Q5.2.3.3 Q5.2.3.4 Q5.2.4.1 Q5.2.4.2 Q5.2.4.3
  /SCALE('ALL VARIABLES') ALL/MODEL=SPLIT.
```

Reliability

```
[DataSet1] F:\Mas.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	6	100.0
	Excluded(a)	0	00
	Total	6	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.889
		N of Items	43[a]
	Part 2	Value	.766
		N of Items	42[b]
	Total N of Items		85
Correlation Between Forms			.751
Spearman-Brown Coefficient	Equal Length		.858
	Unequal Length		.858
Guttman Split-Half Coefficient			.839

a The items are: Q2.1.1, Q2.1.2, Q2.1.3, Q2.1.4, Q2.1.5, Q2.1.6, Q2.1.7, Q2.1.8, Q2.1.9, Q2.2.1, Q2.2.2, Q2.2.3, Q2.2.4, Q2.2.5, Q2.2.6, Q2.2.7, Q2.2.8, Q2.2.9, Q2.2.10, Q2.2.11, Q2.2.12, Q2.2.13, Q2.2.14, Q2.3.1.1, Q2.3.1.2, Q2.3.1.3, Q2.3.1.4, Q2.3.1.5, Q2.3.1.6, Q2.3.1.7, Q2.3.1.8, Q2.3.1.9, Q2.3.1.10, Q2.3.2.1, Q2.3.2.2, Q2.3.2.3, Q2.3.3.1, Q2.3.3.2, Q2.3.3.3, Q2.3.3.4, Q2.4.1, Q2.4.2, Q2.4.3, Q2.4.4, Q2.4.5, Q2.4.6, Q2.4.7, Q2.4.8, Q2.4.9, Q3.1.1, Q3.1.2, Q3.2.3

b The items are: Q3.2.3, Q3.2.4, Q3.2.5, Q3.2.6, Q3.2.7, Q3.2.8, Q3.2.9, Q3.3.1, Q3.3.2, Q3.3.3, Q3.3.4, Q3.3.5, Q3.3.6, Q3.3.7, Q3.3.8, Q3.3.9, Q4.1.1, Q4.1.2, Q4.1.3, Q4.1.4, Q4.1.5, Q4.1.6, Q4.1.7, Q4.1.8, Q4.1.9, Q5.1.1.1, Q5.1.1.2, Q5.1.1.3, Q5.1.1.4, Q5.1.1.5, Q5.1.1.6, Q5.1.1.7, Q5.1.2.1, Q5.1.2.2, Q5.1.2.3, Q5.1.2.4, Q5.1.2.5, Q5.1.2.6, Q5.2.1.1, Q5.2.1.2, Q5.2.1.3, Q5.2.1.4, Q5.2.2.1, Q5.2.2.2, Q5.2.2.3, Q5.2.3.1, Q5.2.3.2, Q5.2.3.3, Q5.2.3.4, Q5.2.4.1, Q5.2.4.2, Q5.2.4.3.

Declaration

I, the undersigned, declare that this is my work and it has not been presented before in any University. Moreover, I declare that all the sources of materials used for this thesis have been duly acknowledged.

Name: Masho Jima

Signature: _____

Date 13/06/2011

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

_____

Signature

Name Dr. Jeilu Oumer

Date:_____