

## **Factors Contribute to Education Wastage in Government Primary Schools: The Case of Malle Woreda in South Omo Zone, Snnprs of Ethiopia**

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*The objective of this study was investigating factors that contribute to education wastage in government primary schools of the Malle Woreda. In this study, a descriptive research design and a mixed research approach were used. Data gathered from ten primary schools through probability and non-probability sampling techniques. The sources of the quantitative data gathered through questionnaire were 147 students, and 126 teachers, whereas the sources of the qualitative data gathered through interview were 10 KETB, 5 experts from Woreda Education Office, 10 PTAs and 10 primary school principals. The quantitative data obtained were analyzed using descriptive and inferential statistics namely mean, frequency distribution, percentage, standard deviation, multiple linear regression and independent t-test. The qualitative data analyzed by narration. The finding showed that parent income level, insufficient home light, family size and parent occupation status among major home based factors and shortage of school facility, teachers' low qualification and low motivation were among influential school related factors. Similarly, lack of self-esteem, absenteeism and peer influence were among dominant student related factors and lack of water near to school and conflict within community were among major external environmental factors that contribute to education wastage in the primary schools of Malle Woreda. Thus, it was recommended that in order to minimize the education wastage through improving dropout and repetition rates, the school management team together with the local government are required to work hard in awareness creation among the community regarding the importance of education, the advantage of saving and planned life, and in improving the school environment. In addition, teacher qualification, in motivating students for their learning through committed involvement of parent, student and teacher association and in resolving existing conflict among the community.*

**Keywords:** Primary school; education wastage; dropout; repetition

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## INTRODUCTION

The World Book Encyclopedia (1992) defined education as the process by which people acquire knowledge, skills, habits, values, beliefs and stresses that education should help people to become useful members of society; to develop an appreciation of their cultural heritage and to live more that are satisfied. Thus, almost all countries in the world invest more resources in the education sector to determine the fate of their nations in the future by improving education access and equity. Nevertheless, education wastage like dropout and repetition delay the countries from achieving their goals. Education is a cornerstone of economic growth and social development and a principal means of improving the welfare of individuals. Primary education is its foundation. Scholars also affirmed that education is key to developing the economic, social, scientific and political institutions of nation states (Simmons, 2016).

Similarly, education plays a pivotal role in human resource development. Changes in the education system of any country have to give due attention to the efficiency and effectiveness of primary education. “The progression of students from admission” in the beginning years of their study “Until their successful completion” of the cycle of education (primary or secondary) reflects the degree of efficiency in that level of education (Kebede, Estifanos, & Bezabih, 2015).

In broad sense, educational wastage is a global phenomenon and emanates from dropouts, repetition of classes and courses, unsuccessfulness and stagnation (Ekka & Roy, 2014). The term wastage is being use within the system of education to provide a description of various aspects that would lead to failure of the education system in the achievement of its goals and objectives. Wastage is referring to as the unsuccessfulness of students in attaining the qualifications that they had enrolled into school level. Wastage that arises from repetition or dropout is the sign of internal inefficiency. When individuals leave educational institutions, before, they have obtained a degree or even before their educational skills are honed or are premature withdrawals and non-employability of school leavers from the education system are listed in the ways of measuring wastage. In the present world, what is being wasted in human learning, school buildings, equipment and the labor of teachers.

On the other hand, educational wastage implies the inefficient use of educational resources. Some of the noticeable signs of wastages include dropouts, repeaters, premature withdrawals, misguided types of education, non-employment of school leavers and even brain drain(D. Durosaro, 2012).According to a report on wastage, lamented that the poor conditions of primary schools, such as poor teaching, poor motivation of teachers, lack of facilities and equipment have culminated into inefficiency in the system with students dropping out and repeating classes.

Repetition and dropout rates are then commonly used parameters to measure educational wastage of the educational system. Repeating a grade means utilizing more resources than allocated to a student and hindering the intake capacity of schools. Similarly, leaving a school (dropping) before

completing a particular cycle/level of education is wastage in resources, number of graduates and student years. In both cases, the meager resources allocated for education will be wasted or underutilized (Alexander, 2010).

Repetition is defined as a year spent by a pupil in the same grade and doing the same work as in the previous year (Simmons, 2016). In its statistical evaluation, UNESCO determined student repetition as wastage because since the pupil has not achieved the educational objectives of this cycle or stage. Wastages may constitute benefits a pupil may draw from the education received before repeating and of the advantages a pupil may derive from spending an extra year in a grade. According to this definition, repetition can be within a single grade level or a cycle.

Drop out is described as a student who leaves the formal education system before starting studies required for primary, secondary, or a university. In the UNESCO, global report shows that students who drop out are denoted as “wastage” because pupils who have not achieved the educational objectives of this cycle or stage. While, Pupils drop out from schools leads to wasteful utilization of scarce educational resources without achieving the nation’s educational aspirations.

In similarly, drop out is an alarming issue, which affects socio-economic development. On the other hand, the problem of dropout is evident in all levels of education in developing countries. This is a reflection of the educational gap between the industrialized nations and developing countries (Klees, Stromquist, Samoff, & Vally, 2019).

However, in Sub-Saharan Africa, about 10 million pupils are said to have been dropout of primary schools. In Ethiopia, Malawi, and Uganda, with a dropout rate between 24% and 28% in the first-grade children have great trouble, negating their way through their early grades. For example, high dropout rates in the last grade observed in countries including Burkina Faso and Senegal partially reflects the effects of school examination failure (UNESCO, 2011). Dropout is also a central problem in the country. Ethiopia is trying to reduce the issues by taking action.

A common feature observed in most developed countries is higher accomplishment in education as compared to the developing nations. For instance, it has been reported by the World Bank (1996) on development indicators that Britain had 98% education attainment, United States of America had 89%, while Nigeria and Sudan had 59% and 33% respectively (Adeniran, Yusuf, & Adeyemi, 2014).

Accordingly, UNESCO (2004) report notes that, worldwide 6.0% of primary students repeat a grade and in secondary schools, the highest repetition rates are observed in West and Central Africa (18.8%), the Middle East and North Africa (12%), in Eastern and South Africa (12.3%). The survey also noted that repetition rates in developing countries are often quite high and the highest rate being in sub-Saharan Africa countries where each year about 22% of primary students and 21% of

secondary school students were repeating their grade, with the situation being worse in secondary schools of Congo (30.8%) and Algeria (27.2%).

In regarding to this, early school leaving has increasingly recognized as one of the main challenges faced by European societies (Commission Staff Working Party, 2010). For the majority of young people leaving education and training prematurely is both a result of educational, psychological and social problems and a cause of continuous social insecurity. European education and training systems lose hundreds of thousands of young people each year who are then equipped with inadequate skills for later life. However, reducing early school leaving to less than 10% by 2020 is a headline target for achieving a number of key objectives in the Europe 2020 strategy.

In the cause of our country, over the years, the Ethiopian government has vigorously expanded access to quality and relevant education system, which also offers equal opportunity to all, thereby ensuring equity. In addition, the government labors to ensure quality of education through different programs such as General Education Quality Improvement Program (GEQIP) and Education Sector Development Program (ESDP). Consequently, access to education has greatly improved. For instance, GER (Gross Enrolment Rate) was 137% and NER (Net Enrolment Rate) was 104% in primary first cycle (1-4) and GER of primary second cycle (5-8) was 63% and NER was 50% in 2013/14(World bank, 2014).Despite this ups and downs progress, Ethiopia's education indicators are still poor and below Sub-Saharan averages (UNESCO, 2014).

According to MoE (2016) statistical annual abstract show that current national policy requires that promotion be based on students' continuous assessment results for the first three grades of primary. The repetition rate is slightly higher in males compared to females, following the historic trend. The female repetition rate of 6.8% and the male repetition rate of 7.5% mean that the ESDP V target for 2017(6%) has not been met.

Similarly, the dropout rate is a measure, typically by grade, of those who left formal schooling the previous year. In most cases, it is calculated as the remainder of students after subtracting those who have repeated and those who have been promoted to the next grade. As many countries have discovered, often students do not completely dropout, they may join education several years later, or seek out alternative education. Dropout rates have increased slightly over the last year, and grade 1-8 dropout rates are now at 11.65%. Dropout is much lower than it was 6 years ago. Dropout is highest in grade 1, at 18%. This means that many children join in grade 1 and then leave the education system within the next year. Dropout in the rest of the grades is around 9%.

While the increase in enrolment at the primary stage has been satisfactory, the problem of wastage has been negating the progress. The Ethiopia government in the past two decades took several measures aimed at removing or lessening the educational wastage problem at primary education. Some of the measures or programs have been taken in order to prevent dropouts and retain all children are legislated free and compulsory primary education. Provision of schooling facilities

within easy walking distance from the homes of children, creation of the necessary infrastructure of facilities in schools, incentive schemes for students and introduction of no detention policy at the primary stage(MOE, 2003).

On the other hand, repetition is a major factor responsible for wastage in primary education. Besides, student fails in a class consistently loses interest in studies and parents get discouraged and lose interest in the child's education. Consequently, the child gives up studies and either gets into some trade thereby helping parents to supplement their income or turns a vagabond menacing society and thus increasing the burden of the nation. Researchers agreed that repetition caused by many factors such as heavy and uninteresting curriculum, irregular attendance, and absence of definite admission rules, unsuitable atmosphere and conditions, a physical weakness of students, social evils, defective education systems, and defective pattern of examination. Whereas, to remove repetition states has been taking some measures likes improvement of curriculum, regular admission policy, and improvement of atmosphere, improvement of health, improvement in teaching method, stopping child marriage, and reforms in the examination system(Bhattacharjee, 2015).

Psacharopoulos and Patrinos (2018) posit that class repetition as a measure of inefficiency in the educational system, uses up limited public resources and blocks access to educating more children. Class repetition is, in addition, an educational management issue because it can lead to large class sizes, which are difficult to teach, assess and supervise effectively. Furthermore, there are several consequences resulting from compelling students to repeat grades: an immediate effect is the creation of classrooms including students of very different ages, with all the negative impacts on discipline and consequently, on learning results. On the other hand, such education systems should over dimension to accommodate a higher stock of students, with an immense financial impact.

This research was conducted on the factors for educational wastage at governmental primary school: the case of Malle Woreda. The ways of educational wastages were the students' repetition and drop out at the end of the year after completing the enrolled year or education cycle. Even if there are a number of researches were done on the factors contributing to educational wastage in many countries of the world including Ethiopia, but there is no scientific investigation concerning factors contributing to educational wastage in Malle Woreda. Therefore, it needs research to explore the factors contributing to educational wastage in Malle Woreda.

### **Statement of the Problem**

Psacharopoulos and Patrinos (2018) reported that factors influencing school wastage are poverty, which may give rise to illness, malnutrition, absenteeism, high opportunity cost of schooling for poor families, and cultural factors, which affect girls in particular, inappropriate curriculum factors, which is excessively academic and designed to prepare the majority of pupils for upper secondary and higher education.

Additionally, Kotok, Ikoma, and Bodovski (2016) stated that major social costs of dropping out of school include reduced political participation, increased demand for social services, increased crime rates and poor levels of health. Let alone the society and the nation, individual students also suffer negatively from dropping out of school. On average, the youth who is dropping out are more likely to experience future unemployment, engage in crime, underemployment, and lower earnings.

On the other hand, Jack (2017) summarizes the results of the assessment of retention policies. Moreover, the negative consequences of retention arise from the fact that it discourages students with low motivation, confidence and social promotion and forces retained students to repeat the same curriculum while their advancing peers keep learning more topics that are advanced.

According to the Education for All EFA (2015) the movement and the Millennium Development Goals (MDGs) have resulted in more attention being paid to issues of both participation and completion in education. However, the programs participating in the right to universal primary education (UPE) and Education for All (EFA) have been under serious threat due to continued high numbers of school dropouts and making school retention and hard to maintain over the past several years.

The education system of most African countries characterized by high rates of dropout and that, result in educational inefficiency and wastage of scarce resources. Besides, high student's dropout figures in Africa as well as in the rest of the world might be a strong indicator of the future shortages of skilled labor force (Hailu, Kassaw, & Wondimu, 2019). Therefore, the problem of dropping out should be the concern of every member of society since it has negative consequences both at individual and societal level.

Particular in Ethiopia, where the majority of the population lives in rural areas and in dispersed communities are pose, and specific problems for the education sector: spreading education and ensuring equitable access to education presents specific challenges in such a geographic context. In addition, the existence of many pastoral and semi-pastoralist groups raises issues of organization of the school system, and the relevance of the curriculum. Above all, the demographic pressures of the country also increase the demand for quality education and offer a great window of opportunity for development if investments are made to ensure a fair distribution of education at all levels (MoE, 2015).

The government of Ethiopia has continued to expand access to achieve universal primary education in line with the Education for All goals. Considerable progress has been made through school construction by reducing the distance between schools and pupils' home. Because of concerted efforts since 1996, the number of primary schools has risen to 33,373 and student enrollment has grown to over 18 million, this progress represents a considerable achievement. The current supply of schools allows for a full intake of students into Grade 1 when they reach the age of 7 years. As

of 2013/14, the Net Intake Ratio (NIR) was 106% (109% for boys and 102% for girls) and the Gross Enrollment Rate was 112% Compared to the target of 100% (MoE, 2015).

Therefore, low enrolment rates in primary second cycle reveal the persistent challenge of reducing dropout and repetition. For both boys and girls, the targets set in ESDP IV for dropout (1% in all primary grades) and repetition (1% in all primary grades) were ambitious and these dictated enrolment rate targets. Performance against these targets, however, has been poor. As ESDP V begins, repetition rates persist at around 6.4% and dropout 12.1%, although with improvement in 2013/14, remains at 22% in Grade 1 and 11% thereafter (MoE, 2015).

Accordingly, within the framework of the 1994 Education and Training Policy, ESDP IV has been launched later on to guide the operation of the education system by focusing on the following priority programs: 1. Quality and internal efficiency (ensuring student completion and achievement) 2. Equity in access (reaching the marginalized and un-reached) 3 Adult education (with specific attention to practical Adult Literacy; 4. focus on sciences and TVET; and 5. improving management capacities (Ministry of Education and UNICEF–Ethiopia Country Office, 2012). Quality and internal efficiency are giving priority in the educational development programs. So as one part of internal efficiency improvement in this program, among the operation of the education system, it planned dropout rate and repetition rate to regulate at 1% for grades 1 up to grades 10(MoE, 2012/13).

Despite these achievements, repetition in Malle Woreda in governmental primary schools in three consequent years (in 2009 E.C) male 1586 (9.58%) female 1341 (8.38%) total 2927 (8.99%) students and (in 2010 E.C) male 2336 (14%) female 2078 (13.35%) total 4418 (13.57%) students and (2011 E.C) male 3428 (20.32%) female 3224 (19.34%) total 6652 (19.8%). Average of repetition in three-year male and female 14.12% students failed. From the above data, we have seen that repetition of students in 3 consecutive years in the 8th grade regional examination of Malle woreda 2009 E.C (46%), 2010 E.C (83%) and 2011 E,C (76%). (MWEO, 2009-2011).

In addition, dropout in Malle Woreda in governmental primary schools in three consequent years (in 2009 E.C) male 441 (2.59%) female 260 (1.6%) total 701 (2.12%) students, (2010 E.C) male 546 (3.17%) female 415 (2.6%) total 961 (2.9%) students and (2011 E.C) male 1800 (9.6%) female 1337 (7.4%) total 3137 (8.55%) students are leave school. Average of dropout in three-year male and female 4.53% students dropped. This means 4.56% students are out of school and dropout rate of primary school was very high. While, the target set by(MoE, 2012), for both dropout and repetition for primary schools is 1%. In addition to drop out and repetition in 2010 academic year 3137 children in age of their primary school of whom 1800 were boys and 1337 were girls not enrolled for schooling (MWEO, 2009-2011).

Moreover, the performance of Malle Woreda exhibited above clearly indicating that the dropout and repetition is the manifestation of poor practice of the education system. Therefore, the research is needed to investigate to what extent the educational wastage is caused by dropout and repetition affect and what prevention strategies are employed to reduce educational wastage in area of the study. This research was different from the other researchers by the following points; the first, other researchers' research area and community awareness on education was different because the communities are agro-pastoral. Secondly, there are no scientific research findings in the study area on the same issue. So, through empirical observation, researcher found some major problems related with the repetition and dropout, student related factors, school related factors, socio-economic (poverty and extended family number) factors and socio-cultural factors.

Therefore, the researcher motivated to conduct this research for the following reasons; Firstly, the researcher was the opportunity to know that the education wastage in government primary school (drop out and repetition) is an issue of concern in the Malle Woreda. Secondly, in most of the year student' repetition and dropout rate is high in Malle woreda, in order to fill the gap which are factors contributing on the educational wastage at primary schools under study.Finally, the researcher sought to find a solution to educational wastage in the government primary school in Malle Woreda.

### **Research Questions**

This study was explored four research questions:-

1. What is the level of education wastage in government primary schools of Malle Woreda?
2. What are the factors that contribute to education wastage in government primary schools of Malle Woreda?
3. What mechanisms can be used to reduce education wastage in government primary schools of Malle Woreda?'

### **Objectives of the Study**

The study would base on the following general and specific objectives.

#### **General Objective**

The main objective of the study was to investigate factors that contribute to educational wastage in Malle Woreda.

#### **Specific Objectives**

1. To assess the levels of educational wastage in government primary schools in Malle woreda.
2. To identify factors that contributes to education wastage in government primary school in Malle Woreda.
3. To assess the mechanisms used to reduce education wastage in government primary schools of Malle Woreda.

### **Significance of the Study**

This study was designed to add some input to existing knowledge on waste management and prevention strategies. Thus, it will have several contributions in education system.

- It enables the stakeholders to improve the students' retention and promotion rates in governmental primary schools.
- It enables the stakeholders to be aware of the factors that contribute to education wastage and contribute their effort to prevent wastage.
- It alerts policy makers to amend the existing intervention strategies or to propose other strategies to minimize educational wastage.
- The results of this study may also contribute to the quality of education if concerned bodies work to reduce educational wastage and create conducive learning environment at school level.
- It was helpful for the researchers who have willing to study factors affecting internal efficiency of school system and encourage practitioners or officials to have knowledge on factors affecting the system and to decide on how to reduce wastage.
- Finally, it helps as references to other researchers who are interested to conduct further study on the area.

### **Delimitation of the Study**

In order to make the research more were focused and manageable, narrowing the scope of the study and focusing only on selected aspects of the problem, certain areas of interest, focused range of research area is advisable. Therefore, this research was delimited only to government primary schools in Malle Woreda, South Omo Zone. The study was focused on factors for education wastage in government primary school such as home based factor, school based factors, students related factors and environmental based factors. In addition, it was carried out from July 2019 up to May 2020. The respondents of the study were contained school principals, teachers, and parents and drop out students and repeaters from selected primary schools (grade 1-8) schools of Malle Woreda. Within this scope of time, issue and study area, each activity carried out based on scheduled.

### **Operational Definitions**

**Wastage:** it is the problem of the concept of wastage is applied to education as unfamiliar ring, and education may object to its "depersonalizing of what is essentially an individual growth process". Its numeric orientation fails to recognize each pupil but equates schooling to industry where the 'product' is being counted. Its focus is superficial and often fails to depict the nature of education.

**Educational wastage:** it is the inefficient use of education resources .some of the noticeable signs of wastage including dropouts and repeaters of school leaves and even brain drain.

**Dropout:** it refers to the pupil who leaves school before the completion of a given stage of education or leaving at some intermediate or non-terminal point in a cycle of schooling .

**Dropout rate:** it is defined as pupil leaving the government school system before completing full cycle or primary or secondary education. In this study, it will refer to the percentage of pupils leaving school before completing standard eight.

**Repetition:** it is defined as a year spent by a pupil in the same grade and doing the same work as in the previous year.

**Repetition rate:** it refers to the proportion of pupils from a cohort enrolled in a given grade at a given school year of primary or secondary education who study in the same grade in the following school year.

**Education:** it is according to Mahatma Gandhi, "Education is an all-round drawing out of the best in the child and man - body, mind and spirit".

**Primary school:** it is a school in which children receive primary or elementary education from the age of about seven to fourteen, coming after preschool and before secondary school.

**School:** it is a school normally comprises a group of pupils of one or more grades organized to receive instructions of a given type and level duly prescribed by a School Board/Government under one or more than one teacher.

**Factor:** it is any behavior, omission, or deficiency if corrected, eliminated or avoided probably for the problems that negatively affect education internal efficiency and positively contribute to education wastage.

**Student:** it is a person formally enrolled in an educational program for undergoing a course of study.

**Affected students:** refers students those who are victims of dropout and repetition.

### **Organization of the study**

In this study, the research contains five chapters; the first chapter is the introductory part, which presented previously. Chapter two with the relevant literature, which is a critical sum of the context and views of the content, related to the issues under study. Chapter three presents the methodology, which includes a description of the study area, research design, research method, sampling techniques, source of data, data collection instruments, data collecting procedures, reliability and validity, data analysis, and ethical considerations. The fourth chapter deal with the research filed

survey finding based on research specific objectives. The last chapter, chapter five, contains summaries of the major findings, conclusion, and recommendations and suggestions for farther research.

## **LITERATURE REVIEW**

This chapter contained literature review and theoretical framework of the factors that contribute to education wastage in government primary schools in case of Malle Woreda. The chapter focused on Concepts of educational wastage, Overview of the development of the educational system in Ethiopia, Educational Wastage in Primary School, Factors of Educational Wastage in primary school whereas at the end.

### **Concepts of Educational Wastage**

Various researchers defined the phenomenon of wastage differently. Wastage is a serious existing problem. It describes the unexcused absence from lessons. The problem cannot be reflected, upon and reviewed by a limited perspective focusing solely on schools and trainings. Accordingly, McFarland, Hussar, et al. (2018) demarcated wastage to include dropouts, repeaters, premature withdrawal from schools and non-employability of school leavers and listed three ways of measuring wastage. These include; shown cohort method, reconstructed cohort method and true cohort method. Economists liken education to industry, with capital invested in plant, and raw materials processed into finished products.

In addition, what is wasted is human learning, school buildings and equipment and the labor of teachers. Wastage occurs through the failure of countries to achieve their educational goals, when children fail to reach educational attainments, in premature school leaving, in unemployed school leavers, (UNESCO, 2004).

According, Gnewuch and Wohlrabe (2018) educational wastage has been a challenge in many countries. It considered emanating from failures, stagnation and dropouts. It is defined as, if a child leaves school without completing a course or fails to class then the investment does not give commensurate returns as such as both money and human resources are wasted. As the result, educational wastage has three components; failures, grade repetition and drop out. It can be said to exist in the following forms; the failure of the system to provide universal education, failure to hold children within the system, failure to hold children within the system, failure of the system to set appropriate objectives, inefficiency in the achievement of objectives. In addition, educational wastage defined as the dual problem of class repetition and drop out. Furthermore; repeaters deplete resources and causes wastage and those who do not complete are not useful workers and constitute wastage as well.

In its statistical evaluation, UNESCO determined students' repetition and dropout as wastage because since the pupil has not completed the educational objectives of this cycle or stage. It also

state that wastages may constitute benefits a pupil may draw from the education received before drop out and repeating and of the advantages a pupil may derive from spending an extra year in a grade. According to this definition wastage (drop out and repetition) can be within a single grade level or a cycle.

Moreover, educational wastage is like a canker worm that has eaten deep into the fabric of our educational system. Over the years, educational planners, school administrators and educational agencies are concerned about how to reduce this state of educational system inefficiency. Changes in the education system of any country have to give due attention to the efficiency and effectiveness of primary education. The progress of students from admission to the beginning years of their study indicates the degree of efficiency in that level of education(UNESCO, 2004).

There are several reasons of educational wastage. According to Mosigisi, Kyalo & Saina (2015)the following are identified as major causes of wastage in education system: the nature, ability and capability of students, the nature of the educational systems, the socio-economic status of parents, the resources available to education. teachers, equipment, etc.) and the socio-physical environment. All these can be categorized under the following factors: School factors, economic factors, cultural factors and Social factors.

The components of wastage according to Ekka & Roy (2014) are failure or grade repetition and drop out which means premature withdrawal. The main burdens of wastage are; joblessness, less income, increased criminality, public dependency and poor health. In addition, the characteristics of wastage include the failure of the education system to provide universal education, failure to recruit children within the system, failure to hold children within the system, failure of the system to set appropriate goals and inefficiency in the achievement of objectives.

### **Global Overview of Educational Wastage**

Hendrik van der Pol, director of the UNESCO Institute for Statistics expressed his worries that the lack of quality and other hurdles in the education systems worldwide will affect the benefit of the 'education for all initiative' as follows;

*The world has just a few short years to make good on the promise to fulfill every child's right to primary education by 2015... School systems are reaching more children, but losing them due to inefficiencies, which lead to early school leaving. It is far more difficult and costly to reach children once they leave school than to address the barriers and bottlenecks in the systems (UNESCO, 2012, p. 1).*

In broad sense, educational wastage has been a global challenge that many countries of the world have been trying to control. Concerning this, the US, for example, the high school dropout rate is

alarming. In 2007-2008, the California Department of Education estimated that 98,420 public high school students dropped out of school (David, S. & Jeffrey, S., 2010).

These data suggest that about 19 percent of California high school students in any ninth-grade class will drop out over a four-year period. Further, the dropout rate is particularly acute among the state's largest minority student population. An estimated 33 percent of African Americans and 24 percent of Hispanics will drop out over a four-year period (David, S. & Jeffrey, S., 2010). This source further explains that the economic and social consequences of the dropout crisis are profound, especially in those minority communities whose children drop out of high school at disproportionately higher rates. Research demonstrates that dropouts suffer more joblessness, earn less income, and tend more to criminality, public dependency, and poor health than high school graduates tend.

In addition, dropouts in California have trouble in the labor market. They are more likely to be unemployed or out of the labor force and twice as likely to be living in poverty. Based on data from the Census Bureau's Current Population Survey, the same source estimate that the average California high school dropout earns \$14,226 less per year than we would expect had they graduated high school.

Dropouts report worse health than graduates report and require more public health resources. Close to 20 percent of California high school dropouts report fair or poor health and close to half receive Medicaid. It is estimated that the average Medicaid costs to the state per high school dropout are \$ 283 per year, which results in over \$ 1 billion in added expenses for the state's 3.8 million high school dropouts (David, S. & Jeffrey, S., 2010).

In generally, David & Jeffrey (2010) further claims that dropouts drive up the state's incarceration costs. Over a lifetime, a dropout costs the state \$ 8,484 because of higher incarceration rates than higher-educated peers. In addition, David & Jeffrey estimates the average annual incarceration costs of California's 3.8 million dropouts would decline by \$ 374 per person if those dropouts graduated from high school, representing a potential cost savings of more than \$ 1.4 billion. California's economy will benefit tremendously by reducing dropouts. It is assessed that each prevented dropout will result in a present lifetime benefit of \$ 28,227.1 by permanently cutting the dropout rate in half; Each new graduating class of high school students would generate more than \$ 1.4 billion in direct gross economic benefits to the state.

A study by Desarrollo (2007) in Latin America noted that the number of repeaters increased with the expansion of schools in the region to accommodate students. A report published by the UNESCO regional office for education in Asia (1967) noted that in countries, which have high wastage ratios, repetition contributes more to wastage than does drop out, and repetition is itself commonly followed by drop out. The report goes on to argue that the reduction of wastage cannot

be brought about by a single method, but involves the whole educational system. However, Japan has largely suffered such problems of wastage and is more concerned with problems of absenteeism (Bureau, 2011).

In generally, based on the Kothari Report, wastage and stagnation causes are categorized into three namely social causes. Which include caste distinctions, early marriages, and opposition to send grown up girls in mixed schools, educational causes which include ill-equipped schools, poorly housed and with dull and depressing enrolment, lack of adequate accommodation, too much overcrowding in schools, inefficient teachers, frequent transfer of teachers and poor quality of teachers, miscellaneous causes which include illness and/or death of parents. (Hannum & Park, 2004)also found that in China repetition rates increased with increase in student numbers.

### **Educational Wastage in Developing Countries**

In developing countries, wastage is also a very common issue. This creates a serious situation because the funds available for educational development are limited and their effective use is considerably reduced by wastage. In addition, (Vieira, 2019)argues that while developing countries have done remarkably well in terms of expanding educational access to a large percentage of their school going population, school performance as measured by dropout rates, progression rates and examinations results has been quite discouraging.

However, most African countries were faced by the educational wastage problem and have come up with various initiatives to reduce the problem. In regard to this, Nigeria, has adopted the education sector as one of the pillars of poverty reduction. It is argued that wastage is an unprofitable and uneconomical utilization of time and resources (Caplan, 2018) Similarly, Adamu argues that repetition of classes may have negative effect on students and parents; therefore, the development of each child must be directed towards the ability of the child, bearing in mind the needs of society.

Accordingly, Matthew (2015) stated that the analysis of efficiency in education is necessary in ensuring optimal uses of meagre resources allocated to education in order to eliminate wastage. In Zambia, educational wastage is very old. For many reasons, wastage is rampant at the secondary level, while the non-formal sector is incapable of catering effectively for those adversely affected due to a variety of factors (Kabanga & Mulauzi, 2020). As the result, Kabanga & Mulauzi continues to argue that wastage in Zambia caused by failing examinations, lack of space in grades 8 and 10, cultural factors, poverty, poor health, truancy and lack of interest in school.

In addition, Ncube (2004) in a study in Zimbabwe found that the number of students repeating a grade increases with level of schooling. Therefore, Ncube (2004) noted that, of the 2527 repeaters over a period of four years, 5.7% were in form one, 7.6% in form two, 30.2% in form three and 56.5% in form four. There is also a problem of high repetition and low progression rate. Furthermore, this could be affected by school size, school regime, school type, and inability to pay

school fees, HIV/AIDS pandemic, violence and drug abuse (Achoka, 2007). It is clear shows an educational wastage problem in the African continent; hence, policies should be created and implemented to ensure that this wastage is reduced.

On the other hand, developing countries faced by many challenges such as poverty, unemployment, corruption and violence. These challenges related to educational wastage because the cost of living in developing countries is high. There are sharp disparities between socio-economic classes, gender, geographical regions and generations, resulting in inequality, low access and non-participation of some individuals (Buckler & Creech, 2014).

Opportunity cost of sending girls to school, according to (Momsen, 2019), is a major issue in female participation in educational process for instance; girls are expected to work as house helps to provide for their family. This may lead to drop out. Although FAWE was more concern about girl, boy children is also at a big rise of being equally wasted.

### **Overview of the Development of the Educational System in Ethiopia**

The responsibility for the development of the educational system in Ethiopia lay for nearly 1500 years with the Orthodox Church and the Koranic Schools. Religious instructions follow authorial Educational styles, church education is characterized by the students' obedience, humility and respect the Koran teacher is usually a strong authority figure who expects subservience and respect from children (Poluha, 2007). Minlik II laid the revolutionary for the modern Educational System. Under his government the responsibility for the Educational Policy is assigned to the Government's area of responsibility. Shortly after the foundation of the Federal Democratic Republic of Ethiopia, a New Education a Training Policy was implemented, with several reforms e.g. concerning the language policy or the gender disparity. Yet, the country's Educational System faces serious problems e.g. the high dropout rates and repletion the neglecting students with special needs.

Within the framework of the 1994 Education and Training Policy, three Education Sector Development Programs/ESDPs have been developed and implemented since 1997 and the fourth ESDP launched later on to guide the operation of the education system. By focusing on the following priority programs; a) quality and internal efficiency that are ensuring student completion and achievement b) equity in access reaching the marginalized and un-reached, c) adult education (with specific attention to practical Adult Literacy) d) focus on sciences and TVET last e) improving management capacities (Unicef, 2012). Accordingly, commendable results have registered in expanding primary education access to educational opportunities, Improving quality, relevance, equity, and efficiency of the education system. Quality and internal efficiency is given priority in the educational development program. Nationally the repetition rate and dropout rate target set in ESDP IV was 1%.

Despite direct and indirect link between education and labor market returns, the education system of most African countries characterized by high rates of dropout, which result in educational inefficiency and wastage of scarce resources (Habtamu, 2016). Thus, high school students drop out

figures might be a strong indicator of the future shortages of skilled labor force (Wood, Kiperman, Esch, Leroux, & Truscott, 2017).

The problem of dropping out should be the concern of every member of society since it has negative consequences both at individual and societal level. For society, drop out resulted in wastage of scarce resources (teachers who have already employed) and student time (time taken to attend school) (KOSKEI & TONUI, 2015). Dropout has also adverse effect on nation progress by jeopardizing human capital formation needed for economic development.

As to Azzam(2007), major social costs of dropping out of school include reduced political participation, increased demand for social services, increased crime rates and poor levels of health. Individual students also suffer negatively from dropping out of school. On average, youth who are dropping out are more likely to experience future unemployment, engage in crime, underemployment, and lower earnings (Thornton, Collins, & Daugherty, 2006).

### **Education Wastage in Primary Schools of Ethiopia**

As study conducted in five regions of Ethiopia shows, primary school dropout rates in 1999/2000 almost doubled in 2003/04 from 9 percent to 19 percent. Thus, high dropout rate is a major obstacle in the achievement of universal primary education. This is because when students leave the school, there is wastage of resources in one way and they occupied a school space, which could be used for the other newcomers in other way. Beside this, they have not acquired the minimum level of literacy and numeracy skills. In Ethiopia 15.7% (boys 15.9 and girls 15.4) children have left the school before completing primary school education in the year 2012/13 (Unicef, 2012). This indicator measures the proportion of students who remain in the same grade for two or more consecutive years, by retaking the grade after e it her leaving the grade prematurely, or returning for a second or third time.

Ethiopia has the statistics on “readmits” that drop out during the school year and return to the same grade in the next school year. Therefore, the repetition rates are lower when compared with other countries, as these readmits are not counted as repeaters, while at the same time, the dropout rates rise, according to the (MOE, 2019). To see how the problem is far more serious and needs of some researchers to achieve UPS. Let show in the below Table 1.

***Table 1: Primary School Education Wastage in Ethiopia by grade and Gender***

Grade level	Dropout			Repetition			Wastage		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1-4	19.02	18.57	18.79	3.9	3.67	3.79	11.46	11.12	11.29
5-8	14.2	14.27	14.23	4.78	4.5	4.63	9.49	9.39	9.44
1-8	17.7	17.3	17.5	4.2	3.9	4.1	10.48	10.26	10.39

Source: MoE, (2018/2019)

Regarding the Education wastage rates by grade, the rate of grade 1-4 was the highest at 11.29%. Especially, the rate of boys was 11.46%, which was significantly higher than that of girls 11.12%. In addition, it needs a high priority area of internal and efficiency in ESDP IV for goals of educational achievements. In other ways, the dropout and repetition rates had been improving since 2001/02 when the rate marked the peak of 11.75%, but not decreased to target to 1%. In fact, based on the above years, it shows improvement in a few years, but still not meets the goal of the education target. Regarding the improvement of repetition and dropout rates, the MOE set the target to improve them to 1.0% by 2014 (MOE, 2018).

Any repetition reduces the efficiency of the education system, and can also be an indication of high PTR, unqualified teachers or lack of learning materials. The current national policy requires that promotion is based on students' continuous assessment results for the first three grades of primary. Male students are slightly more likely than, female students to repeat a grade, which has been the trend since 2003. The ESDP V target has not been met. The female repetition rate and the male repetition rate of 4.0% mean that the ESDP V target for 2017/18 (4% for female and 5% for male) has met for male. Harari has the highest RR following by Benishangul -Gumz, DireDawa, SNNP and Afar. As chart 3.18 shows, the repetition rate is slightly higher in males compared to females, from 2002 E.C to 2009 E.C trend. Chart 3.19 shows that repetition is highest at Grade 8, where students need to pass the grade 8 exams to successfully completed primary education. The repetition rates both for male and female in 2010 E.C. has reduced since the previous year (MOE, 2010).

Dropout rate is a measure, typically by grade, of those who have left formal schooling the previous year. In most cases, it calculated as the remainder of students after subtracting those who have repeated and those who promoted to the next grade. As many countries have discovered, often students do not completely dropout, they may join education several years later, or seek out alternative education. Dropout rates have increased slightly over the last year, but remain much lower than 5 years ago. At national level, the female and male students in Grades 1-8 Education wastage rate is 10.26% and 10.37% respectively. ESDP V target for 2017/18 (7% for both sex) has not been met. SNNP has the highest education wastage rate following by Somali, Oromia and Afar (recorded above national level)(MOE, 2010).

The target set by the government concerning primary school dropout was 8 percent for the year 2010/11, despite the fact that actual dropout rate was 13 percent. The data show that the rate is higher for grade 1, grade 5, and grade 8 whereas the lowest dropout rate was registered at grade 3. Furthermore, as it was indicated in the ministry document the rate escalate to 18.6% for both sexes in Oromia Regional State. Moreover, found that girls were less likely to enrolled primary school than boys. In addition, the probability of completing primary schools was affected more negatively for girls (40.3%) than for boys (31.9%). As to recent study, the dropout rates were increasing in an alarming condition especially in some region and pastoralists area. For example, in Harari Region students dropout rates were increased year-by-year, great percent of students dropped out, and very great percent of students were at risk of dropping out of their education (Unicef, 2012).

Conceiving the negative consequences of drop out for society and individuals, facilitating school completion for all students must be a priority for educators, administrators, researchers and policy makers. In this regard, Bongani (2014) asserted that the ongoing neglect of such an important topic to developing countries renders the problem a near permanent obstacle on the road to the elimination of poverty. Addressing dropout has been high on the agenda of the Ethiopian government for several years believing that preventing drop out and encouraging successful completion of primary school can enhance economic growth and social development.

It can ensure that students graduate with at least the minimum qualifications needed for economic labor market and for further education & training. Thus, the Ministry of Education planned to reduce dropout and repetition rates of general primary education and expand general primary school in view of its universalization by 2020 in line with the middle- income country vision (MoE., 2010). However, high dropping out of students from schools has been one of the main challenges of the education system of Ethiopia in general, and primary school in particular. For instance, the MOE data of 2010 showed that more than 17% of school age students of primary education dropped out from the schools. The trend analysis for drop out showed a decline tendency from 2003 to 2005.

It might be the government measures such as increase budget allocation to education, construct new schools, recruit and train teachers and the like to reduce drop out (FDRE, 2004). Nevertheless, dropout rates began again started to show an increasing trend from 2006 to 2009 (MoE and UNICEF, 2012).

Several factors mentioned associated with students' dropout in Ethiopia. Previous studies conducted on primary schools and female students drop out (Faulhaber & Zehle, 2009)(Habtamu, 2016) revealed that several personal, school and family related factors contributed to students' dropout. Some of the factors mentioned comprise ill health, malnutrition, low students interest to education, low employment opportunities to graduates, teachers' methods of instruction, range of costs associated with schooling like uniform, travel, equipment and students' opportunity costs.

### **Forms of Educational Wastage**

This refers to the forms in which wastage takes place in schools. They include repetition, non-enrolment and drop out. Repetition means a year spent by pupil in the same grade and doing the same work as the previous year(Musyimi, 2011).

Deduce five major forms of repetition, depending on the source and reason of repetition. This decision may be initiated by the student themselves or by the school. This is voluntary and serves the student's best interest. He continues to explain that the second type of repetition reflects farming believe that the student did not learn much the previous year-end therefore ought to repeat the grade. It is most common in developing countries where attendance is poor due to poverty, illness and starvation. Third type of repetition is common in areas where the language used in school differs from the language that many students speak at home. Repeating early grade may enable their students to gain fully in the language of instruction. Fourth type of repetition occurs at higher levels in countries that require students to pass exams to qualify for secondary or post-secondary education. The fifth form is involuntary initiated by school rather than the student or their families' grade repetition whether voluntary or forced, represents wastage of resources for society. However, it is not clear the extent to which repetition should regarded as wastage(Musyimi, 2011).

Nkinyangi's study further notes that each student who repeats has the economic effect of increasing class size which means constructing more classes and employing more teachers. Ngau (1991) argued that pupils who repeat grades especially towards the end of a cycle believe that they will improve their chances of passing the examination for entry into the next level. However, this has never proved. Repetition rate is very high at the developing countries and especially in the sub-Saharan; Africa (Eisenman, 1997) found out that repetition is frequent in rural areas.

Drop out as another form of wastage may define as premature leaving of education system. Starkey, Audrey, Holliday, Moore, and Campbell (2009)notes that students who repeat a grade prior to high school have a markedly higher risk of dropping out of high school than those who are continuously promote through school. Leaving school after completion of compulsory cycle without going on the succeeding cycle does not constitute drop out.

Dropping out of school has various consequences as illustrated in the following studies. Studies conducted by McFarland, Cui, and Stark (2018)revealed that the major consequence of dropping out of school is low literacy and numeracy skills. He continued to state that school dropouts find it difficult to secure employment. The dropouts have fewer opportunities to obtain additional education and training needed to make one remain competitive in the job market. A study carried out by Belfield (2020) on high school dropouts in the United States revealed several social consequences associated with dropping out of high school. These social consequences include - foregone national income; increased demand for social services such as welfare, medical assistance

and unemployment assistance by the dropouts; increased crime; poorer levels of health; reduced political participation and reduced intergenerational mobility.

Belfield (2020) estimated that the social costs of providing social services and fighting crime associated with dropping out was \$6 billion per year. A study by Belfield and Levin (2007) on the economic losses on school dropout in California reveals that there are substantial economic benefits in raising the rate of high school graduation. The same study revealed that there were significant fiscal gains to the state and federal governments.

Non-enrolment defined as failure to register to educational institution. In Sub Saharan Africa, enrolment rates have remained at about 30%, but it has been rising in some other developing countries. For instance, in East Asia, it grew from 47% to 68% , in the Middle East, it grew from 52% to 57% (UNESCO, 2004). In Kenya, the Gross Enrolment Rate (GER) increased from 53.3% in 2009 to 60.2% in 2012 (Economic Survey, 2013). The low GER in secondary school is compounded by declining transition rates leading to high wastage levels.

### **Factors Contributing to Educational Wastage**

The factors can be grouped into three perspectives namely; individual perspective, school perspective and House perspectives. Individual factors that predict whether students drop out or graduate from high school fall into four areas: educational performance, behaviors, attitudes, and background (Rumberger & Lim, 2008).

In addition, Kebede et al. (2015) on factors contributing to educational wastage at primary school level in Lanfuro Woreda, Ethiopia revealed that factors contributing to educational wastage are home-based, student-related and school-based. According to Deribe, one of the main components required to make an education system viable, functional and productive is the availability of qualified and satisfied teaching staff.

Similarly, Mosigisi, Kyalo, and Saina (2015) carried out a study on factors influencing educational wastage among girls in secondary schools in Kenya; the case study of Kisii. Some of the factors studied in this study were; cultural factors, economic factors and social factors (McFarland, Cui, & Stark, 2018).

The study revealed that economic factors such as poverty at household level, cultural factors such as pregnancy and marriages were responsible for the drop out. School related factors such as school examination and social factors such as provision of sanitary towels found to affect education negatively. However, this study only focused on girls and it was done in a different geographical region.

Orwasa (2014) undertook a study on the assessment of factors contributing to wastage in secondary schools in Kericho County. The study revealed that school and home-based factors contributed to poor performance, repetition and the likelihood of students to drop out. However, this study did not exhaust all the factors and a study on more factors should be done.

Mutwota (2013) undertook a study on socio-economic factors influencing wastage in public primary schools in Igembe south district. The purpose of the study was to investigate the socio-economic factors influencing wastage in public secondary schools. Factors under study include family income, cost of education, family education and early marriage. The study revealed that family income was too much of education, family education and early marriage influence wastage of ages. However, this study only focuses on primary schools and on socioeconomic factors.

Although student and family characteristics account for most of the variability in dropout rates, about 20 percent can be attributed to four characteristics of schools: the composition of the student body, resources, structural features, policies and practices (Rumberger & Lim, 2008). Research conducted by Rumberger and Lim (2008) shows that the odds of dropping out are lower in schools with more disadvantaged students, but the effects appear to be indirect, through the association with other school characteristics.

Students are less likely to drop out if they attend schools with a stronger academic climate, as measured by more students taking academic courses and doing homework. On the other hand, students are more likely to drop out of schools with a poor disciplinary climate, as measured by student disruptions in class or in school (McFarland, Cui, Rathbun, & Holmes, 2018). There does not appear to be a consistent effect of exit exams on dropout rates, although more recent high school exams appear to lower high school completion rates. Additionally, requiring students to attend school beyond age 16 leads to lower dropout and higher completion rates (Rumberger & Lim, 2008). Communities play a crucial role in adolescent development along with families, schools, and peers. Rumberger further argues that Population characteristics of communities are associated with dropping out, but not in a straightforward manner: living in a high poverty neighborhood is not necessarily detrimental to complete high school, but rather that living in an affluent neighborhood is beneficial to school success. This suggests that affluent neighborhoods provide more access to community resources and positive role models from affluent neighbors.

Other school-based factors leading to wastage in schools include teacher pupil conflicts, poor methods of teaching, excessive punishments; excessive homework, over-crowded schools, inaccessibility and costly school requirements. The girls and their parents are also discouraged by the absence of female teachers who act as their role models (Ekundayo, 2019). low populations have few schools, while highly populated areas have more schools which leads to the difference in enrolment rates in The distances to the nearest school in Kenya have been reduced as compared to other countries of similar income levels, even though not in all regions. Areas having these

regions(Glennester, Kremer, Mbiti, & Takavarasha, 2011). It is therefore important to reduce the distance, which deters access to social services, to schools in low population areas in order to help boost educational access to these regions. The school environment, indiscipline, sexual harassment of girls by male counterparts and some teachers and unfavorable home environment were some causes of dropout in the area.

### **Home-Based Factors Contributing to Educational Wastage**

Research by Rumberger and Lim (2008) on dropouts has identified a number of factors within students' families, schools, and communities that predict dropping out and graduating. Three aspects of families predict whether students dropout or graduate family structure, family resources, and family practices.

Accordingly, students living with both parents have lower dropout rates and higher graduation rates, compared to students living in other family arrangements. More important, changes in family structure, along with other potentially stressful events (such as a family move, illness, death, adults entering and leaving families, and marital disruptions) increase the odds of dropping out. Students in homes with more family resources; as measured by parental education, parents' occupational status, and family income; are less likely to drop out of schools (Thomas, Utley, Hong, Korkmaz, & Nugent, 2020). A number of parenting practices; sometimes referred to as social resources or social capital; have been shown to reduce the odds of dropping out, including: having high educational aspirations for their children; monitoring their children's school progress; communicating with the school; and, knowing the parents of their children's friends. Finally, students are more likely to drop out if they have a sibling who dropped out of schools (McFarland, Cui, Rathbun, et al., 2018).

The members of a household may have an influence over educational access and retention of their children in school, especially in poorer communities. Children living with mothers generally are less likely to drop out. The number of children in a family dictates the poor families' ability to retain their children in school. Older girls in poor families may be withdrawn from school to take care of their younger siblings. This therefore means that birth order and gender often influence who has access to school(Akyeampong, Djangmah, Oduro, Seidu, & Hunt, 2007).

### **Student-Related Factors Contributing to Educational Wastage**

Individual factors that predict whether students drop out or graduate from high school fall into four areas: educational performance, behaviors, attitudes, background and teenage pregnancy. Several aspects of educational performance have been widely recognized in the research literature as strong predictors of dropping out or graduating: test scores and grades in high school. Academic achievement in both middle and elementary school (with grades a more consistent predictor than test scores); non-promotional school changes during middle and high school; and, retention (being held back one or more grades), in elementary, middle, and high school(Rumberger & Lim, 2008) argues that students who get poor grades are likely to leave school.

Furthermore, wide range of behaviors both in and out of school have been shown to predict dropout and graduation. One of the most important is student engagement, which includes students' active involvement in academic work (e.g., coming to class, doing homework) and the social aspects of school (e.g., participating in sports or other extracurricular activities). Research consistently shows that high absenteeism; one specific indicator of engagement; is associated with higher dropout rates (Domjan, 2018).

Accordingly, Rosenthal further argues that misbehavior in high school and delinquent behavior outside of high school are both significantly associated with higher dropout and lower graduation rates. In addition, drug or alcohol use during high school is associated with higher dropout rates. Teenage parenting and childbearing increase the odds of dropping out and repetition. Having friends who engage in criminal behavior or friends, who have dropped out and repetition increases the odds of dropping out, and such associations appearing as early as the seventh grade. Finally, a number of studies have found that students who work more than 20 hours a week are significantly more likely to drop out (McFarland, Cui, Rathbun, et al., 2018).

Although a substantial body of research has explored the association between student achievement and a wide range of student beliefs, values, and beliefs, far less research has explored the links between these factors and dropping out. The dropout literature has generally focused on a single indicator - educational expectations and has found that higher levels of educational expectations are associated with lower dropout rates (Rumberger & Lim, 2008).

The beliefs and attitudes that students hold towards school are important predictors of drop out (McFarland, Cui, Rathbun, et al., 2018). A number of student background characteristics; including demographics and experiences are linked to whether students drop out or graduate (Rumberger & Lim, 2008). Rumberger further argues that dropout rates are generally higher for males than for females, and they are higher for Blacks, Hispanics, and Native Americans than for Asians and Whites; yet these differences may be related to other characteristics of students as well as characteristics of their families, schools, and communities. Some studies have found that second-generation students, especially Latino students, have higher graduation rates than either first-generation (foreign-born) or third-generation students and parents. Higher English language proficiency also lowers the odds of dropping out.

One past experience; participation in preschool, has been the subject of extensive, rigorous research and has been shown to not only improve school readiness and early school success. But also to affect a wide range of adolescent and adult outcomes, including high school completion, crime, welfare, and teen parenting (McFarland, Cui, Rathbun, et al., 2018).

(Domjan, 2018) noted that dropouts are more likely to come from low-income families. Access to good quality education is one of the most effective interventions to empower adolescents with the most basic skills to function and contribute to society.

This is of greater relevance for girls to obtain comprehensive sexual education; to know and recognize options; to be able to negotiate reproductive desires, including when and how many children have; and to be able to access to good quality services for reproductive health. All of these faculties could be easily denied to adolescent girls who are out of school and unable to complete their secondary education as a minimum (Loaiza & Liang, 2013). One major contemporary social problem confronting most countries in the world is teenage pregnancy. From the first world countries such as the United States to the third world countries, this problem has been a source of worry for policy makers, social workers and other human service providers due to its negative repercussions on the girl-child (Collins, McMahan, & Stekler, 2017). It is alleged that teenage pregnancy and its associated motherhood characterized by shame, disgrace, and school dropout. According Freitag et al. (2018) approximately 60% of adolescent mothers live in poverty at the time of birth of their babies, and approximately 73% go on welfare within 5 years of giving birth. It is suggested that school dropout is a uniquely predictive factor of teen pregnancy and a precursor to, rather than a consequence of becoming pregnant (Bonell, 2004). Abebe, Fitie, Jember, Reda, and Wake (2020) Assert that pregnancy acts as a catalyst to school dropout in poor families re-echoed this by stating that academically oriented women are less likely to give birth while still in high schools.

### **School Based Factors contributing to Educational Wastage**

Several school-based factors, cited as being responsible for high or low completion rates among primary schools. Pupils in most African countries include: school facilities and materials, access to educational facilities and classroom dynamics, teachers' qualifications and best towards their work and study and overloaded curriculum, are the main areas (Barry et al., 2018). One of the most important factors that enable us to determine high or low internal efficiency is the organization and structure of the school. According to Mupa and Isaac Chinooneka (2019) school based factors include school facilities, teacher characteristics. School management regulation and guidance and the classroom dynamic or interaction of the student, teacher and curriculum are the dominant factors.

#### **A. School Physical Resource and Facilities**

School physical resources and facilities include school buildings, furniture, equipment of laboratory pedagogical center, library, textbooks etc. Many writers have tried to study the effect of school physical resources and facilities on academic achievement of students in particular and internal efficiency in general. For example, indicates that shortage to physical resources and facilities at school level causes a decline in education, by raising the repetition and dropout rates. Accordingly, Harrison and Hanusheck recent review studies on relationship between facilities and student

achievement in developing countries 22 out of 34 studies showed a positive relationship. However, three studies showed an inverse relationship and nine studies found that it was insignificant (de Koning, Rop, & Paas, 2020). This review of studies indicates that the school facilities and academic achievement of students are directly associated. In other words, other things being equal as school facilities increase the number of good achievers or promote children increases, and vice versa.

It is true that many educationalists give emphasis on the availability of school facilities, which affect the quality of teaching poor school facilities may affect students' performance. In some cases, it has more impact on girls than boys. The effect is clearly seen when girls reach puberty, they need seats permanently and separate latrine. The non-existence of these facilities is likely to be contributing factors for girls' dropout (Mjaaland, 2018). In addition to this sexual harassment and school, location and distance affect girls' dropout.

#### **A. School Location**

School location described as one of the factors of rising school dropouts and repetition rates. Distance to school and danger to travel are major problems categorized under this factor.

This problem is mostly felt in rural schools than urban schools. It also affects girls more than boys. For example, as one study conducted in Egypt reports, among enrolled girls who lived 2km from their school were 8% lower than that of girls who lived 1 km from their school. Whereas for boys who lived farther away were 4 percent lower (Zapp, 2017) In Ethiopia as, greater proportion of the population is living in scattered settlements of rural area this factor seems critical factor for internal efficiency of primary schools.

#### **B. Teacher's Characteristics**

Generally, the quality of teaching staff in schools affects the internal efficiency of schools. The characteristics that are associated with quality of teachers include teachers' attitude, qualification, experience, motivation, classroom management and their interaction with students' academic achievement in particular and school repetition rate in general (Brown & Alibali, 2018).

For example, many researchers studied the effects of teachers' input on cognitive achievement and the summary of the results of the study reported as follow. As Yang (2014) 96 studies conducted in developing countries reported that among 63 studies conducted on the relationship between teacher education and 23 students' academic achievements 35 of them showed a positive relationship. However, he studies were found an insignificant relationship. On the other studies conducted on teachers' experience, salary and teacher-pupil ratio on academic achievement, over half of the studies were found to have an insignificant effect. In contrast to the above-mentioned fact (Nguyen, Courtney, & Gillis, 2018).

Accordingly, studies carried out in Asian countries have confirmed that schools, which have, increased class size yet have shown reduced wastage in terms of dropout and repetition. On the other hand, few class observations in Kenya indicate that there are cases where teachers' negative attitudes; Push eating, especially girls, out of schools. These the ones who are neglected, abused,

and miss-handled and sent out of class during teaching learning periods. The results of all the above cases are absenteeism, denial of schooling poor academic performance, and non-completion of the education cycle (Calvino, 2017). In addition to this sexual harassment and pregnancies found to affect girls' participation and repetition rate in education.

Finally, in the sphere of teacher's characteristics, low teacher motivation is one of the most important causes of wastage in education. Low teacher motivation leads to absenteeism and attrition, which are the major problems of developing countries. Teacher absenteeism reduces students' learning time, while teacher attrition increases costs of teacher training. One recent World Bank study reports that the causes of low teacher motivation are low salaries, poor working conditions, insufficient career advancement opportunities and / or weak supervisory and support services. Low teacher morale, directly or indirectly, affects the quality of teaching and the relationship between teachers and students, which results in low pupil achievement and high school dropouts (Regmi, 2017).

### **C. School Policies**

Schools have their own operational policies and regulations in relation to teaching learning process and assessment of students learning. That affect repetition and dropout rates, these policies include multi-grade teaching, self-contained teaching, shifting systems, language policies, Promotion police etc. Some of the school-based policies of these policy factors have their own positive or negative impact on schools' internal efficiency performance. For instance, according to (Brunette et al., 2017) multi grade teaching and shifting teaching that was designed to expand the opportunity of basic education through effective use of available resources are associated with a high repetition rate for that it reduces instructional time.

The other school policies that affect educational wastage are the promotion policy or examination regulation. Even though examinations are not fully effective to measure student academic achievement, many use it to determine the opportunity of students to move to the next higher grade or level of education. As a result, examinations and promotion usually cause high or low rate of educational wastage (Chankrajang & Muttarak, 2017).

Many countries incorporate automatic promotion policy, especially at lower grade to reduce high repetition rate. In Ethiopia automatic Promotion was incorporated in grade 1-3 to reduce repetition rate, however, these grades still repetition rate are reported(MOE, 2000). The other school related factors that are the most critical for school readiness, academic performance and repetition rate are the language policy, as it is evident in our educational policy and practice; we have given primary school education in Mother tongue instruction. The ultimate purpose of this policy was mainly to increase educational quality and reduce educational wastage.

### **D. School Management System and Practices**

School management is one of the important factors that affect internal efficiency of schools. For example, the school management has an important role in improving the learning capacity of learners, because they coordinate teachers in setting standards teaching the curriculum in relevant way, and providing additional support(Ndarhutse, 2010). However, there are several factors that influence school management practice similar to the top management, qualification & training of school teachers, and most importantly the commitment and initiative taken by the head teachers and teachers. In order to improve the status of school management many countries have adopted and emphasized on decentralized management system. School level decentralized management system was believed to improve schooling efficiency.

### **Environmental Based Factors Contributing to Educational Wastage**

According to Save the children (2005), indicates that cultural norms and beliefs constrain girls' education, especially in many developing parts of the world. In these societies, traditional values and some religious beliefs constrain girls from making their own decisions and expressing their own opinions. In addition, the high persistence of girls in school for their own learning and established that initiation ceremonies have a significant effect on the girls' dropout rate. Generally, to reduce dropouts in primary schools are challenges of pastoral community attitude towards and cultural beliefs. Concerning to the educational context, the poverty of students is also the major reason for dropping out of students. The phenomenon of early marriage is further linked to cultural factors. The effect of early marriage on girls found that in the local area 'dropout rates became higher because parents consider girls' schooling as no benefit when they leave their own family after getting married. In general, marriage is the core backbone of cultural context in the pastoral community for student dropout from school.

In additional, Solomon and Getachewu (2008) found that both drought and conflicts singly or in combination are driving factors to the movement of the households to the current location. Over the years, the extent of conflict has changed and more so its role in triggering the movement of pastoral dropouts has increased in importance.

### **heoretical Framework: Functionalism Theory**

This study adopted functionalism theory, which is the work of (Đorić, 2018). The sociologist compared societies to organisms with structures that consist of interrelated parts that work together to achieve a goal. If one part is affected it affects all the other parts' performance. Education is vital in the maintenance of society as a whole. It happens to be the acquisition of skills, knowledge, values and attitude hence being an important agent of socialization.

The functionalists Approach views specific component parts of the school systems as performing specific and complementary roles that are necessary if the school has achieved its desired goals. One goal of education is to promote individual development and self-fulfillment. It should assist

children to develop their potential interests and abilities. A vital aspect of individual development is character building.

In this approach, therefore, a component of the social system can be referred to as those that play their respective roles effectively to ensure students succeed in schooling and complete their primary education successfully. These components include; Parents, who play a crucial role in the early socialization of students by helping them learn and adapt to the values and norms of the society. The parents are obliged to ensure that students attend and continue learning without disturbing by paying school fees, creating a conducive environment at home and becoming good role models for their children. The students, who according to the functionalists must view themselves as instruments, which the future of society depends on, the students must be ready to be shaped by the teachers into responsible citizens by being guided to observe rules and regulations and core values at all costs. . They are expected to make full use of their abilities and get the best out of education provided by the school curriculum.

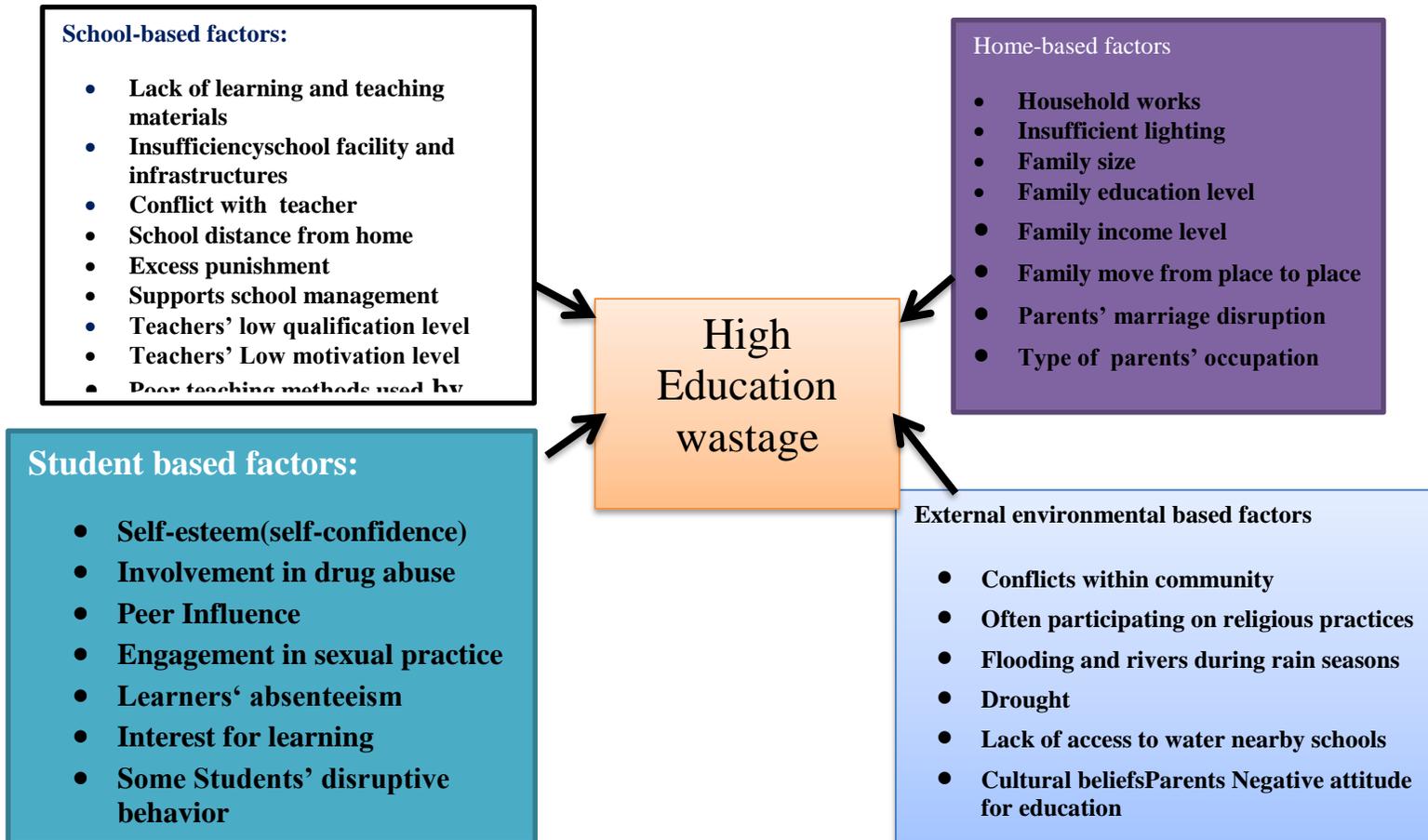
The schools, which were viewed as a very important component of the system. The school must have adequate facilities, adequate teaching staff, and a conducive teaching and learning environment.

### **Conceptual Framework**

The conceptual framework is based on the assumption that identifying the areas in which the education system is failing to be useful in determining where to focus efforts to reduce education wastage in the study area. The conceptual framework for this study was showing the interrelatedness of the factors that contribute to education wastage in government primary schools. This study was conceptualized within a framework that specifies component parts of a school system as performing specific component roles (independent variables) that are necessary. Moreover, the schools have to achieve their desired goals (dependent variables).

The dependent variable in this study was education wastage in government primary schools. Education wastage in governmental primary schools of Malle Woreda was daily affected by several factors that constitute the independent variables. Based on the literature review the home based factors (parents' income level, family size, insufficient home lighting, parents' low education level, family move from place to place, parents' marriage disruption, parents' occupational status and household works engage in). Student related factors (low self-esteem/self-confidence/, involvement in drug abuse, peer influence, engagement in sexual practice, frequent absenteeism, lack of interest in education, some students' disruptive behavior). School related factors (lack of learning-teaching materials, insufficiency of school physical facilities, distance of school from home, lack of support from school managements, excess punishment, conflict with teachers, teachers' low qualification level, teachers' low motivation level, and poor teaching methods used by teachers. In addition, environmental factors (internal conflict between communities, often participate on religious

practice, flooding and rivers during rain seasons, cultural beliefs and parents' negative attitude for education)



*Figure 1: Conceptual Model Shows the Factors for Education wastage in government primary school. Design from Researcher*

## RESEARCH DESIGN AND METHODOLOGY

### Description of the Study Area

Malle is one of the 16 ethnics groups found in South Omo Zone of the Southern, Nations, Nationalities and Peoples Regional State. The Word 'Malle' comes from the ethnic' name and the name of the language of the ethnic is itself. Now, the district also named as Malle Woreda. Formerly, the Woreda administered under Bako-Gazer Woreda until 2005. Since 2006, it became established as Malle Woreda administration with its present in which it stated town known as Lemo-Gento. There are 23 rural Kebeles, 5 urban Kebeles, among which 11 Kebeles are pastoral, and the rest 17 Kebeles are agro pastoral. The woreda covers total area land of 205,355 hectares. The main

livelihood strategy of the woreda is crop farming and animal husbandry (livestock rearing) and beekeeping. The main crops produced in the district are maize, sorghum, millet, teff, pumpkin, haricot, groundnut, and sesam. Astronomical location of the Woreda lies between 5°48' - 6°01' North latitude and 36°30' - 37°04' East longitude (MWFEDO, 2011/2012:1). The altitude of the woreda ranges from 501 to 1440 meter above sea level. The Woreda is located in Ethiopia at 799 kms far from Addis Ababa, 558 kms away from regional capital city of Hawassa, and 42 kms far from Zonal capital of Jinka (MWRTO, 2015). Malle Woreda is bordered along the South and Southeast by Bena-Tsemay Woreda, along the West and North-West by Dehub-Ari Woreda, along the North by Uba-Debre-Tsehay Woreda, along the Northeast by Marta Garda Woreda, and along the South-East by Alle Woreda.

Based on 2007 national population census of the woreda office of Finance and Economic Development projection in 2018; total population of the woreda is around 119,238, of which 58,979(49.5%) are women and 60,259(50.5%) are men. From this number, male 18,059 female 17,145 total 35,204 area youth age group (15-19 year old) who expected to attend secondary school(MWFEDO., 2017).

According to the simplified traditional agro-climatic classification system, the study area lies within dry wegna dega 20%, and kola 80%. The annual rainfall varies from 400 mm to 1200 mm; the annual mean temperature also vary from 22°C to 35°C with mean value of 28.5°C. (MWANRDO, 2015). Finally, according to Woreda Education office 2011 E.C report, in the woreda there are 25 (1-4) schools, 27 (1-8) schools 6 (9-10) schools and 1 (11-12) preparatory school total 59 schools are found. Total students learn in above listed school male 20146 female 19516 total 39,662.

### **Research Design**

According to AECT (2001) explained that the descriptive survey research design which to describe a subject, behavior, situation or phenomena, and also to associate with a particular research questions or problem in order to get the knowledge, experience, and view of the Educational wastage. Therefore, the research design was used in this study a descriptive survey research design because the method can assume to enable the researcher to find out the solution for existing problems. Researcher was initiated this design because of data describing the nature of existing condition and to obtain more statistical information concerning the status of educational wastage in governmental primary schools in study area.

### **Research Method**

Based on the descriptive survey type of research, design was employed by using mixed methods approaches and QUANT+qual (data was collected concurrent and quantitative data heavily weighted than qualitative data) model to investigate what are the associations of wastage in ten selected primary schools. The reason behind to use this approach is due to the nature of the study which involved that needed to be described and quantified (Kothari, 2004).

As Hesse-Biber and Johnson (2013) explain that, a mixed method approach provides complementary in both quantitative and qualitative data better and more thorough understanding of the research problem being studied. The research was employed different data collection tools of both quantitative and qualitative nature by using both closed-ended and open-ended questions, interview for PTAs, KETB, principals.

### **Source of Data**

Data for the study was obtained from both primary and secondary sources. Primary data source helps the researcher to get first-hand information about the issue under study. For the study, the primary data source is primary school principals, teachers, students, KETB, PTAs and experts of the Woreda Education office in the study area. Secondary data sources are different written documents. In this regard, different written documents related to the areas of the study were assessed to get secondary data. These documents include attendance sheet, school consolidated final reports and other important documents prepared by the ministry of education and different scholars.

### **Sampling, Sample Size and Sampling Techniques**

#### **The Target Population**

The specific target population of the study consists of 52 primary school (1-8) because researcher was found data deeply from those school, 3220 dropouts and repeaters, 342 teachers, 52 school principals, 10 PTAs, 10 KETB primary schools and 5 woreda experts in woreda education office. Therefore, the researcher was select sample size from the 342 teachers and 3220 students, 52 school principals, 10 PTAs, 10 KETB in governmental primary schools and 5 woreda experts in woreda education office as a sample size by different sampling techniques. (MWEO, 2009-2011).

#### **Sample Size**

The Malle woreda is composed of 11 pastoralists Keble, 12 agro pastoral and 5 municipalities. The Malle woreda has 52 primary schools were established to facilitate teaching and learning process. As Arisian and Gay (2004) stated that, the sample size taken depending on the guideline for sampling, which suggested that for such studies, 10% to 20% was sampled, because this provides a good representation of the population if selected appropriately. Therefore, among from these 52 primary schools, ten (10) primary schools (20%) were selected as Arisian and Gay stipulated by purposive sampling techniques based on their high dropout and repetition rate.

Kothari (2004)state that an optimum sample is one, which fulfills the requirements of efficiency, representativeness and reliability. Therefore, the researcher employ Kothari formula to select participants from the target population of teachers and students. Based on the formula to determine the sample size of the finite population the following formula was applied.

$$n = \frac{z^2 \cdot N \cdot p \cdot q}{e^2 \cdot (N - 1) + z \cdot p \cdot q^2}$$

Where;

n- Refers to required sample size

z- Refers to z value (1.96 for 95% confidence level)

N- Refers to population size

p- Refers to sampled population of success (0.11)

e- Refers to an acceptable level of error (5% or 0.05),

For teacher ( $n_t$ )

$$n_t = \frac{(1.96)^2(0.11)(0.89)(342)}{(0.05)^2(342-1)+(0.89)^2(0.11)(1.96)} = \frac{128.6}{1.02}$$

$$n_t = 126$$

For students ( $n_s$ )

$$n_s = \frac{(1.96)^2(0.11)(0.89)(3220)}{(0.05)^2(3220-1)+(0.89)^2(0.11)(1.96)} = \frac{1211}{8.2}$$

$$n_s = 147$$

From the above calculation, the sample size was 126 teacher’s participants and 147 student participants’ respectively. To select the sample from target population simple random sampling technique was employed using the lottery method. Finally, from (10) primary schools, totally (10) school principals were selected from each school by availability sampling; hence they are key informants that could give full information about the educational wastage under the study. Educational experts, (1) Kebele education training board (KETB) and (1) parent teacher student association (PTAs) chairpersons and from (10) primary schools totally (20) parents were selected by availability sampling technique, because they give more information about educational wastage of their school and population members who are conveniently available to participate in the study (Saunders & Thornhil, 2012).

To determine the sample size of teachers and students for each primary school the following stratified formula Williams (1997) was utilized.

$$na = \frac{Na \times n}{N}$$

Where na----Sample size of each school

Na----Population of each school

n-----Total sample size

N-----Total population

**Table 2 : Teachers and Students Sample Size in each School**

Name of school	Teachers		Students	
	Populatio n	Sample	Populati on	Sample
<hr/>				

## Publication of the European Centre for Research Training and Development-UK

Beneta	45	16	342	16
Koybe	36	13	415	20
Aleze	35	13	312	14
Balla	46	17	374	17
Gento	65	24	625	28
Kaleyndo	22	8	382	17
Asheker	21	8	217	10
Gudo	37	14	172	8
Boshkoro	19	7	283	13
Asho	16	6	98	4
<b>Total</b>	<b>342</b>	<b>126</b>	<b>3220</b>	<b>147</b>

*Source: Malle Woreda Education Office (2018/19)*

### Sample Techniques

In order to address the objective of the study, different sampling techniques were used namely availability, purposive, and simple random sampling techniques. Ten (20%) sample primary schools were selected using purposive sampling technique among a total of 52 primary schools within 10 clusters because schools have their own high dropout rate and repetition rate problem in the internal efficiency. Again, Principals, Woreda experts, PTAs and KETB was selected availability sampling techniques, according to (Saunders, M. L., 2012) stated that the availability sampling that relies on data collection from population member who are conveniently available to participate in the study.

Simple random sampling was used to select students and teachers from each school that provides an equal probability of being chosen in the study sample (Kothari, 2004). However, during the selection of students and teachers, the research was treated into account the educational wastage status, i.e. (dropout and repetition students). Students and teachers select by using the lottery method, through writing each of samples on a slip of paper, mix these slip thoroughly in a box, and the draw-required number of slip for the samples one after the other without replacement to get the end of 147 and 126 of students and teacher respectively from each sample primary school.

**Table 3 : Sample size and Sampling Techniques**

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Category	Target population	Sample size	Sample Techniques	Instruments	Remark
Students(dropout & repeater)	3220	147	Simple random sampling	questionnaires	Kothari (2004) method
Teacher	342	126	Simple random sampling	questionnaires	Kothari (2004) method
Principals	10	10	Availability sampling	Interview	Population members who are conveniently available to participate in the study (Saunders & Thornhil, 2012)
PTAs chairman	10	10	Availability sampling	Interview	Population members who are conveniently available to participate in the study (Saunders & Thornhil, 2012)
KETB Chairman	10	10	Availability sampling	Interview	Population members who are conveniently available to participate in the study (Saunders & Thornhil, 2012)
Woreda experts	5	5	Availability sampling	Interview	Population members who are conveniently available to participate in the study (Saunders & Thornhil, 2012)
Total	3597	308			Selected from 10 schools which are in their turn selected among 52 Schools.(Arisian & Gay, 2004)

(Source: Malle Woreda Education Office (2018/19))

**Instruments of Data Collection**

The study was used different instruments to collect both quantitative and qualitative data from primary and secondary data sources. Among these instruments, particularly questionnaires, semi-

structured questions for interview and checklist for observation was employed to obtain information from primary and secondary data sources.

### **Questionnaires**

The questionnaire, which allows informants to express their ideas and opinions freely about the phenomenon under study, in this research, a questionnaire was used to secure a quantitative data from government primary school teachers and students. A questionnaire, which is an essential data collection instrument consisting of questions for gathering information from respondents (Abawi., 2013). In this study, questionnaires were designed to quantitative data method for collecting sufficient information to address the research aims. Questionnaires are emphasizing on the factors of educational wastage in primary schools rate of education wastage and mechanisms to reduce wastage in Government primary schools in Malle Woreda.

Regarding the structure of the questionnaires, both open-ended and closed-ended questions were prepared, and filed by selected teachers and students. The research questions developed based on the literature and from published researcher (Deribe Debella *et.al*, 2015). Research by using the Likert type rating scale and the level of agreement were indicated by a five-point scale ranging. In order to avoid the communication barrier, the questionnaires were retranslated into Amharic and Malle local language (Malleigna) for the respondents who cannot read and understand the questionnaire properly.

### **Interview**

The interview was conducted to elicit data from the experts of the Woreda Education office, PTAs (chairperson) and KETB (chairperson) was selected purposive sampling technique and school principals by using availability-sampling techniques. An interview is very important and the most commonly used qualitative techniques, which could provide better sources of data on people's experiences and feelings. In line with the above idea, Johnson, Burke and Larry (2014) argue that interviews, which can be used to obtain in-depth information about a participant thought, knowledge, motivation, beliefs and feelings about a topic.

In the study, participant interview which consists of semi-structured questions, was employed to collect qualitative data from the principals, PTAs, KETB and woreda education expert purposive sampling technique, because they give deeply current information about student repetition and dropout. The researcher was interviewed face-to-face with selected principals, and woreda educational experts using participants' vernacular language to make the communications more effective.

### **Observation**

Observation was used to gather viable qualitative data about the extent to which the in-school environment; buildings, school facilities, school structure and outside school environment are contributing to educational wastage through checklist prepared by the researcher.

### **Document Analysis**

Document analysis was used to assess the extent of primary education, promotion, and repetition and dropout rate in the study area. Document analysis was used to gather quantitative and qualitative data from secondary data sources such as books, journals, articles and reports pertinent to the phenomenon under study and reliable information obtained from school documents like attendance sheet, school consolidated final reports and other relevant documents.

### **Validity and Reliability**

#### **Validity**

Validity refers to the extent to which an instrument measures what it ought to measure. It also refers to the extent to which an instrument asks the right questions in terms of accuracy (Yang, 2014).

Validity is the degree to which results obtained from the analysis of data actually represent the phenomena under study (Ellen, 2015). The researcher has checked the validity through two ways of interims; first, the questionnaires were distributed to teachers and students in selected primary school by the researcher personally. During the exercise of collecting the questions back, the researcher was discussed each questionnaire item with the respondents in order to determine whether the items are correctly was recorded and therefore, not open to misinterpretation when administered to the respondents during the main study. Secondly, the instrument's validity was determined through the submission of questionnaires and interview with the advisor, co-advisor, and expert is comments and suggestions to improve the instruments.

According to Best and Khan (2003) stated that the research instruments can be validated using experts' judgments and or statistical procedures. Therefore; experts who have a long experience on the research evaluated the questionnaires and interview questions then responses and suggestions given by respondents during pilot test was incorporated in the actual questionnaires and administered to participants.

#### **Reliability**

Questionnaires were piloted in two non-sampled area of school in Malle Woreda. The piloting was to ensure clarity and suitability of the language used. The purpose of this pre-testing was to assist in finding out any weakness that might be contained in the instruments. The piloting was also used to determine whether the instruments were reliable and valid, thus checking whether the items had covered enough range of data required, to test whether there were any identifiable ambiguity in the structure of the questions in order to make improvement and reveal flaws in the questions and inadequacies in coding system. The questionnaires were then declared reliable for the study based on guideline from (Fraenkel & Wallen, 2009).

Cronbach's alpha is one of the most commonly accepted measures of reliability. It measures the internal consistency of the items in a scale. It indicates that the extent to which the items in a

questionnaire are related to each other. The normal range of Cronbach's coefficient alpha value ranges between 0-1 and the higher value reflects a higher degree of internal consistency. The most commonly accepted value is 0.70 as it should be equal to or higher than to reach internal reliability (Hair et al., 2003). The reliability of the instruments of the study was checked using a Cronbach Alpha after administering the instruments to dropout and repeater students and teachers, during a pilot test. The responses collected from the participants were analyzed by SPSS version 20 to determine the value of alpha.

Hence, 30 students were selected by simple random sampling from grade 5 up to 8 during the Polit test while 30 teachers were similarly selected simple random sampling. The pilot study sample was included in the main study part of the research. After pilot testing, the researcher has checked the reliability of the instrument by using Cronbach alpha and the result was 0.802, 0.806 of students and teachers respectively. All cases were greater than 0.7 it fulfils the Cronbach's coefficient alpha value.

### **Procedures of Data Collection**

The questionnaires, interview, and observation checklist was prepared by the researcher from the previous researches and personal experience then evaluated by research experts before it was administered to participants. Permission was requested from the university, Zone education department and school principals respectively to collect data from some selected schools.

The pilot test was conducted in some selected primary schools of the study area, which is not included in the actual study, and then the responses given by the participants through questionnaires were collected and evaluated to check their validity and reliability.

After pilot testing, the instruments were amended in line with the comments and suggestions given by research experts and participants before administering the instruments to participants in the actual study. The researcher was orient the participants based on the significance of the study and process of distribution and collection of instruments in clear language.

Finally, the data collected through questionnaires, interview, observation checklist and document analysis during the actual study will analyze and interpreted followed by discussion and recommendation.

### **Methods of Data Analysis**

Data analysis is the process of making sense of one's data in the meaningfulness. It involves scrutinizing the information and making inferences (Tromp, 2009). The methods, which was used in data analysis, have whether the research is qualitative or quantitative. Therefore, in this study data analysis both qualitatively and quantitatively (mixed approach) and based on the concepts of particular theoretical and empirical evidence.

The quantitative data collected through questionnaire and were analyzed by using statistical package for social science (SPSS, version 20) software. Moreover, descriptive statistics (frequency distribution, percentage, mean and standard deviation), and inferential statistics independent t-test and multiple linear regression were used to analyze quantitative data. Items were prepared to be rated in the Likert type of scale 1=strongly disagree, 2=disagree, 3= undecided, 4=agree and 5=strongly agree and independent sample t-test was used to check the significant difference between the teacher and student perception on education wastage. On the other hand, the qualitative data from key informant interviews and observation were summarized and presented by narration. First objective, which was to assess the rate of education wastage in governmental primary schools, were analyzed by descriptive statistics like percentage. It describes repetition and dropout from 2008/2016-2011/2018 years was analyzed.

Second object, which was to identify factors that contribute to education wastage in primary school, were analyzed by independent t-test and multiple linear regression analysis. The regression model consisted of one dependent variable and four independent variables the independent variables were home based factors, students' related factors, school based factors and environmental related factors. Dependent variable education wastage in primary school as provided in the model below:  

$$y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where: y= education wastage in primary school

$\alpha$  = Constant; y- intercept, that is the value of y when x is equal to zero

$\beta_1$  to  $\beta_4$ =the slope demonstrating degree of variable in independent variable by one unit variable

X1=home based factors

X2= School based factor

X3= students' related factors

X4= environmental based factors

$\epsilon$  = error term

And the last objective, to assess the mechanisms that can be used to reduce education wastage in government primary schools, were analyzed by narration, such as independent t-test show that the significant difference between dropout students' and teachers also repeater students and teachers. The table below gives a summary of how data collected was analyzed as per the objectives of the study.

**Table 4: Summary of Data Analysis**

No	Objectives	Method of data analysis
1	Demographic characteristics of respondents	Descriptive Statistics
2	Objectives 1	Descriptive Statistics
3	Objectives 2	Descriptive and Inferential Statistics
4	Objectives 3	By narration

## **Ethical Consideration**

The researcher was ensured that ethical issues concerning research participants will be observed. During data collection, analysis and presentation the researcher was maintain integrity. For this reason, before data collection, permission was sought to carry out research from the university and education department of the zone as well as school principals. The researcher was make it clear to the participants that the research objectives were to investigate factors of educational wastage in Malle woreda primary schools and to assure that the outcome of the study was directly benefit them. Finally, the researcher was also promise to protect the information of the respondents by keeping them confidentially.

## **DATA PRESENTATION, ANALYSIS AND DISCUSSION**

The purpose of this research was to investigate the factors that contribute to education wastage in government primary schools of Malle Woreda and to assess the solution to reduce education wastage. Subsequently, this chapter deals with the presentation, analysis and discussion of data collected on the factors that contribute to education wastage and as well as its mechanism to reduce wastage. It contains two major parts; the first part presents characteristics of respondents, whereas the second part deals with the findings regarding the research questions.

### **Response Rates of the Respondents**

The number of questionnaires, administered to all the respondents was 273. A total of 261 questionnaires (142 students and 119 teachers) were properly filled and returned. This indicated that an overall successful response rate of 95.6%. According to (Mugenda, O.M. & Mugenda, A.G., 2003) found that a response rate sufficient and representatives as it confirms 50% is adequate for analysis and reporting.

### **Demographic Characteristics of Respondents**

#### **Demographic Characteristics of students**

The demographic characteristics of students involve their sex, age, grade level, parents' education level and with whom students live as is presented in The demographic characteristics of students involve their sex, age, grade level, parents' education level and with whom students live as is presented in table 5 below. As shown in Table 5, the dropout rate of male and female students was 76.5% and 23.5%, whereas the repetition rate of male and female students was 67.6%, and 32.4% respectively in the primary schools of Malle Woreda. The results show that male students higher suffer in education wastage in the study area.

As shown in Table 5, 95.6% and 2.9% of the students experienced dropout were within the age range of 7 - 14 and 15 – 22 years, whereas 90.5% and 8.1% of them experienced repetition were within the age range of 7 - 14 and 15 - 22 respectively. This implies that the students most affected by education wastage in the study area were within the age range of 7 to 14 years.

**Table 5: The Demographic characteristics Students**

Variables	Category	Dropout students		Repetition students	
		F	P	F	P
Sex	Male	52	76.5	50	67.6
	Female	16	23.5	24	32.4
	Total	68	100	74	100
Age	7-14	65	95.6	67	90.5
	15-22	2	2.9	6	8.1
	23 and above	1	1.5	1	1.4
	Total	68	100	74	100
Grade	1-4	2	2.9	6	8.1
	5-8	66	97.1	68	91.9
	Total	68	100	74	100
Parents education level	Unable to write	42	61.8	43	58.1
	Primary school	13	19.1	21	28.4
	Secondary school	4	5.9	5	6.8
	Certificate and diploma	9	13.2	5	6.8
	Total	68	100	74	100
With whom students live	With two parents	52	76.5	63	85.1
	With one parents	10	14.7	3	4.1
	With guards	1	1.5	5	6.8
	Alone	5	7.4	3	4.1
	Total	68	100	74	100

(Source: computed from survey data 2020)key; F= frequency P= percentage

Regarding grade level, 97% and 92% of the dropped out and repeated students lay within the grade levels of 5 to 8, whereas 3% and 8% of the dropped out and repeated students lay within the grade levels of 1 to 4 respectively. This shows that students in grade levels 5 to 8 experience high dropout and repetition rates.

As indicated in table 5 above show that, the proportion of parental education level of dropout and repeater respondents' results show that 61.8% and 58.1% indicate that their parents cannot read and write respectively. Similarly, parents' education level of dropout and repeater, respondents answer shows 19.1%,28.4% and 13.2% and 6.8% of them replied that their parents have primary and secondary education level respectively. This depicts high rates of illiterate among parents of this study area, which may have a considerable impact on their students' survival and promotion in the

school. In addition, they may not be well aware of the value of education, follows up students learning systems, and give priority to the study of their children.

Furthermore, 76.5% and 85.1% (n=52 and 63) of dropout and repeater student respondents said that, they are living with both parents respectively. 14.7% and 4.1% (n=10 and 3) of them live with only one of the parents and 1.5% and 6.8(n=1 and 5) of they live with their gardeners and only 7.4 % and 4.1% (n=5 and 3) of them live alone respectively. Therefore, it is possible to deduce that most of the student respondents were living with their parents. This showed that parents' educational level was more important in determining repetition and dropout of students.

### The Demographic Background of Teachers

The demographic characteristics of teachers involve their sex, age, education qualification; marital status and teaching experiences as is presented in table 6 below.

**Table 6: The Demographic characteristics of teachers**

Variables	Category	Respondent	
		F	P
Sex	Male	94	79
	Female	25	21
	Total	119	100
Age	11-20	15	12.6
	21-30	61	51.3
	31 and above	43	36.1
	Total	119	100
Education Qualification	Below certificate(10 <sup>th</sup> completers)	23	19.4
	Certificate(10 <sup>th</sup> +1) and diploma(10 <sup>th</sup> +3)	95	79.8
	Degree(12 <sup>th</sup> +3) and above	1	0.8
	Total	119	100
Work experiences	1-5 years	52	43.7
	6-10 years	58	48.7
	11-15 years	5	4.2
	16 and above years	4	3.4
	Total	119	100
Marital	Married	97	81.5
	Single	20	16.8
	Divorced	1	0.8
	Winded	1	0.8
	Total	119	100

(Source: computed from survey data 2020)key; F= frequency P= percentage

As indicated in table 6, the sex distribution of the respondents of teachers, the majority of the teachers' involved in this study were male compared to the percentage of female participants (79% versus 21%). This indicates that female teacher involvement in the teaching process in the study area less than male teachers.

Regarding the teachers respondents age, 15(12.6%) and 61(51.3%) of them were between the age interval of <20 and 21—30 years respectively. The remaining 43(36.1%) were 31 and above years. This shows that the greater numbers of the teachers' in the primary schools of Malle Woreda are at youth age level. Concerning the education qualification, 23(19.3%), 95(80%) and 1(<1%) of the respondents indicated that they have education qualification of below certificate, certificates and diplomas, and Bachelor's degree respectively. The findings imply that the respondent's education level has not much enough based on the qualification of the primary level for teachers. As indicated in table 6, the marital status distribution of the respondents of teachers the majority 97(81.5%) of the respondents are married; while 20(16.8%) are single. The divorced and widowed respondents represent 1(0.8%) & 1(0.8%) respectively. This implies that the respondents of marital status had been a high influence on student's internal efficiency. Regarding the teaching experiences of the respondents, it shows the teaching experience of teachers in selected primary schools. The study indicates that among current teachers' respondents under this study, the teaching experiences of below 5 years were 52 (43.7%), 6-10 years experiences were 58(48.7%), 11-15 years experiences were 5(4.2%) and above 15 years were 4 (3.4%) respectively. This shows that of majority of teachers' work experiences is below 5 years. The findings reflected by Brown and Duguid (2003) who found that highly experienced personnel enhance production of high quality outcomes and effective quality improvement in aventure.

### Level of Education Wastage in the Study Area

#### Analysis Levels of Students Drop out in the Malle Woreda

**Table 7: The Level of Drop out Students in Malle Woreda**

Years	Grade 1-4			Grade 5-8			Grade 1-8		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2008	25 (0.51%)	9 (0.19%)	34 (0.39%)	19 (0.6%)	23 (0.69%)	42 (0.64%)	44 (0.55%)	32 (0.4%)	76 (0.48%)
2009	57 (1.08%)	29 (0.61%)	86 (0.83%)	38 (1.07%)	21 (0.576%)	59 (0.823%)	95 (1.078%)	50 (0.58%)	145 (0.83%)
2010	113 (1.91%)	52 (0.99%)	165 (1.48%)	147 (3.62%)	114 (2.84%)	261 (3.22%)	260 (2.61%)	166 (1.79%)	426 (2.22%)
2011	289 (4.56%)	195 (4.53%)	484 (4.54%)	231 (5.38%)	137 (3.37%)	368 (4.37%)	520 (4.89%)	332 (3.46%)	852 (4.18%)
Total	484 (2.01%)	285 (1.58%)	769 (1.79%)	435 (2.67%)	295 (1.87%)	730 (2.27%)	919 (2.28%)	580 (1.56%)	1499 (1.92%)

(Source: Woreda Education Statistical Annual Abstract, 2020)

As indicated in table 7 above, the dropout rate was 0.48%, 0.83%, 2.22%, and 4.18% in the years 2008/2015, 2009/2016, 2010/2017 and 2011/2018 respectively. This result show that the dropout rate of students increased year to year in primary schools of Malle woreda. The table also shows that dropout rate is the highest for the grades 5 – 8 with the 4-year average value of 2.27. This result is in line with that of the national trend, which indicates that the dropout rate of grade 5-8, was the highest with average value of 13.5% (MOE 2012). Therefore, even though it is less than the national average, the level of dropout in the primary schools of Malle Woreda is far behind the national target, and the problem is severe in grades 5 – 8.

### Analysis Levels of Students Repetition in the Malle Woreda in Primary school

**Table 8: The Level of Repetition in Malle Woreda**

Years	Grade 1-4			Grade 5-8			Grade 1-8		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2008	76 (1.6%)	68 (1.4%)	144 (1.4%)	108 (3.1%)	107 (2.9%)	215 (3.1%)	184 (2.1%)	175 (2%)	359 (2%)
2009	269 (4.6%)	231 (4.4%)	500 (4.5%)	180 (4.4%)	170 (4.3%)	350 (4.3%)	449 (4.5%)	401 (4.3%)	850 (4.4%)
2010	305 (4.9%)	283 (5.1%)	588 (5%)	454 (10.6%)	437 (10.7%)	891 (10.7%)	759 (7.2%)	720 (7.5%)	1479 (7.4%)
2011	398 (6.28%)	366 (6.62%)	764 (6.45%)	836 (19.46%)	768 (18.88%)	1604 (19.17%)	1234 (11.6%)	1134 (11.82%)	2368 (11.71%)
Total	948 (4.35%)	848 (4.38%)	1796 (4.37%)	1578 (9.39%)	1482 (9.195%)	3060 (9.29%)	2526 (6.35%)	2330 (6.41%)	4856 (6.38%)

(Source: Woreda Education Statistical Annual Abstract, 2011)

As indicated in table 8 above, the dropout rate was 2%, 4.4%, 7.4%, and 11.71% in the years 2008/2015, 2009/2016, 2010/2017 and 2011/2018 respectively. This result show that the repetition rate of students increased year to year in primary schools of Malle woreda. The table also shows that repetition rate is the highest for the grades 5 – 8 with the 4-year average value of 9.29. This result is in line with that of the national trend, which indicates that the repetition rate of grade 5-8, was the highest with average value of 4.63% (MOE 2012). Therefore, the level of repetition in the primary schools of Malle Woreda is far behind the national target, and the problem is severe in grades 5 – 8.

### Factors that Contribute for Education Wastage in Primary Schools

Based on the review of literature and the conceptual framework stated, data were gathered on the factors of education wastage in the categories of home based factors, school-related factors, student related factors and external environmental factors. Accordingly, data collected from teachers and

affected students through questionnaire were analyzed using frequency distribution, mean and std. deviation, t-value and P-value and multiple linear regression.

### **Frequency Distribution of Responses on the Factors of Education Wastage**

Frequency distribution of the categories of factors contributing to education wastage is dealt with in Table 10. As depicted in Table 10 below, 7.62%, 6.56%, 18.59%, 27% and 40.23% of the respondents strongly disagree, disagree, neutral, agree and strongly agree respectively that home-related factors contribute to education wastage in the primary schools of Malle Woreda. In this regard, Ambajo (1997) found out that a combination of low parental level of education, and low income catalyzed low participation among pupils in primary schools. Again it support by (Akyeampong, Djangmah, Oduro, Seidu, & Hunt, 2007) the members of a household can have an influence over educational access and retention of their children in school, particularly in poorer communities. The number of children in a family dictates the poor families' ability to retain their children in school. Older girls in poor households may be withdrawn from school to take care of their younger siblings. This therefore means that birth order and gender often influence who has access to school.

Similarly, 11.1%, 11.23%, 25.24%, 21.19% and 29.83% of the respondents strongly disagree, disagree, neutral, agree and strongly agree respectively that student related factors contribute to education wastage in the primary schools of Malle Woreda. This findings supported by the findings of Deribe, et al. (2015) which reveals that students' low self-conception due to the previous failure in examination as one of the significant factors for educational wastage. Moreover, 3.83%, 6.58%, 19.92%, 28.57% and 40.93% of the respondents strongly disagree, disagree, neutral, agree and strongly agree respectively that school related factors contribute to education wastage in the primary schools of Malle Woreda. Furthermore, 10.39%, 13.66%, 27.36%, 19.06% and 29.5% of the respondents strongly disagree, disagree, neutral, agree and strongly agree respectively that environmental factors contribute to education wastage in the primary schools of Malle Woreda. In support of these findings, Natasa (2017) argues that students from schools characterized by a high dropout rate claim that most teachers claim to be motivated to work in school. They like school causes, e.g. ignoring teaching regulations and teaching-learning facilities, unsatisfactory cooperation with the principal, insufficient school equipment, interpersonal relationships, and so on. Also according to Kane (2004), other school-based factors leading to wastage in schools include poor methods of teaching.

In general, the distribution indicates that majority of the respondents (41%, 40%, 30%, and 29%) for school related, home related, student related and external environmental factors respectively) strongly agree that all of the categories of supposed factors contribute to education wastage in the primary schools of Malle Woreda. Moreover, family size, parent occupational status and household works engagement among home related factors, low self-esteem/self-confidence/, frequent absenteeism of students and some students' disruptive behavior among student related factors that

contributed to education wastage in primary schools in the Malle Woreda. In addition, teachers' low qualification level, teachers' low qualification level and poor teaching methods used by teachers among school related factors for education wastage in the study area. Similarly internal conflict between communities, lack of access water near to school and community negative attitude for education among environmental factors are the most influential components of factors that contribute education wastage in the primary schools of Malle Woreda. Interview discussion show that,...

*In the rural area context there was high home based factors influencing education wastage in our area, because most students' parents were do not educated, for these case parents like to use students force by engaging household practice, Such as keeping cattle, cooking food, pitching water, keeping the child and so. In student related factors influenced, they said that, most of in our school students tend to lose the self-confidence towards learning and do not expect themselves to be successful in their own efforts because most of students depend on clever students. In school related factors there is shortage of educational materials, as their report the reason for shortage was mismatch of textbooks, teacher guides and other materials not printed and distributed by the Regional Education Bureau with a number of students. In our school, most of teachers' are not motivated for teaching, because in school level for teacher not fulfils a good shelter and food facilities. Lastly in external related factors they stated that, in Malle society there are 42 clan groups, from those one clan group person attack(killed) or conflict with another clan group, all of from died clan group attack killer clan group, for that cause most of students dropout(leave) from school in one or two year.*

**Table 9: The Frequency Distribution of the responses on Factors of Education Wastage**

Factors for education wastage	Items & the frequency distribution of the respondents' perception										Mean	SD
	Strongly Disagree		Disagree		Undecided		Agree		Strongly agree			
	F	%	F	%	F	%	F	%	F	%		
Home F1	-	-	3	1.1	50	18.8	83	31.2	125	47	4.26	0.808
Home F2	-	-	-	-	46	17.6	78	29.9	137	52.5	4.35	0.763
Home F3	1	0.4	5	1.9	56	21.5	79	30.3	120	46.0	4.20	0.866
Home F4	-	-	2	0.8	44	16.9	102	39.1	113	43.3	4.25	0.757
Home F5	88	34.1	61	23.4	45	17.2	24	9.2	42	16.1	2.5	1.445
Home F6	76	29.1	61	23.4	55	21.1	29	11.1	40	15.3	2.6	1.406
Home F7	-	-	5	1.9	53	20.3	71	27.3	132	50.6	4.26	0.84
Home F8	-	-	-	-	40	15.3	88	33.7	133	51.0	4.36	0.733
<b>Sub-total</b>	<b>23</b>	<b>7.62</b>	<b>17</b>	<b>6.56</b>	<b>48</b>	<b>18.59</b>	<b>68</b>	<b>27</b>	<b>105</b>	<b>40.23</b>	<b>3.85</b>	<b>0.952</b>
Student F1	18	6.9	19	7.3	57	21.8	66	25.3	101	38.7	3.82	1.22
Student F2	63	24.1	57	21.8	68	26.1	37	14.2	36	13.8	2.72	1.343
Student F3	98	37.5	53	20.3	90	34.5	14	5.4	6	2.3	2.15	1.061
Student F4	12	4.6	39	14.9	80	30.7	73	28.0	57	21.8	3.48	1.125

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Student F5	-	-	3	1.1	46	17.6	71	27.2	141	54	4.38	0.805
Student F6	12	4.6	25	9.6	47	18	76	29.1	101	38.7	3.88	1.164
Student F7	-	-	9	3.6	73	28	76	19.1	103	39.5	4.05	0.902
<b>Sub-total</b>	<b>29</b>	<b>11.1</b>	<b>29</b>	<b>11.23</b>	<b>66</b>	<b>25.24</b>	<b>59</b>	<b>21.19</b>	<b>78</b>	<b>29.83</b>	<b>3.5</b>	<b>1.089</b>
School F1	2	0.8	5	1.9	67	25.7	81	31.0	106	40.6	4.09	0.18
School F2	-	-	2	0.8	56	21.5	97	37.2	106	40.6	4.18	0.788
School F3	53	20.3	45	17.2	69	26.4	51	19.5	43	16.1	2.95	1.358
School F4	-	-	26	10	69	26.4	56	21.5	110	42.1	3.96	1.042
School F5	10	3.8	35	13.4	53	20.3	70	26.8	93	35.6	3.77	1.18
School F6	21	8	31	11.9	66	25.3	50	19.2	93	35.6	3.62	1.294
School F7	2	0.8	5	1	23	8.8	88	33.7	143	54.8	4.4	0.791
School F8	2	0.8	4	1.5	28	10.7	110	42.1	117	44.8	4.29	0.778
School F9	-	-	4	1.5	37	14.2	68	26.1	152	58.2	4.41	0.787
<b>Sub-total</b>	<b>10</b>	<b>3.83</b>	<b>17</b>	<b>6.58</b>	<b>52</b>	<b>19.92</b>	<b>75</b>	<b>28.57</b>	<b>107</b>	<b>40.93</b>	<b>3.96</b>	<b>0.911</b>
External F1	-	-	21	8.0	67	25.7	74	28.4	99	37.9	3.96	0.98
External F2	51	19.5	41	15.7	87	33.3	38	14.6	44	16.9	2.93	1.327
External F3	48	18.4	52	19.9	64	24.5	38	14.6	59	22.6	3.03	1.417
External F4	51	19.5	52	19.9	72	27.6	26	10.0	60	23.0	2.97	1.417
External F5	-	-	10	3.8	57	21.8	70	26.8	124	47.5	4.18	0.904
External F6	34	13.0	58	22.2	81	31.0	39	14.9	49	18.8	3.04	1.284
External F7	6	2.3	16	6.1	72	27.6	63	24.1	104	39.8	3.93	1.061
<b>Sub-total</b>	<b>27</b>	<b>10.39</b>	<b>36</b>	<b>13.66</b>	<b>71</b>	<b>27.36</b>	<b>50</b>	<b>19.06</b>	<b>77</b>	<b>29.5</b>	<b>3.43</b>	<b>1.199</b>
<b>Grand Total</b>	<b>22</b>	<b>8.24</b>	<b>25</b>	<b>9.51</b>	<b>59</b>	<b>22.78</b>	<b>63</b>	<b>23.96</b>	<b>92</b>	<b>35.12</b>	<b>3.69</b>	<b>1.038</b>

Source: computed from survey data 2020; Key: F1, F2, F3 ... = Factor 1, Factor 2, factor 3, etc.

### Respondents' Mean Perceptions on the Factors of Education Wastage

This part main present on the statement about home based factors, school and school-related, student's related factors and environmental factors that contribute to education wastage in primary schools. To this end, data collected from teachers and affected students through questionnaire were analyzed using mean and std. deviation, t-value and P-value total response of respondents as contributing factors for education wastage in primary schools in the studyarea.

Affected students and teachers whose are studying and teaching in the primary schools were asked the perception of students and teachers on factors of education wastage which they relate the dropout and repetition of pupils in the primary schools. Accordingly, an average mean point of less than 1.9 is considered as strongly disagree, 2.-2.40 as disagree, 2.51-3.40 as moderated, 3.51-4.4 as agree and 4.5-5.0 as strongly agree. Additional, if a calculated value is greater than 0.05 significant levels, there is no significant difference between the views of the two groups of respondents, while the calculated value is less than the 0.05 significant values, there is significant difference between the views of the two groups of respondents.

**Table 10: Respondents' perception regarding factors on education wastage**

Variables	Respondents				WM	T	Sig
	Affected students		Teachers				
	X	SD	X	SD			
Home based factors	3.72	0.468	4.00	0.395	3.86	-5.186	0.000
Student related factors	3.53	0.470	3.61	0.452	3.57	-1.343	0.180
School based factors	3.83	0.467	3.79	0.475	3.81	0.605	0.545
External environment factors	3.51	0.566	3.35	0.563	3.43	2.292	0.023
Overall factors	3.65	0.326	3.69	0.309	3.67	-1.00	0.318

The overall factors of Table 10, dealt with the education wastage factors with respect to overall factors in Malle Woreda Primary School. The table shows that the mean perceptions of the affected students and that of the teachers regarding overall factors were 3.65 and 3.69 with standard deviations of 0.326 and 0.309 respectively. Besides, the independent samples t-test value revealed that there was no statistically significant difference in the mean perceptions between the affected student and teacher respondents regarding overall factors as  $t = -1.00, p = 0.318 > 0.05$ . . . . Thus, the results show that overall factors contributed to education wastage PrimarySchool.

The first item of Table 10, dealt with the education wastage factors with respect to home based factors in Malle Woreda Primary School. The table shows that the mean perceptions of the affected students and that of the teachers regarding home based factors were 3.72 and 4.00 with standard deviations of 0.468 and 0.395 respectively. Besides, the independent samples t-test value revealed that there was statistically significant difference in the mean perceptions between the affected student and teacher respondents regarding home based factors as  $t = -5,186, p = 0.000 < 0.05$ . . . . Thus, the results show that home based factors contributed to education wastage Primary School. This is in line with Henry (2015) who concluded that family income influenced educational wastage. In opposite side, Ambajo (1997) found out that a combination of low parental level of education, and low income catalyzed low participation among pupils in primary education. This is in concurrence with (Hunt, F., 2008)who noted that older children in poor households might be withdrawn from school to take care of younger siblings and fend for them for them.

Regarding in above table 10, dealt with the education wastage factors with respect to student related factors in Malle Woreda Primary School. The table shows that the mean perceptions of the affected students and that of the teachers regarding student related factors were 3.53 and 3.61 with standard deviations of 0.470 and 0.452 respectively. Besides, the independent samples t-test value revealed that there was no statistically significant difference in the mean perceptions between the affected student and teacher respondents regarding home based factors as  $t = -1.343, p = 0.180 > 0.05$ . . . .

. . . .

Thus, the results show that student related factors contributed to education wastage Primary School. This finding supported by the findings of Deribe, et al. (2015) concluded that frequent absenteeism, and Students' lack of interest in education and students' low self-conception is one of the major factors of educational wastage.

As the indicate Table 10, dealt with the education wastage factors with respect to school-based factors in Malle Woreda Primary School. The table shows that the mean perceptions of the affected students and that of the teachers regarding school-based factors were 3.83 and 3.79 with standard deviations of 0.467 and 0.475 respectively. Besides, the independent samples t-test value revealed that there was no statistically significant difference in the mean perceptions between the affected student and teacher respondents regarding home based factors as  $t = 2.292, p = 0.545 > 0.05$ . . . . .

Thus, the results shows that school based factors contributed to education wastage Primary School. According to Kane (2004), other school-based factors that cause wastage in schools include teacher student conflicts, bad teaching methods, excessive penalties, too much homework, and overcrowded schools. In another side, Natasa (2017) argues that students from schools characterized by a high dropout rate claim that most teachers claim to be motivated to work in school. They like school causes, e.g. ignoring teaching regulations and teaching-learning facilities, unsatisfactory cooperation with the principal, insufficient school equipment, interpersonal relationships, and so on.

The last item of Table 10, dealt with the education wastage factors with respect to external environment factors in Malle Woreda Primary School. The table shows that the mean perceptions of the affected students and that of the teachers regarding external environment factors were 3.51 and 3.35 with standard deviations of 0.566 and 0.563 respectively. Besides, the independent samples t-test value revealed that there was statistically significant difference in the mean perceptions between the affected student and teacher respondents regarding external environment factors as  $t = -4.22, p = 0.023 < 0.05$ . . . . . Thus, the results show that external environment factors contributed to education wastage Primary School. The findings also supported by Save the Children, (2005) indicated that cultural norms and beliefs constrain girls' education, especially in many developing parts of the world. In addition, the high persistence of girls' student in school for their own studying and founded that initiation ceremonies (religious ceremony) have a significant effect on the girls' dropout rate. The findings agree with those of Seyma et al. (2016) who found that the teachers and school community negative attitudes towards the students come out as an important cause in the students to absence and to drop out of school.

### **Prediction of the Factors on Education Wastage**

The Multiple Linear Regression Analysis

**Table 11: Result of multiple regression analyses on factors of education wastage**

Model	R	R Square	Adjusted R <sup>2</sup>	Std. Error of the Estimate	Df	F	Sig	Durbin Watson
Education wastage overall factors	.105	.011	.010	.833	1128	12.571	.000	1.683

The result of overall multiple regression analysis of factors showed that the combination of all education factors entered into the model had significantly strong relationship ( $p = .000 < .001$ ) with the education wastage. As could be estimated from the coefficient of multiple regression  $R = .105$  and from ANOVA F-ratio of (1128) 12.571. Thus, there was statistically significant relationship between education wastage and combined factors that contribute education wastage in the study area. The goodness of fit of the model showed that R square was 0.105, which implied that 10.5 per cent of the education wastage predicted to happen by the combined effect of home based, student related, school based and external environment factors in study area.

**Table 12: Result of multiple regression analysis for measure of relative importance of independent Variables**

Predictor Variables	Unstandardized Coefficient		Standardized Coefficient, $\beta$	T	Sig
Wastage	B	Std. Error			
(Constant)	2.486	0.279		8.383	0.000
HB	0.301	0.055	0.165	5.430	0.000
SR	0.052	0.058	0.029	0.906	0.365
Factors SB	0.126	0.056	0.071	2.245	0.025
EER	-0.108	0.046	-0.073	-2.329	0.020

Note: Predictors: (Constant), HB - home based factors; SR - student related factors; SB - school based factors and EER - external environment related factors

Table 15 displayed that the beta regression coefficients for home based factors (HB), student related factors (SR), school based factors (SB) and external environment related factors (EER) were 0.301, 0.052, 0.123 and -0.108 respectively. The analysis result indicated that, holding other variables constant, for a unit improvement in a home based factors, school based factors and student related factors there would be 16.5%, 7% and 3% decrease in education wastage respectively. This shows that home based factors are the most influential factors that contribute to education wastage in primary school of Malle Woreda.

### The Mechanisms in Order to Reduce Education Wastage in Primary Schools

In this part of the research objective was analyzed by qualitative approach and data taken from school principals, woreda education experts, PTAs, KETB and researcher observation.

However, the data gained from school principals, woreda education experts, PTAs, KETB interview answer show that education wastage more due to the lack of providing a suitable environment for students in the schools.

In addition, they stated that most of teachers in classroom students follow-up and take information about dropped students on time are best, because knowing the reasons why students leave school would help to return them on time. Another solution is all stockholders are continues meeting parents on students' absenteeism and they show direction and they take responsibility for return students in school. School managements, teachers, PTA and KETB counseling and guiding dropout and repeat students is the best solution for reducing education wastage. Lack of school leader role in the school this may increase student dropout and educational wastage because of less interest of pastoral and semi pastoral area children to learn.

School principals and woreda experts interview results show that classroom teachers follow-up, teachers continuous meeting with parents, strong rules and regulations, parents participation in decision making, and making issue of repetition and dropout priority agenda of school, were mechanism to reduce education wastage of primary school in Malle Woreda. Similarly, creating safe learning environments in school, use of active learning methods in school, employing a good continuous assessment were mechanism to reduce education wastage of primary school in Malle Woreda. Similarly support from teacher underperform students, providing counselling service to students at risk, encourage student to take responsibility for learning, encourage students to participate in extra-curriculum, students engage in school's decisionmaking, fulfilment of learning facilities in school were mechanism to reduce education wastage in primary school in Malle woreda. As the researcher observed that, most schools are lack of teaching material, lack of learning classroom, library and shelter for teachers and students in the schools. This implies that it support for student dropout and repetition, because of less attention given for teaching-learning- process primary education.

Student's parent comments, they said that, in our area, students are the cause of the wastage they are not learning in their mother tongue since grade 1. Therefore, like students in our area, when they come straight to school, and in Amharic, language of learning and it is difficult for children to understand the subject matter. Students can easily understand and will continue to learn and make it easier for them to continue learning in their mother tongue, which may be due to this right. This idea support by literature, according (Woldab., Ziyen Engdasew, 2012)found that Children who speak a language other than the language of instruction confront a substantial barrier to learning. When the children are trying to acquire basic literacy as well as adjust to the demands of the school setting, not speaking the language of instruction can make a difference between succeeding and failing in school, between remaining in school and dropping out. To confirm this, (MOE, 2013) pointed out that the English language is a serious challenge for many subject teachers as well as for those teachers teaching English as a subject.

## **SUMMARY, CONCLUSION, AND RECOMMENDATION**

### **Summary**

The main objectives of the study were to investigate factors that contribute to Education wastage in government primary schools of Malle Woreda and to identify possible solutions of reducing education wastage in primary schools. The study attempted to answer the following basic question.

1. What is the level of education wastage in government primary schools of Malle Woreda?
2. What are the factors that contribute to education wastage in government primary schools of Malle Woreda?
3. What mechanisms can be used to reduce education wastage in government primary schools of Malle Woreda?

The study used descriptive survey research design, and mixed research method, which is QUANT+qual, it collected in concurrent time. Data was collecting by using questionnaires, interviews and document analysis. The target population for the study comprises of 10 principals, 10 KETB, 10 PTA, 5 Woreda experts, 147 (dropout and repeater) students, and 126 teachers. In total there were 308 respondents was collected in the selected primary schools. The sample teachers and students were selected by simple random sample method. And principals, PTAs, KETB and woreda expert were selected by availability sampling method. Data secured from different sources were analyzed by using descriptive statistics (mean, standard deviation, frequency distribution, and percentage), inferential statistics (independent t-test and multiple linear regressions) and interview and field observation were analyzed by narration. Depending on the analysis of the result made, the following major findings were obtained:

With respect to the level of education wastage, both dropout rate and repetition rate in the primary schools of Malle Woreda were far behind the national target, and the problem is severe in grades 5 –8.

With respect to factors contributing to education wastage, the analysis of frequency distribution indicated that majority of the respondents (41%, 40%, 30%, and 29%) for school based, home based, student related and external environmental related factors respectively strongly agree that all of the categories of supposed factors contribute to education wastage in the primary schools of Malle Woreda. Moreover, family size, parent occupational status and household works engagement among home-related factors, low self-esteem frequent, absenteeism and students' disruptive behavior among student related factors were the most influential factors in contributing to education wastage in primary schools in the Malle Woreda. In addition, teachers' low qualification and poor teaching methods among school related factors internal conflict between communities, lack of access water near to school and community negative attitude for education among environmental factors are the most influential components of factors that contribute education wastage in the primary schools of Malle Woreda.

Besides, the overall mean perceptions of the affected students and that of the teachers (analyzed using independent samples t-test) were 3.88, 3.79, 3.56 and 3.43 for home based, school based, student related and external environmental factors. In addition, the independent samples t-test value revealed that there was statistically significant difference in the mean perceptions between the affected student and teacher respondents regarding home based and external environment factors as  $t = -5.186$  and  $-4.22$ ,  $p = 0.00$  and  $0.023 < 0.05$  respectively. On the other hand the independent samples t-test value revealed that there was no statistically significant difference in the mean perceptions between the affected student and teacher respondents regarding student related factors and school based factors as  $t = -1.343$  and  $0.605$ ,  $p = 0.180$  and  $0.545 > 0.05$  respectively. Thus, the results show that student related factors and school-based factors contributed to education wastage Primary School. Thus, each of the categories of the estimated factors had significant contribution to education wastage in the primary schools of Malle Woreda.

Moreover, the overall multiple regression analysis revealed that the combined effect of home based, student related, school based and external environment factors on education wastage was 10.5% in the study area. Furthermore, for a unit improvement in home-based factors, school based factors and student related factors, there would be 16.5%, 7.1% and 3% decrease in education wastage respectively. This shows that home based factors are the most influential factors that contribute to education wastage in primary school of Malle Woreda.

## Conclusions

Based on the above findings, the following conclusions were drawn.

- ❖ The study result found through analysis of data obtained from different sources to triangulate the result revealed that the dropout and repetition rates of students in the primary schools of Malle Woreda were far behind the national target and it was worsening from year to year. Thus, it was concluded that there was ever increasing high level of education wastage in the study area.
- ❖ The result of the analysis of the data revealed that the overall mean values of the respondents' perceptions on the existence of each of home based, student related, school based, and external environment related factors were high ranging from 3.43 to 3.86 with the highest mean value of home based factors. Besides, family size, parents' occupation status and students in household engagement among the components of home based factors, students' low self-esteem, frequent absenteeism and some students' disruptions among the components of students' related factors. Similarly, teachers low qualification level, teachers' low motivation and poor teaching methods by teachers among the components of school based factors as well as conflicts within communities, lack of access water near to school and communities negative attitude to education among the components of external environmental factors were found to be the most influential ones. Thus, it was concluded that all of the categories of estimated factors contributed significantly to education wastage in the study area being home based factors the most influential factor.

- ❖ The result of multiple regression analysis revealed that there was statistically significant relationship between education wastage and the combination of the home based, school based, student related and external environmental factors with a prediction level of 10.5%. Besides, analysis of relative importance of each of the categories of the factors indicated that home-based factors had the highest prediction capacity on education wastage indicating that a unit improvement in home based factors would result in 16.5% decrease in education wastage in the study area. This implied that home based factors, among others, contributed the most to education wastage in the study area.
- ❖ Based on findings, from interview data, it can be concluded that classroom teachers follow-up, teachers continuous meeting with parents, strong rules and regulations, parents participation in decision-making, making issue of repetition and dropout priority agenda of school, creating safe learning environment in school, use of active learning methods in school, employing a good continuous assessment were mechanism to reduce education wastage. Similarly support from teacher underperform students, providing counselling service to students at risk, encourage student to take responsibility for learning, encourage students to participate in extra-curriculum, students engage in school's decision making, fulfilment of learning facilities in schools. As a result, these factors were a lack of mechanisms to reduce education wastage in the primary schools leading to education wastage in primary schools in Malle Woreda.

### **Recommendations**

Based on the findings and the conclusion drawn from the study, the following recommendations were forwarded:

- ❖ School Based Management Committees (SBMCs), PTAs, KETB, women leaders and other related groups need to work towards ensuring that the stockholders create the enabling environment for enhancing retention and promotion rate of students.
- ❖ Schools' principals need to work for ensuring the conduciveness of the school environment to addresses the major school based factors contributing to education wastage.
- ❖ The school principals also need to organize different forums so that the home environment and external environment could be conducive for the students so that it may reduce education wastage.
- ❖ Schools' principals had better to work for maintaining disciplined and committed learning behavior among the students to minimize education wastage.
- ❖ The Woreda education office need to expand best achievement trends of one school to others to support students learning.

### **Suggestions for Further Research**

Future research should focus on:

- ✓ The study suggests that a thorough analysis of practices and impacts of the role of the school leader in the context of primary schools in the study area.

- ✓ In-depth study should be conducted on how to support and encourage teachers' qualification, satisfaction and motivation in study area.
- ✓ Investigate further possibilities for raising the awareness of the community in the schooling their children.

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