
ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

# CONTRIBUTION OF SCHOOL PLANT FOR ACCESS TO SECONDARY SCHOOL IMPROVEMENT IN SOUTH WEST SHOA ZONE OROMIA REGION STATE

By: AWEKE BEFIKADU

ADVISOR: DR. YEKUNOAMELAK ALEMU

DECEMBER, 2020

ADDIS ABABA UNIVERSITY, ETHIOPIA

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CONTRIBUTION OF SCHOOL PLANT FOR ACCESS TO SECONDARY SCHOOL IMPROVEMENT IN SOUTH WEST SHOA ZONE OROMIA REGION STATE

BY

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# Declaration

The researcher hereby declares that the thesis on the title, *"*contribution of school plant for access to secondary school improvement in South West Shoa Zone Oromia Regional State*"*, is his original work and that all sources that have been referred to and quoted have been dully indicated and acknowledged with complete references.

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

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## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| EFA | Education for All |
| ESDP | Education Sector Development Program |
| ETP | Education Training Policy |
| FGD | Focus Group Discussion |
| GDP | Gross Domestic Product |
| GER | General Enrollment Rate |
| ICT | Information Communication Technology |
| KETMB | Keble Education training and Management |
| LDCS | Less Developed Countries |
| MOE | Ministry of Education |
| NER | Net Enrollment Rate |
| ORS | Oromia Regional State |
| PHRD | Policy and Human Resources Development |
| PTA | Parent-Teacher Association |
| UNESCO | United Nation Education Social and Cultural Organization |
| VIM | Visual Instructional Media |
| WB | World Bank |

# ABSTRACT

*The purpose of this study was contribution of school plant for access to secondary school improvement in south West Shoa Zone Oromia Region State. Hence, it examined the status of school plant, problems of school plant, strategies school plant and maintenance in the study area. To accomplish this purpose, the study employed a descriptive survey design. The study was carried out under selected eight secondary schools of South West Shoa Zone. A total of 228 individuals participated in the study. Among them 180 teachers were included as a sample through simple random sampling technique especially lottery method. Additionally, 16 secondary school principals, 8 Woreda planning and project experts and 24 administration worker of secondary school were included through purposive sampling technique whereas, principals were through availability sampling. The questionnaire, interview, observation checklist and focus group discussion were the main instrument of data collection. Interview was also utilized to substantiate the data collected through the questionnaire. The analyses of the quantitative data were carried out by using percent, mean and standard deviation. While data obtained through open ended questions, and interview were qualitatively analyzed. The results of the study suggested that, low status of the school plant and facilities, didn't have laboratory, trained laboratory technician, classroom of different clubs, departments, and pedagogical center. The schools also did not have equipment and chemicals that can be used in the laboratory and no internet access. Additionally, low participation of students and teachers for school improvement, no record and documentation, and low government refunding, low maintenance service and the poor handing school plant and facilities, lack of proper planning, for school plant are mong factory affect the school plants.Finally, the study came up with the following recommendations: training opportunities on school plants, develop school level policy and guidelines, design a strategy to ensure sustainable stakeholder participation through creating fundraising activities, budget allocation and increasing stakeholders' participation to promote teaching and learning process and fulfill of facilities such as pedagogical center, clinical center, first aid in case of accidents, toilets for girls and other problems mentioned.*

# CHAPTER ONE: INTRODUCTION

This chapter deals with background of the study, statement of the problems, objectives of the study, significant of the study, delimitation of the study, limitation of the study, definition of operational terms and organization of the study.

## 1.1. Background of the Study

Education for any nation is believed to be veritable machinery for the development of a country. This is clear because of the roles played by educated people in the development of science, socio - economic and political structure to improve the individual, families and making the society a better place to live. In the light of these values, the objective of education part today must prepare the child to function effectively as an adult in the 21st century (ETP, 1994). In relation to this view, Ezeocha (1985) stated that, inadequate school facilities can lead to undesirable personal behaviors, and large group interaction such as sports, games, drama cannot be conducted effectively without adequate physical space and equipment.

The development of any nation or community depends largely on the quality of education of such a nation. This indicated that the basis for any genuine development must commence with the development of human resources. Much then is said that formal education remains the vehicle for social-economic development and social mobilization in any society and the socio-economic development of many countries has been strongly linked with education. No country has scored sound economic growth without sound development in its education (PHRD, 1996).

As Obanya (2005) stated, education is the foundation for optimal utilization of resources through, development of human capital and the most powerful instruments in shaping the human race. Education is one of the answers to our socio-economic problems. There has been a broad consensus that education is an important foundation on which the socio-economic and cultural development of the nation is based. Education improves the capacities of societies and their social, economic, scientific technological institutions. It also helps people to alleviate poverty, tackle demographic problems, improve health and nutrition, and increase

the value and efficiency of labor. Generally, education, transforms both humanity and human instillations (Lockhead, 1994).

The primary purpose of teaching and learning process is to bring a significant change in behavior through active participation and critical thinking of the learner. This cannot take place without the availability and proper use of school plant and other needed resources. Regarding available school resources, Ogunsaju (1980) emphasized that, access of quality education students receive depends on the availability of an overall school facilities in which teaching and learning takes place. Therefore, access to education can be attained if and only if educational resources are properly available and utilized in an educational institution. According to Durbin *etal*. (1989), resources are the only means through which organizational activities, service and satisfactory ends are attainable. For the achievement of organizational objectives, resources play the crucial roles.

In international secondary schools, school plant means all facilities and equipment's within the school, which used by the members of the school community (Kochhar, 2016).

According to Abraham (2003), school plant means all facilities and equipment's within the school, which used by the members of the school community. Considering this, the school plant made up of the following issue. In the side of buildings; classrooms, administrative blocks, library, laboratories, health blocks, kitchen, examination hall, dining hall, assembly hall, clinics, rest rooms, toilets, hostels, store, staff rooms, workshops are important for the schools. In side educational equipment; equipment in the laboratory such as computers, chalkboard, chalk, chart flannel graph, beakers, burette, pipettes test tubes, thermometers, weighing balances, map, and glass jars, globes are the used laboratories. In other side, the classroom equipment such as chairs, desks, tables, chalkboards, dusters, washes hand basin, napkins, chalk are used in the school daily activities. In side of the office equipment the cupboards, generator, typewriter, photocopying machines, etc. and landscape, trees, grasses, lawns, hedges and accompanying paths. In the school compound the play grounds such as football, volley ball, basketball and badminton, tennis court, swing and slide ground etc. Finally, the security facilities such as walls, gates, alarm system, phones, and visitors' books are used for communication. And also the school utilities such as electricity, pipe-borne water/borehole and transport facilities are need for

schools and sports facilities such as football, table tennis, basketball, and like help the school comfort.

As to Buckley, Schneider and Shang (2004), school facilities enable the teacher to accomplish his/her task as well and help the learner and to achieve educational objectives effectively. Additionally, they emphasized that the availability and proper use of school facilities can affect the interest of the teacher to teach effectively in turn that positively affects teaching learning outcomes. Therefore, the school facilities in the school needs a proper attention as they have a great value in the support of teachers and students morale, motivation and plays a significant role to improve the access of quality education. As stated by MoE (2002), to ensure the access to quality education, students should have quality textbooks, instructional materials and other school facilities in sufficient quantity and quality.

Ryonds (1996) also argues that, the adequacies of school facilities do not a guarantee for an overall teaching learning out comes but the proper use of the facilities has a great value. As indicated above, to improve the access of quality education, the availability of school facilities and the proper management of these resources should give a great attention.

Furthermore, advances in science and technology, necessitate that the school manager should adopt modern methods of facilities management. This will improve the quality of teaching and learning. A direct relationship exists between the quality of school facilities provided and the quality of the products of the school.

The physical environment of a school is a major determining factor in the attainment of its objectives. It is now obvious that the problems generated by poor planning, insufficiency non availability and poor maintenance of the school plant can no longer dismissed by a wave of hand. There seems to be no culture of school facilities maintenance in Schools. However, the maintenance of school facilities appear to vary between schools as opinions differs in maintenance activities between schools. Moreover, Hika(2017) in his study revealed that lack of laboratory room with appropriate size, lack of adequate chemicals and apparatus and deficiency of laboratory facilities such as electric light, water, students' seat and work bench in preparatory of schools of Wollega.

Again in education statistics of 2014/15 compiled by MoE, secondary schools have different problems of facilities such as pedagogical center, laboratory with science kit, clinic, internet access, toilet and library. For example, in 2014, 86% of secondary with toilet, only 433 school with science kit in laboratories, 1464 schools have library and 746 clinic (MoE,2014/15, 2016). Besides, the MoE inspection standard of secondary school in 2017/18, only 22 secondary fulfill the standard that found level four/4/. The same study also documented that in 2008 shows almost 60% of the students' National Secondary School Examination grade was below 25% (Telila, 2010).

Therefore, there is a gap in schools plant contribution for access quality to secondary school improvement with particular attention in government secondary schools in South West Shoa Zone.This study was emphasized secondary schools of this zone, their status of school plants, and how these contribute to access of improvement quality of educations. As far as the experience of the researcher is concern, no systematic study is reported on the contribution of schools plant access improvement of secondary schools of South West Shoa Zone.

## 1.2. Statement of the Problem

School facilities in most developing countries schools today are up to reinforce role teaching method and further hinder the students' capacity for independent and creative thinking. With regard to facilities such as text books, classrooms, laboratory, library, toilets, playing ground, electricity, which aids students in learning, unraveling the secret of academic wisdom, most school libraries are there in name as the books therein are obsolete and out dated.

Similarly the study conducted by USAID (2010) confirmed that, the availability of textbook and other reading materials, in Ethiopia reveals that there is a big gap among regions. From the regions of Ethiopia: Oromia, Somali, Benshangul-Gumuz and Sidama only 1 in 6 children had any other reading materials. Additionally, the study showed that school resources such as electricity, water, computer rooms, and laboratories are the common problems of all the regions. This shows that, the access of quality education is questionable that needs a great attention to determine the areas of quality improvement that might support the efforts of all stakeholders in the country.

In line with the above idea, school plant for access of quality education currently serving as the major input through which, teaching learning process is conducted. For example; all building, plants, laboratory, library are the immediate supporter for the six educational programs, where the attention of MoE (1994) has been implemented.

Furthermore, the researcher experience in the field of education sector as a teacher and a school principal in the last sixteen years witnessed that the above stated problems are also common in the majority secondary schools of Ethiopia, specially the Oromia Regional State. After all in most rural areas of the country the school plant lacks more of the stated problems which made teaching and learning process ineffective. Similarly, many secondary schools in South west Shoa zone are also victims of the problem. To support, some of the schools in the study area are yet to install the ICT infrastructure like computers many years after they were supplied by the federal and state governments because they were lack of electricity supply.

Ethiopia has made considerable progress in improving enabling conditions for effective learning. Yet, challenges remain, especially in the most disadvantaged areas, with 35 percent of secondary schools not having a sufficient number of classrooms and only 20 percent having internet access (Verspoor, 2013).Many laboratories lack basic equipment and supplies and it is unclear how well libraries are stocked. It will therefore be important to agree on minimum enabling conditions for effective education service delivery. On the basis of such conditions, investments should be targeted to schools where remaining resource gaps are so large that they, in effect, preclude effective instruction (Verspoor, 2013)

Specific elements of learner achievement are also coming under scrutiny; an early-grade reading assessment in the mother tongue has been conducted and both a similar reading assessment in English and a numeracy survey are planned. With respect to national examinations, these tests are administered at the end of the year in both grades 10 and 12. The grade 10 examination is very high stakes, as only the top 20 percent of graduates are allowed to join the preparatory program (grade 11–12) that leads to higher education. In addition to this the teachers have problem instructional performance (UNESCO, 2015).

Ethiopian Government has been great effort to improve the access, quality, and efficiency of the country's education system, since the revision of the Ethiopia Education and Training Policy

(ETP) in April 1994. However, Inadequate facilities, insufficient training of teachers, overcrowded classes, shortage of books and other teaching materials, all indicate the low quality of education provided. This implies that there might be some challenges/ obstacles and much has been improve the quality of education in schools.

In First Annual report of Ethiopia 2018, secondary school of Ethiopia, there is no separate male and female latrine, only 76% access of electricity and 20% of internet access.

Again in education statistic of 2014/15 compiled by Moe, secondary schools have different problems of facilities such as pedagogical center, laboratory with science kit,clinic, internet access, toilet and library. For example, in 2014, 86% of secondary with toilet, only 433 schools with science kit in laboratories, 1464 schools have library and 746 clinic (MoE,2014/15, 2016). Furthermore, the MoE inspection standard of secondary school in 2017,only 22 secondary fulfill the standard that found level four/4/,

The same study also documented that in 2008 almost 60% of the student's National Secondary School Examination grade was below 25%. (Telila, 2010)

Schools exist for the purpose of teaching and learning. Human and material resources are deploying for this purpose. School facilities are the material resources provided for staff and students to optimize their productivity in the teaching and learning process. The realization that the transfer of knowledge does not only take place in the four walls of the classroom from the teacher to the students but rather that learning takes place through discovery, exploration, interaction with the internal and external environment has necessitated the creative and innovative development of teaching and learning facilities that reflect these changes (Kochhar, 2016).

There has been a tremendous growth in students' population without corresponding growth in the number of facilities because of economic depression and corresponding rise in cost. This has put much pressure on existing facilities. Thus, it appears that school facilities have allowed decaying.

The lack of learned and shared patterns or knowledge created by sets of people for expressing and responding to the social realities around them, culture is neither restricted to the urban nor rural schools.

It is uncommon these days to see some classrooms full of holes on the floor comparable to the sections on the roads. Children scarcely find space to sit or move about. Lack of ceiling makes classrooms extremely hot for learning activities in hot weather. Some buildings have bending roofs on them. When facilities not maintained, they constitute health hazards to the users of the facilities. Teachers on their own will not perform effectively without facilities. The students' academic performance will be negative affected, the nature of the school will be at its lowest fade and human and materials resources will be waste.

Hika(2017) in his study about problems of laboratory usage, revealed that lack of laboratory room with appropriate size, lack of adequate chemicals and apparatus and deficiency of laboratory facilities such as electric light, water, students' seat and work bench in preparatory of school of Wollega. This study did not examine the contribution of school plant of secondary schools access improvements.

Moreover, in most schools in the zone where the researcher will conduct the study, there are lack of class room that provide students save learning environment .Laboratory and the equipment are not providing service the students. As a result, many students are attending instruction in a single class which is against the standard (1:35) (MoE, 2005).

Through my experience in addition to the above problems lack of workshops, Hall, laboratories, separate female and male toilet, functional libraries and portable drinking water supply, electricity, classrooms are considered as the major challenges. For instance, Gindo high school has electricity supply while Dalidaki secondary school has suffered. Moreover, the Gindo secondary schools has problems laboratory equipment and 80 students are attending instruction in a single class which is not consistent with the standard (1:35) (MoE,2005). So there is gap on school plant in secondary schools of South West Shoa zone.

Therefore, there is a gap in the contribution of school plant for access to improvement in South West Shoa Zone of secondary schools did not achieve what is expect from secondary

schools. This study was emphasized the status of school plant, the extent of school plant contributing to increase access to improvement in secondary schools and investigate the major problems school plant of secondary school in South West Shoa Zone and how enhance motivating environment that increase access to secondary school education.

## 1.3. Research Questions

1. What are the status school plants of secondary schools in South West Shoa Zone?
2. To what extent school plants are contributing to increase access to improvement in secondary schools of South West Shoa Zone?
3. What are the major problems of school plants of secondary schools in South West Shoa Zone?
4. What are the alternative strategies for proper management used to improve school plants for increasing access to secondary school education?

## 1.4. Objectives of the Study

This section is present the general objective specific objectives of the study.

### 1.4.1 General Objective

The main objective of this study was to investigate the contribution of school plant for access to quality secondary school education in South West Shoa Zone.

### 1.4.2 Specific Objectives

The specific objective of this research was to:

1. Examine the status of school plant of secondary schools in South West Shoa Zone
2. Explore the extent which school plants are contributing for access to improvement secondary school in South West Shoa Zone
3. Identify the major problems of school plants of secondary schools in South West Shoa Zone

4. Find out alternative strategies used to improve school plants for increasing access to secondary school education.

## 1.5. Significance of the Study

This study provides valuable insights to the government, MoE planners, school principals, school boards of governors, students and the communities on the effects and challenges likely to be encountered during the ineffective contribution of school pant for access improvements secondary school education. The government is likely to be in a position to develop strategies to improve the managerial problems of school plant in order to be more effective in the implementation and contribution of school plant for access improvement of secondary school education.

Moreover, it informs the school authorities and teachers of secondary schools on the need for regular effective supervision of the school plant. This is necessary since the school is like a manufacturing organization where plants and equipment must be in top operational shape to produce results. Effectiveness on the use of materials is dictated largely by the operation of the facilities. Finally, the result of the study serves as base line data and source of concern for future researchers.

## 1.6. Delimitation of the Study

This research was delimited in both content wise and geographically. Regarding to contents, this research was limited on assessing the contribution of school plant for access improvement of secondary school of South West Shoa zone.

Geographically the scope of this study was delimited to eight secondary schools of South West Shoa Zone due to the limit of time and financial resources. This means it include general secondary schools found under the study area. Therefore, the finding of this research was generalized for secondary schools of south West Shoa Zone without considering secondary schools or preparatory schools of nearby zones.

## 1.7. Limitation of the Study

The limitations might be observed in this study are some of the school directors and WEO expert were overburdened by routine office and personal activities to provide the necessary data. This problem elongates the time for data collection more than the expected plan. In addition the limitation of this study could be the fact that the findings cannot be generalized for all schools in Oromia Regional State because it focused on only in South West Shoa Zone secondary schools. Furthermore, there is case Covid 19 disease occurs affect the direct communication of advisors and access of updated related literature and similar research works on the topic from different source, especially in South West Shoa Zone.

## 1.8. Operational Definition of Key Terms

Access: It is the establishment of across each woredas with the citizen who can attend/her education.

Contribution: The benefit school plants provide for access to quality education.

Quality Education: it is the success with which an institution provides educational environment.

Quality secondary School education: students should have quality instructional and other school facility from grade 9-12.

School plant: refers to all physical facilities and equipment within the school, which are used by members of the school community.

Secondary schools: In this study, secondary school refers to a school comprising grades 9-12.

## 1.9. Organization of the Study

This study comprises five chapters. The first chapter is the introduction which includes the background of the study, statement of the problem, objectives of the study, significance of the study and delimitation and limitation. The second chapter presents literature review related to the

area of contribution of school plant for access to secondary school improvement in South west Shoa Zone. While the third chapter discusses the research methodology employed in the study. The fourth deals with presentation, analysis and interpretation of data. The final part of the thesis deals with the summary of the major findings, conclusions and recommendation.

# CHAPTER TWO: REVIEW OF RELATED LITERATURE

## Introduction

This chapter presents literature review related to the purpose of this study. The main purpose of reviewing the literature is to determine what has been done already relating to the research problem to be studied. Literature is reviewed under the following subheadings; concept of school Plant, role of school plant, school plant and access to secondary education, school plant management and school plant access to education in Ethiopia.

## 2.1 Concept of School Plant

The term school plant refers to the school site, the buildings, the playgrounds, the equipment and other material resources provided in the school for effective teaching and learning operations. According to Abraham (2003), school plant means all physical facilities and equipment within the school, which are used by members of the school community. All the physical structures in the school fall within this category. Facilities are plants (buildings) equipment, materials (Ehiemetalor, 2001). Whereas, school buildings according to Olutola (1981) include classroom, dormitories, libraries and laboratory buildings, staff rooms, teachers' quarters, examination halls and administrative buildings; educational equipment include such items as machines, audio-visual materials, chalkboards, cleaner's tools and workshop equipment.

In support of the above statement Olagboy (1998), described school plant is the site, building, equipment and all the facilities within the school which enhance the teaching and learning activities. At the same time which protects the physical well-being of the teachers and the learner. It consist of the basic system and structures which a viable school or institutions' needs in order to function effectively and to fulfill the purpose for which it was established. Further the school plant include the following: classroom blocks, libraries, laboratories, workshops, hostels, staff quarters, assembly halls, administrative office blocks; equipment: laboratory workshop equipment, sporting kits, teaching aids, workshop machines or tools, secretarial machine like computer; classroom, office, hostels or staff furniture; text

books, stationary and library books; electrical fittings, fans, overhead electrical conductors, generator etc; pipe born water, borehole, deep well water; tanks.

Moreover, the school plant represents the aesthetic picture of the school conveyed by the position of structure in relation to one another (Bosah, 1997). It also represents the empirical relevance of the whole environment for the realization of the school goals and objectives. In addition, Osahon (1988) provided a much more comprehensive list of educational facilities and grouped them into two: The first one as school building: These are tangible structures, which serves as shelter for educational activities. They include among others, classrooms, laboratories, workshops, teachers' common rooms, toilets, restrooms, reading rooms, dispensaries, libraries, hostels/dormitories, dining halls, assembly hall, staff quarters etc.

The second as equipment: School equipment refers to facilities or outputs such as machine and tools, which ease the operation of academic activities. Various equipment are required in: Classrooms, For example, desks, chairs, blackboards, cupboards, shelves, dusting dusters, wash hand basins, napkins, teaching aids etc; Laboratories, for example, physics, chemistry, biology, agricultural science, languages, geography etc; Workshop, for example, woodwork, metal works machineries, electronics /electrical, business studies etc; Sports/games, For example, football, table tennis, volley ball, net ball, hockey, tourniquet, short put, high jump stands/crossbars, javelin, hurdles, trophies, jersey, bells, notice boards, electric generator, typewriters, photo stating machines, computers etc.

On the other hand, Ani (1997) defined school plant as the location of the school buildings, the equipment in the school and other material resources provided in the school for the purpose of enhancing teaching and learning processes. To him school plant include the fixed and mobile structures and materials in the school such as the classroom buildings, laboratories and laboratory equipment, the school furniture, the chalkboards, tools and machines, the chalk, audio and visual aids.

In the support of the above review, school plant can also be taken to mean the site where the school programs and activities take place or the environment where the school curriculum is implemented. However, Obi and Ezegbe (2002) defined school plant as the space interpretation of the school curriculum. In other words, school plant can be said to be physical

expression of the school programs and activities. According to the scholars view, school plant is a consciously designed and controlled environment with the sole aim of promoting teaching and learning activities within the school. On the other hand, it is putting together of facilities to protect the physical well-being of the individuals associated with the school. Thus, school facilities are the operational inputs of every instructional program. Therefore, the school is like a manufacturing organization where plants and equipment must be in a top operational shape in producing product, however, the efficiency in the production function depends on the quantity and quality of the facilities.

## 2.2 The Role of School Plant

The role of school plant has been highlighted by many educational administrators and planners as the importance is attached to it, as a vehicle for effective teaching and learning cannot be over emphasized. On this view, Nwaogu (1985) asserted that no matter the strength of manpower resources in the system, educational processes must require a conducive physical accommodation, libraries, furniture and playgrounds. But in the absence of these instructional facilities, teachers are hardly effective in their instructional activities. In supporting this view, Bosah (1997) quoting Lorton and Wally, confirmed that learning experiences are richest when the environment around the student meets their needs.

Udoh and Akpan (1987) also pointed the right type of atmosphere required for effective learning is that consisting of better teaching facilities. Besides, Adesina (1980) also lends credence to this as he claims that the access to quality education that our children get has direct relevance to the availability or the lack of physical facilities and overall atmosphere where the learning takes place. Since the basic aim of the school is to create relatively paramount changes in the behavior of children, the need for adequate and well maintained facilities becomes eminent.

Mgbodile (1986) stressing the need for school plant, observed that the physical appearance and general condition of school physical facilities are the striking basis upon which many parents and friends of any educational institutions may make their initial judgments about the quality of what goes on in the school. In short, the physical facilities play a major role in determining the type of relationship between the school and the community. This is because

parents and pupils make their judgments and take their decisions on whether to associate themselves with a particular school after a careful evaluation and consideration of the facilities in the school.

Ani (1997) while supporting the above statement opined that if the quality and quantity of physical facilities attracts the admiration of a parent, the conviction of the parent will be that since the quality and quantity of facilities is of such level, the quality of the staff and school program will be of high standard. Thus Obi (2001) said that the general landscaping of the school speaks succinctly of the tone of the school and the disposition of the management. Therefore to attract the admiration and acceptance from the community, there is need for a well-planned school physical facilities and equipment.

Moreover, Onwurah (2004) stated that the school plant plays a crucial role in the development of the three domains of Bloom's Taxonomy of educational objectives namely; cognitive, affective and psychomotor. Educational facilities are needed for developing cognitive area of knowledge, abilities and skill, which are prerequisites for academic achievement. They are essential for developing values, commitment, positive emotions and social interactional sensitivity in learners. In addition, they help the school to develop the hands and muscles of learners. Besides, Ejikeme (1999) also called attention to the fact that Montessori, a specialist in educating children laid emphasis on "the importance of providing an environment physically and psychologically adjusted to the stages of growth, so that the child could generally master his environment.

Moreover, Adesina and Ogunsaji (1984) noted that for effective performance of educational programs, the school plant and educational goals should be viewed as being closely interwoven and interdependent. Apart from protecting pupils from the sun, the rain, heat and cold, the school building represent a learning environment which has a tremendous impact on the comfort, safety and performances of the children. It is therefore an incontrovertible fact that school plant is an important factor in the achievement of educational objectives.

## 2.3. Factors that Affect School Plant

Even though the teaching and learning conditions for many less developed countries (LDCS) can be described as deplorable, differences still exist in the conditions for the individual countries. In many countries including Nigeria, "it is still common to see classes holding inside uncompleted or dilapidated building and under tree shades and pupils sitting on floors (Agabi, 1999). Similarly David Molomo in a newspaper report captioned "law maker spend N3 million on school project" quoted Hon. Garba of Ussa LGA, of Taraba State who is a member of Taraba State House of Assemble saying "the school within my constituency have been an eye sore as most of them are operating in make-shift structures with the children improvising woods, stones for seats. He further stated that it is embarrassing to see people learning under the sun and in the rains due to inadequate facilities as a result of the poverty level of the people of his community.

Nwuzor (1989 p-53) in agreement noted that "the physical conditions under which a very large majority of our children are taught are just dehumanizing". Citing a News watch specials report on "Nigeria in the Eyes of the child" he quoted a school child as saying that:

> *The classroom are full of gallops .....we need new buildings. If they will provide electricity in the schools, it will be okay. The school is too tight, we need space. The space in our school is not enough for students to play.*

In addition, elaborated that the potholes on the floor of the classrooms are very comparable to the series on our roads. The classrooms are not well ventilated, they are very dim for ceilings, and classes are extremely hot in hot weather and very damp during the rainy season. Learning apparently becomes ineffective and practically difficult - when school environmental setting becomes stuffy and smoking and ill-ventilated. "Stuffy and smoking environment reduces the quantity and quality of oxygen intake by students leading to lowered studying and learning symptom zed by constant tiredness, yawning and feeling of dizziness or sleeping during studying" (Okoye; and other 1997 )p.150).

Several factors contribute towards the unattractive situation of inadequate school plant in secondary schools include:

A. Funding: Dearth of funds is a major constraint to provision of adequate school facilities. This has led to a devastatingly low level of provision of adequate physical facilities in schools. Even when funds are allocated to education, they are often diverted (Hanson, 1992) and not spent on building infrastructure improvements.

B. Deferred Maintenance: A poor maintenance culture also accounts for the deplorable situation of schools in Ethiopia. Government and its related organization usually wait for too long when physical facilities would have deteriorated beyond repairs before them attempts any form of intervention in schools. In support of this assertion, Onwuamanam (2005) noted that inadequacy of infrastructural facilities and lack of maintenance for available ones was major debacles of the educational system.

C. Built: In Obsolescence of Schools: The high level of corruption ravaging the society does not spare the education system. It is painful that educational administrators and political office holders occasionally connive with contractors and condone shoddy work in order to receive kickback from contractors. This leads to decay in school facilities (World Bank, 2012).

## 2.4. School Plant and Access to Secondary School Education

Numerous studies have catalogued the profound effect of school plant on access to secondary school education. There has been an ambivalence of such opinions, in that, while some opinions favored the predisposition that little or no effect of school facilities impact in any way on access to secondary school education, yet other studies such as Philips (1997) have attributed access to secondary school education to other factors as socio-economic.

Furthermore, Hanushek (1981) studied funding of schools and access to education and reached a conclusion that there is high connection between expenditures and access to school education. He acknowledged variation in expenditure in different places, however no conclusive evidence was discovered by him to suggest that higher expenditures yield better access to school education, in addition he was specific that increased educational spending would not necessarily yield desirable result in access to education where the stakeholders fails to make the wise use of available resources.

On the contrary, Hanushek opines that such factors like teacher-pupil ratio, teacher education and teacher salary account for access to school education. In agreement with the teacher-pupil ratio factor Cailods and Pestlethwasite (1998) stated that, due to inadequate classroom accommodation, experience of high pupil-teachers ratio with figures in the neighborhood of 120 per class are common in places like Nigeria, Ouagadougou, and most part of Latin America. When a class is too large, obviously effective teaching and learning is compounded, movement of both teachers and students are greatly impaired and the possibility of individualize attention becomes difficult to achieve by the teacher. Further Iqbal (2004) described that in the compounded class students are unable to do group work, student-centered method, which results in an ineffective teaching learning, which in turn the cause for the low achievement of students.

## 2.5. School Plant Management

As earlier mentioned, the term school plant means all facilities and equipment within the school, which are used by members of the school community. These facilities it must be noted are used in the day-to-day business of the school. The process of planning to meet the need of the school for physical facilities is known as school plant management (Onuorah, 2004). It includes procurement and maintenance of school physical facilities for effective teaching and learning. According to Abraham (2003), school plant management is viewed as functions geared towards maximizing the efficiency and effectiveness of the schools. The management functions towards the school plant include planning, procuring, receiving, storage, control and maintenance.

### 2.5.1. School plant planning

Plant Planning is an important aspect of school plant management. According to Ogunsaji (1982) school plant planning is the process of acquiring and designing a building which would satisfy the education needs of students. The physical plant of the school should have a high aesthetic value, and the environment generally should be such that stimulates learning. Udoh and Akpan (1987) quoting Candil posits that “the school plant planning starts and ends with the children and are to be designed to satisfy the children’s physical and environmental needs”. Students and

indeed their teachers need a conducive environment to be able to teach and learn adequately and effectively. The main function of school plant planning therefore is the acquisition of a conducive site, designing and construction of buildings to meet required standards and the procurement of other facilities and equipment.

According to Eresimadu (1996), the following constitute the importance and purposes of school plant planning. School plant planning improves the aesthetic beauty of a school, Proper planning is necessary since land area does not always increase except where reclamation is done at very heavy expense. The types, level and program of a school determine the type of buildings, equipment and facilities therein primary school buildings and secondary school buildings are different from buildings in tertiary institutions because of differences in program, school type and level. It is only during planning that these designs are accommodated, proper planning and implementation of school plants would save a lot of money, which would otherwise be wasted by inadequate plant development and poor maintenance.

Good plant planning will help to avoid catastrophic loss of the lives of occupants when buildings are re-planned, reinforced or replaced, school plant planning improves the quality and quantity of the programs offered. It protects schools occupants from rain, sunshine and hearing conditions. It reduces the chances of buildings collapsing, which may lead to suing or being sued. It may lead to serious embarrassment when pupils and students desert such a school with collapsed buildings in large numbers. In fact, properly planned and utilized school building, with a wide array of teaching aids provides effective delivery of schools curriculum and are positively related to academic achievement (Ezewu, 1983).

### 2.5.2. Procuring school plant facilities

An essential part of a school plant management is its equipment for functional operation of the educational program. Educational production facilities are elements that are necessary for teaching and learning such as buildings, laboratory equipment, machinery, furniture, electrical fixtures etc. These are some of the necessary inputs the school system requires for its effective and efficient production. It is noteworthy that the quality of education can be traced to the quality of facilities available to the school system (Ehiametalor, 2001).

School administrators, supervisors, and teachers should be aware of modern trend in equipment. For example desks and seats tend towards greater comfort and improved posture. There is also improvement in lightening fixtures, chart s, audio-visual aids, games equipment; Instructional equipment should serve working and living conditions; laboratory tables should have comfortable stools of adequate height. Dormitories should be equipped with box rooms, with storage shelves, if possible wardrobes and well ventilated; Committees mainly of administrators, supervisors and teachers with representatives of certain professionals like architects and businessmen may be used for procuring equipment. This serves as aids and safeguards; sufficient funds should be provided for planning educational facilities (Onwurah,2004)

There is also the need to establish the adequacy of the position of school structures in relation to one another. For example, the principal's office should be strategically located for advantage view of the entire school at a glance. Classroom and laboratories should not be so far apart neither should the laboratories of the respective science subjects. This ensures economy in movement as students move from classroom to classroom and from classroom to laboratories for practical classes (Bosha, 1997)

Ventilation is another aspect of intersect. Bosah (1997) maintained that there should be adequate number of windows, doors and air spaces for free flow of air, location of windows on walls opposite to one another makes for desirable cross ventilation. The classroom floors should be plastered and free from potholes and dusty earth. Classroom should have ceiling to ensure conducive environment for teaching and learning. Classroom lighting is very important. There should be enough illumination for clear vision and reading. Every classroom should have a chalkboard, when chalkboard loses its darkness, it should be repainted. The duster should always be handy. Wash hand basin, soap and hand towels are part of the facilities to be provided in the classroom.

Regarding the better achievement of students, library is the main important resource centre for book and non-book materials. The non-book material according to Earthman G. (2002) includes pictures, charts, maps, globes, slide projectors and models. For effective utilization of library there should be adequate number of books. Reading space should be made available

with adequate sitting agreement. The lighting should be good for proper illumination and reading ventilation should be adequate to avoid fatigue. Adesina and Ogunsaji (1984) stressed that school libraries should be fully equipped and staffed with qualified librarians who should be ready at hand to assist the library user.

Kitchen should be distanced from the classrooms, laboratories and hostels and equipped with adequate cooking utensils and fire-fighting gadgets. Bathrooms and toilets should have adequate sanitary provisions. Pit toilets are common but water system is better though more expensive. Water system is expensive but preferable.

Clinic for first aid to sick students before the arrival of their parents or before they are sent to the hospital should be provided. A well-equipped first aid box is indispensable. Commenting on the school landscape, Mgbodile (2003) stressed that it is a reflection of the school scenery or the aesthetic pictures of the school and this should be adequately arranged. This includes the arrangement of trees, flowers, lawns, hedges and paths to give a pleasing effect. Playground for football, buckets, balls, volleyball, cricket and badminton pitches should be equally provided. Well-marked paths that are re-enforced with ornamental hedges/flowers are beautiful sight to behold in a school compound.

### 2.5.3. Maintenance and modernization of school plant

An effective school facility is responsive to the changing programs of educational delivery, and at a minimum should provide a physical environment that is comfortable, safe, secure, accessible, well illuminated, well ventilated, and aesthetically pleasing. The school facility consists of not only the physical structure and the variety of building systems, such as mechanical, plumbing, electrical and power, telecommunications, security, and fire suppression systems. The facility also includes furnishings, materials and supplies, equipment and information technology, as well as various aspects of the building grounds, namely, athletic fields, playgrounds, areas for outdoor learning, and vehicular access and parking (Ezgebe, 1990).

The school facility is much more than a passive container of the educational process: it is, rather, an integral component of the conditions of learning. The layout and design of a facility

contributes to the place experience of students, educators, and community members. Depending on the quality of its design and management, the facility can contribute to a sense of ownership, safety and security, personalization and control, privacy as well as sociality, and spaciousness or crowdedness. When planning, designing, or managing the school facility, these facets of place experience should, when possible, be taken into consideration (Undoh and Akepa, 1987).

### 2.5.3.1. Maintenance of school the plant

It is one thing to plan for a school plant and also develop it. It is another to leave the plant without proper care and maintenance. The best-planned plant that is not maintained soon becomes defaced and losses its aesthetic value and worth. This view is supported by Owodogu (1989) by posting that a poorly kept building or poorly maintained site all inhibits the development of a good educational program. Thus good as the provision of plant is, a more important one, is to maintain the plant.

According to Udoh and Akpa (1987) maintenance of school plant is concerned with keeping grounds, buildings and equipment in their original condition of competences or efficiency. Ezegbe (1990) stated that maintenance involves caring and repairing of the components of plant. Caring he said is done when adequate administrative attention is given to the protection of the facilities such as the laboratories, farm, fields, classrooms and other teaching aids and materials. Protection from damage is hereby emphasized. For proper effects, the facilities and equipment must be in perfect condition. The rate at which a facility or equipment gets defaced to a very large extent depend on the materials with which it is made, utility and maintenance. This view is supported by Udoh and Akpa (1987) as they opined that, the time it takes for a building to become physically obsolete depends on the quality of the original construction and materials as well as the quality of maintenance.

The untidy compound, the in-service equipment and the poorly maintained buildings not only tarnish the image of the school but shorten the life span of the facilities. The Federal Government of Ethiopia has continued to advocate better maintenance culture of Ethiopians, school administrators inclusive. This will help to avoid incurring heavy expense in replacing damages or worn-out items with new ones (MoE, 2002).

According to Forbis (1985). The three types of maintenance services are: Regular Maintenance: This is the type of maintenance given to special equipment in the school on periodic basis. For example, servicing of machines is aimed at keeping the equipment working and minimizing cases of total breakdown of the equipment's. These repairs are usually done by some skilled workers in or outside the school. Emergency Maintenance: This type of maintenance is seldom carried out in the school. It happens once a while. Take for example, the wall of a dormitory may crack, requiring urgent repairs to avoid total breakdown of the building. Also, the engine of a machine may start to produce cracking sound, which calls for emergency repair to avoid engine knock.

Preventive Maintenance: This is aimed at reducing the possibility of repairs or break down of equipment. It is very economical since it is believed that prevention is better than cure.

According to Candoh (1988), preventive maintenance is that program for servicing machines, systems and structures devised to prevent a breakdown of the system or one of its components. Preventive maintenance allows an equipment or building to remain in its original useful life. Maintenance is carried out before there is malfunction of equipment. Manufacturers usually indicated parts of equipment to be replaced at intervals to avoid break down and give the equipment maximum useful life. Adherence to manufacturer's advice on repairs enables the school to operate efficiently and effectively.

However, the situation in Ethiopia, particularly South West Shoa Zone, equipment preventive maintenance is usually neglected or often postponed until there is total breakdown. In a lot of instances, there may be no budget for funds for such maintenance. The principals may not have any idea of equipment maintenance and need for period maintenance.

Moreover, Ehiametalor (2001) included recurring maintenance, which is the type of maintenance is tied to operation of the equipment. One day-to-day operation of equipment, recurring equipment maintenance maybe necessary to keep at full operational status, irrespective of the number of times such services are required. The maintenance of the school plant as earlier mentioned is as important as its acquisition if not more important. The school administrators or principals must use everything at his disposal to bring about adequate maintenance of the school plant.

In addition, Obi and Ezegbe (2002) listed some activities, which the school administrators should carry out to ensure effective school plant maintenance. They include: engaging an experienced custodial supervisor to assist the administrator, keeping the compound tidy by sweeping the floors of the buildings and compound, repairing machines, vehicles etc. whenever there is breakdown, re-flooring and repairing cracked walls, replacing broken window blades and roofing sheets, engaging knowledgeable carpenters, plumbers, electricians, laborers, painters to effect necessary repairs in school, purchasing requisitions, equipment and materials for custodial duties such as diggers, rakes, wheelbarrow, etc, instilling in staff and students to be clean conscious at all times, establishing sanitary and health societies in the school.

Onwurah (2004) in support of the maintenance activities as part of the school plant management added the following: selection of special personnel for operating and maintaining the school plant must be carefully based on skill and knowledge. Proper work orientation should also be given to them to avoid damage of certain items, periodic inspection of school plant facilities is very necessary to detect defects and effect repairs for replacement. All staff of the schools should be involved since they are direct users of these facilities. They should identify and report defective facilities to ensure prompt repairs, school administrators should mobilize the communities and philanthropists to assist in rehabilitating, remolding and replacement of school plant facilities. This supplements government funding.

The school plant as an essential component in the school system, consumes a large proportion of the educational budgets. Consequently, these educational facilities must be properly maintained to ensure good returns and attainments of educational goals. Bosah (1996) has stressed that plant maintenance will enhance physical environment that promotes teaching-learning processes and will protect the financial and material investments of the community. The school administrator under whose care the school and all that is in it falls should therefore ensure that the enormous investment by both the government and community is not wasted.

## 2.5.3.2. Modernization

Other more mundane changes are also an important part of a continuous modernization process. Installation of white boards to replace traditional chalk boards or changing wall

surfaces to make it easier to hang displays and teaching aids can make a tremendous difference in the appearance of a classroom. Yet even these simple things can be expensive, and planning for such upgrades is important. Furthermore, as new schools are built with such features as work areas for teachers attached to clusters of classrooms, the school budget needs to provide adequate funds for work materials and equipment for teachers (such as computers, copiers, and telephones) and for reasonable replacement programs for these important tools. The growing use of technology–particularly computers–in instruction has placed a whole new set of demands on the construction, maintenance, and modernization of school facilities. Although technology in schools is a much broader concept than simply the use of computers, it is computers that are most frequently thought of in discussions of educational technology today (Mgbodile, 2003).

## 2.6. The Steps Needed for Improvement

The importance of school plant and the need for improvement for academic development and achievement cannot be over-emphasized. In order to guarantee a sustained interest and a motivating environment for qualitative education that will promote optimum performance and achievement, focus should be directed to the following areas:

A deliberate culture of maintenance of school plant should be highly esteemed. This will enable rust parts such as leaking and weak roof to be replaced, dilapidated walls to be mended, faded painting resulting from effects of rains, and weather be redecorated to give beauty and standard to the school. In carrying out this job, the services of professional should be employed but in view of high cost contract jobs, it may be advisable if such minor works are done through direct labor to save costs (Oyeyemi, 1986)

Today’s bare an imaginative classroom design can actually stagnate the child's motivation to learn. Beside the class size, shape and composition, the environment within and outside the classroom must be enriched to stimulate the child's cognitive development. This is why Winkel (1971) has said that "the more a child's experience the more he wants to learn". Classroom can be enriched in the simplest form using bulletin boards with displays imaginatively put up to reinforce the topics being taught at a particular time. Displays such as number charts, letter charts, science charts naming the parts of the body, skeletal system,

insects, flowers etc are not only motivating to learning but also serve as aesthetic values to the classroom. Teachers can use a variety of materials and facts that need to be stressed. Researchers on education have found out that children as well as adult comprehend and remember better when instructional materials are employed in teaching.

For example, researches carried out by Oyeyemi, (1986) on effectiveness of visual instructional materials (VIM) in teaching subjects reveal that some visual are good when retention of basic concepts understanding is desired of students. Classroom shape can be changed or modified to provide new possibilities for example, large rooms might house several classes at once with portable or collapsible walls and partitions to divide areas when classes wish to work alone but can be opened when the entire school needs to join together for assemblies or similar activities. Good cross ventilation, enough illumination for clear vision and reading, adequate portable drinking water; wash - hand basin with soap and towels, cubby hole for storing personal item are vital as this will help to inculcate the virtue of self-discipline and respect in the students. Storage space is also needed for storage of old and new teaching materials and aids that will accompany any modern teaching practices. Cupboards, counters and shelves are necessary for the teachers to store her books and materials and also display object that will stimulate the students' interest.

The office of the principal or head-teacher and the vice principal and teachers should be spacious enough, well decorated for aesthetic impression and should be adequately furnished with shelves, file/book racks, file cabinets with locks, sizeable table with lockable drawers, comfortable padded armed chair and seats for visitors, good window blinds, transistor radio, daily newspapers, magazines, journals and calendars. When office environment becomes appealing and motivating, high productivity is inevitable.

## 2.7. School Plant and Access to Education in Ethiopia

### 2.7.1. Education in Ethiopia

Education in Ethiopia had been dominated by the Ethiopian Orthodox Church for many centuries until secular education was adopted in the early 1900s. Prior to 1974, Ethiopia had an estimated illiteracy rate well above 90% and compared poorly with the rest of Africa in the

funding of schools and universities. After the 1974 revolution, emphasis was placed on increasing literacy in rural areas. Practical subjects were stressed, as was the teaching of socialism. Education received roughly 13% of the national budget in 1992. By 1995, the rate of illiteracy had dropped substantially to 64.5%. Projected adult illiteracy rates for the year 2000 stood even lower at 61.3% (males, 56.1%; females, 66.6%). As of 1999, public expenditure on education was estimated at 4.3% of GDP (Teferra and Altbach, 2003). The educational sector in Ethiopia has been given powerful impetus after the overthrow of the military government in 1991. Since then education has been a development priority on the national agenda.

The Government of Ethiopia has developed Education Training Policy (ETP) and Education Sector Strategy in 1994 (TGE, 1994; MoE, 1996). The Government adopted the Education Sector Development Program (ESDP) in 1997 together with the Education Training Policy. Furthermore, Ethiopia is working towards achieving the EFA (Education for All) goals as defined in the EFA, Dakar Framework in 2000. The illiteracy rate is still high at a rate of approximately 73 per cent for females and 50 per cent for males.

The current system follows very similar school expansion schemes to the rural areas as the previous 1980s system with an addition of deeper renationalization providing rural education in their own languages starting at the elementary level. The sequence of general education in Ethiopia is 6 years of primary school, 4 years of lower secondary school, and 2 years of higher secondary school, yet Ethiopia has the seventh lowest literacy rate in the world in global country rankings.(Teferra and Altbach, 2003).

The educational policy goals, strategies and programs are addressing the problems of access, equity, quality, and relevance in education. Access to education in Ethiopia has been one of the lowest in Africa. In 2003, the net primary-school enrolment rate (NER, referring to the relevant age group) (Grades 1-8) was 54.0 per cent for all students (47.2 per cent for girls and 60.6 per cent for boys). The gross enrolment rate (GER), covering overage and evening programs students, was 64.4 per cent for all students (53.8 percent for females and 74.6 per cent for males) (Ministry of Education, 1996). Nearly half of the Ethiopian primary school-aged children do not go to school. Low enrolment levels are a result of children never entering

school and of the cumulative effect of a high dropout rate in every grade of the primary cycle. Nevertheless, the primary school enrolment has increased from 2.5 million in 1989/1990 E.C to 7 million in 2001/2002 E.C.

### 2.7.2. School Plant and Educational policy in Ethiopia

Education contributes to children's perceptual growth and understanding of their environment. To this effect, students learning environment should be designed in a way that can provide them greater opportunity to observe and work with various facilities that play an important role in their understanding of man and his environment. In such a case, the physical facilities and access of education is an important input component of the schools programs. According to UNESCO (2005), school facilities are useful components of school inputs to enhance students" achievement. Thus, the school facilities and access to education can be seen as indispensable in facilitating the introduction of innovation and promoting changes in the improvement or quality of teaching.

The Government of Ethiopia started its own part of the ESDP program in 1 July 1997 E.C, when the new budget year began with the objectives that the ETP and the Education Sector Strategy linked with it and the ESDP has addressed the problems of access, equity, efficiency, planning and management capacity, quality, and relevance in education, which have been foci of their objectives and strategies. The ESDP envisaged an expansion of primary-school enrolment from around 22 per cent in 1995/96 to 50 per cent in 2001/02, and an increase in financing for education through a rise in public expenditure on education to 4.6 per cent. This translated into an increase in the number of children in primary schools from 3.38 million to 7 million.

The ESDP recognized that the capacity of the teacher training system must be enhanced in order to provide the qualified teachers necessary to teach the greatly increased enrolment. It also noted the need to improve the quality of the teachers, to pay attention to gender balance among students and teachers, and to improve the student-textbook ratio at the primary level from 5:1 to 1:1. The ESDP has had the aim of promoting equity by achieving a gross primary education enrolment rate of at least 25 per cent in under-served regions, raising female in primary education from 38 to 45 per cent, and increasing the proportion of female teachers

from 25 to 35 per cent in 1997/98-2001/02 EC.The ESDP program has addressed the following strategic choices in 1998-2002 E.C: school site location in rural and under-served areas; construction of more schools; shorter school days; optimizing student-teacher ratio and elimination of school fees from Grade 1 to Grade10.

According to Dobler (1971), the budget for school facilities can be prepared once the requirements are worked out. Thus, one can see that the purchase budget takes into account the inventory on one hand and orders on the other hand. Besides, the budget itself may be formulated to attain certain targeted inventory levels. It is the usual practice to formulate budgets both in terms of quantity and money. But Amare (1999) argues, in Ethiopia the school facilities did not get enough attention in the planning process by both planners and implementers in their action plans due to the problem of conceptualization. As evidence, he mentions the budget allocated by the country in the five years Education Sector Development Program (ESDP) plan. This is 6.8 percent out of the total budget of 12.2 billion birr.

Therefore, availability and accessibility of data, priority or emphasis given to school facilities among other issue in education, availability of finance or total allocated budget for education are some of the factors that may affect school facilities planning. Similarly Negessie ( 2007) states that the school facilities such as textbooks, references, maps, globs, laboratory equipment and other materials are not requested and supplied procedurally as a result it has created ineffective use of school facilities.

Thus, school principals together with his teaching and non-teaching personnel should create a guideline to serve as a mechanism for the effective use of school facilities. The determination is accompanied by mechanisms that can be applied for proper usage. For example rules and regulations of handling and managing resources would determine the store house where they are carefully placed and they were by ascertaining the responsibility of the teaching, non-teaching for effective use of school facilities. All these precautions have taken ahead of time to ensure the effective teaching learning by effective use of school facilities (Negessie, 2007).

Conducive environment is important to note that students and indeed their teachers need to be able to teach and learn adequately and effectively. The school materials therefore, must meet the needs of the school community (Abraham, 2003). Our school can only be what we want

them to be only if proper steps are taken to plan the buildings, the grounds and in fact the general layout of schools (UNESCO, 2005).

Regarding this view Amare (1999) stated that in Ethiopia most schools building haven't maximum to reduce the intensity of heat. They are also constructed without a design that makes for cross ventilation. Good sanitary facilities are also the problems of most schools. Classrooms are overcrowded and no spacious enough for free movement. Amare (1999) also described that, the school farm is another important ground of the school; it is an integral part of the school facilities. It is a part of the school compound which many people tend to ignore. But most Ethiopian schools, especially urban areas, haven't school farm. Other important facilities such as, well-equipped library and laboratory, games materials, equipment etc are also the deep rooted problems of our schools.

## Summary of Literature Review

The literature review highlighted the challenges facing the teaching and learning of secondary in schools. It has led to secondary schools plant not enjoying the high status it deserves despite the benefits that are derived from teaching and learning it. One gap identified is that secondary plants varies from country to country in that some countries had adequate class room but lacked different resources required. Another gap identified will that in Ethiopian the government provides funding through Free Primary Education (FPE), but do not see the need of purchasing resources especially for secondary schools. Another gap illustrated is that despite the problems attitudes from school administration, low academic achievement, drop out of students and modernization of school by technology. In addition, another gap is that studies on extent of school plant contributing to increase access to improvement in secondary schools and have not been carried out in secondary school of South West Shoa Zone in Oromia regional State.

# CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

This part of the research wasprovided adequate information about research method, which, include population and sampling techniques, source of data, data gathering and instrument and procedure of data collection. Besides, the instruments that were selected and try out procedures will elaborate. Methods of data analysis will also indicate.

## 3.1. Research Design

This study employed a descriptive survey design. A descriptive survey design is a process of collecting information by interviewing or administering questionnaire to a sample of individuals (Messier, 2003). Most social science researchers prefer this design because of its ability to observe, describe and document aspects of a situation as it naturally occurs. In this study both quantitative and qualitative approaches of data analysis were used. A quantitative approach is structured in nature, and the data were interpreted in statistical form, using the closed ended questions. This enabled the researcher for the interpretation of the data by using multivariate statistical packages for the identification of the general trends concerning the contribution of school plant for access.

## 3.2 . Sources of Data

In order to strength the finding the relevant data gather for the study was from both primary and secondary sources.

### 3.2.1. .Primary source of data

The primary source of data were student's council chair person, teachers, School leaders (principals, supervisors and PTAs), planning and project officers, school administrative staff (Librarians, Lab technicians, and Store keepers) because they were given the right or legal authority on school resources in the schools.

### 3.2.2. Secondary source of data

Secondary data were obtained from different documents such as; models which indicate the way school plants were taken from story, record books which show type and technique of school administrators undertaking, the nature and type of school plant available form in store, different report which link process owners from the Woreda which was appointed by Woreda education office.

## 3.3. Population, Sampling size and sampling techniques

### 3.3.1. Population

Population is the total collection of all cases to which a researcher intends the results of a study to apply (Best and Kahn, 2006). Therefore, the accessible populations of this study to which the researchers can apply his conclusions were all the 30 secondary schools of South West Shoa Zone. Specifically, secondary school teachers (903), principals and vice principals (59), all eight planning and project of Woreda experts,all 24 administrative and finance workers, a total of (986).

### 3.3.2. Sampling and Sampling Size

Mostly the sample size is determined on the availability of time, money and effort (Delice, 2010).And alsothe researcher should decide on an appropriate size for sample depending on the research topic, population, aim of the research, analysis techniques, sample size in similar research and the number of the subgroups in the sample (Ross, 2005). In this study, due to the availability time and financial resources and also to increase the reliability of the study and to adequately represent the population from the total 11 Woredas, eight (8)Woreda and from 30 secondary schools eight(27%) has been taken randomly by lottery method as a sample. Random sampling is the best ways to obtain a representative and population have an equal and independent chance of selection for the sample (Gay and Airasian, 2012).Thus; the researcher uses, these sample size of secondary schools representative and helps to compose well-founded generalization for the study.And also, 185(20.4%) of secondary schools teachers were selected through simple random sampling technique. The sample Woreda were: Wonchi, Ameya, Tole,

Goro, Bacho, Ilu, Dawo and Saden Sodo. From each Wored will select 1(one) secondary schools. These are Chitu, Dalidaki, Bantu,Bacho,Teji,Kersa Busa and Harbu-chulale.The total population numbers of teachers in selected schools are 340. These are; secondary school of chitu 43,Dalidaki 21,Batnu- 70,Gurura 32,Bacho-37,Teji-70,Kersa Busa 23, and Harbu Chulule 44.

The total numbers of teachers in the eight selected secondary schools (340) were proportionally allocated to the size of teachers in each school. Selecting teachers through random sampling technique help the researcher to keep representativeness of the research work through giving equal chance for each teacher to be a sample unit. Making proportional allocation to teachers in each school, equalize the representativeness of the larger as well as the small secondary schools for the study. It was done by dividing the targeted sample teachers (185) with the total number of teacher in the eight secondary schools (340) and multiplied with total number of teachers' in each school. To determine the total sample size of teachers to be drawn from the selected schools, the researcher used the following derived formula of Healey (2012).

Proportional formula; $Ps = \frac{n}{N}$ *X No of teachers in each school*

Where, *Ps = Proportional allocation to teachers' sample size in each school*

*n = Total teachers' sample size (185)*

*N = Total number of teachers in the ten selected sample schools (340)*

Based on the above formula, sample size of teachers in each secondary school is computed.

In this study, all eight 16 school principals and vice principals, administration workers were selected. This is because of the sample helps the researcher to gain adequate and necessary information due to their day to day participation in management school plant. Thus, taking all school principals from sample school would have a great benefit for the research findings. All existing 24 administrative workers and eight Woreda planning and project expert were selected. . Because, these respondents have adequate information regarding the situation of school plant management in each schools.

Table 1: Population, Samples and Sampling Techniques

| | Participants | Total Population | Samples | % | Sampling Techniques |
|---|---|---|---|---|---|
| 1 | Teachers | 903 | 185 | 20.4 | Simple Random Sampling |
| 2 | School Principals | 59 | 16 | 27.1 | Available principals in sample schools |
| 3 | Planning and Project Officers | 8 | 8 | 100 | All |
| 4 | Administrators Workers | 24 | 24 | 100 | All |
| | Total | 986 | 233 | | |

## 3.4. Instrument of Data Collection

For this study, questionnaires, interviews, observation and focus group discussion was used as instrument of data collection.

### 3.4.1 Questionnaires

Questionnaire with both closed and open items were employed to collect quantitative and qualitative data from teachers and school leaders. Thus, the questionnaires were distributed to 185 and 16 school principals. This is because questionnaire is convenient to conduct survey and to acquire necessary information from large number of study subject with short period of time. The questionnaire has two parts. The first part of the questionnaire describes the

respondents' background information categories like sex, age, and level qualification, year of service and location of school. The second and the largest part incorporate the whole possible effect of independent variables of school plant on dependent variables of access to secondary school quality education rates using closed ended question items. The closed ended items were prepared by using likert scales like strongly agree, agree, disagree, and strongly disagree and undecided, and the rating scales such as very low, low, average, high and very high. Pilot-test was conducted to ensure the reliability of the questioner before distributing for actual samples. The pilot study was conducted on 30 teachers and 4 school leaders of Gindo secondary school.

### 3.4.2. Interview

Interview is one of the widely used types of data gathering tools. It was used to get personal information through written questions. The interviewer and the interview interact to get deep information so that the chance of incomplete questionnaires which was observed in questionnaires will minimize. Moreover, interview is quick tools of gathering data from population. Semi-structured interview was employed to get the detail information from eight planning and project officers from the sampled Woreda. Thus, the purpose of the interview was to collect more supplementary data by providing them the opportunity to their opinion, feeling freely, about the contribution of school plant for access to secondary education, and allow the researcher to compare and contrast with the closed ended questionnaires.

### 3.4.3. Observation

Observation was conducted to get adequate data on basic research questions that focus on the availability and maintenance of schools contribution of school plant access to quality secondary school education of South West Shoa Zone of Oromia Regional State. To undertake observation, check list was prepared to better facilitate its process. The observation part was focused on school facilities seen on the stores, library, laboratory, classroom and the school plant/physical ground.

### 3.4.4 Focus group discussion (FGD)

As to Sommer (1997), focus group discussion is a group interview design to explore what specific set of people think and fill about it. It is very essential instrument of collecting primary data from a group of study participation brought together to openly discuss in issues present by study. The target population of FGD was 24 administrative workers (Librarians, Lab technicians, and Store keepers) from sampled schools.

## 3.5. Procedure of Data Collection

Before starting to collect the data, the researcher made face to face contacts and through written letter with principals to establish rapport introduction of the purpose of the study. Then, the questionnaires were set and distributed to be filled by the school leaders and teachers of the pilot study area. The selected school for pilot test was Gindo Secondary School. Then reliability of the questionnaire was checked and then it was distributed to the actual sampled school respondents with continuous follow up for creating clarity. On the other hand, the other data gathering tools like interview, focus group discussion and observation were used in order to collect data. Finally, the require data was obtained which can support the researcher to analyze data.

## 3.6. Validity and Reliability Checks

Checking the validity and reliability of data collecting instruments before providing to the actual study subject is the core to assure the quality of the data (Ary et al., 2010). To ensure validity of instruments, the instruments are developed under close guidance of the advisor, instruments are developed related to review of literature and also a pilot study was carried out on 23 teachers of Gindo secondary schools to pre-test the instrument. The pre-test provides an advance opportunity for the investigator to check the questionnaires and to minimize errors due to improper design. And also the reliability of the instrument was measured by using Cronbach alpha test to check the consistency and accuracy of the measurement scales (Ary et al., 2010).

**Table 2: Reliability Test Results with Cronbach Alpha**

| No | Variables | No. items | |
|---|---|---|---|
| 1 | School facilities | 11 | 0.859 |
| 2 | The Extent of school Plant Contribution for increasing access to Improvement secondary schools | 10 | 0.86 |
| 3 | Library service | 5 | 0.858 |
| 4 | Maintains service of schools plants in secondary schools | 5 | 0.861 |
| 5 | Respondents' View Participation of Stakeholder on accessing school Plant | 8 | 0.86 |
| 6 | Major problems of School Plants in Secondary School | 5 | 0.862 |
| 7 | Strategies to improve factors affecting school plantation | 5 | 0.868 |
| | Average reliability coefficient | 49 | 0.861 |

The result of the pilot testing was statistically computed by using IBM SPSS- Statistics version 20. The Cronbach's alpha was used to analysis the data. Based on the pilot test, the reliability coefficient (Cronbach's alpha) of the instrument was found to be 0.861 which was taken to be reliable. Since as (Field, 2009) the reliability coefficients between 0.70–0.90 are generally found to be internally consistent and reliable.

## 3.7. Method of Data Analysis

The collected data were analyzed both quantitatively and qualitatively. The analysis of the data was based on the responses of respondents. The data collected from different sources was summarize, categorize and code to suit for analysis. The quantitative data collected by the

closed ended questions was presented in the form of table. The collected data from the respondents were processed and then analyzed by using both descriptive and inferential statistics.

The first part the quantitative data, about the background information of the respondents were analyzed by Percentage and frequency. The second and the main part of the quantitative collect through closed ended questions were analyzed by mean scores, and standard division. On the other hand, the data that will obtain from open ended items, interviews, observation and FGD will analyze qualitatively by transcribing respondent's ideas and views through narrations, descriptions and discussion. Finally presentation, analysis, interpretation, conclusions and recommendations were drawn using by analyzed data outcome.

## 3.8. Ethical Consideration

Research ethics refers to the type of agreement that researcher enters into his or her research participants. In this regard, the researcher got the consent of those he/she questioned, observes or took material from. Moreover, the researcher reached agreements with them about the use of the data and how its analysis was reported and disseminated.

According to Mutch (2005) the condition for ethical research in practices are that all participants were offered opportunity to remain anonymous. All information is treated with strict confidentiality; interviewers have the opportunity to verity statements when the researcher is in draft form and participants receive copy of the final report.

For this study, ethical code in terms of data collection, data analysis and diffusion of findings was conformed.

In this regard the researcher was conducted discussion with the principals of the school personally in order to seek their prior permission to administrator the three instruments. Adequate information on aims of research, the procedure follow and the use of results was given to each participant. The information from the participants was regarded as confidential and anonymity was assured.

# CHAPTER FOUR: PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with presentation, analysis and interpretation of data. The chapter sections majorly categorized based on the predefined research questions and objectives. The important finding and results were directly linked to contribution of school plant for access to secondary school improvement in south West Shoa Zone Oromia Region State. The chapter comprises two major parts. The first part presents the characteristics of the respondents in terms of sex, age, service years and academic qualifications. The second part deals with the results of findings from the data which were gathered through the questionnaire and interview. Hence, the results and discussion of the second part is provided based on five major sections and some other supportive subsections. These sections are: contribution of school plant for access to secondary school improvement. In this study, a total of 185 copies of questionnaires were distributed to sample secondary schools teachers of South West Shoa zone. The return rate of questionnaires from teachers was 180(97.29%).

The rest five (2.71%) were not filled properly; hence they are omitted from analysis. Moreover, 24 administration workers and eight woreda education expert were interviewed. Therefore, the analysis of this study were done based on the questionnaire data obtained from 180(97.41%) teachers, and 16 school principals, interview results from administration worker and Woreda education expert, and document analysis.

The respondents' characteristics were analyzed using percentages. Whereas the main quantitative data of the study presented in able up 3 to table 10 were analyzed by using frequency, percentages, mean scores and standard deviation. Because, the response in rating scales was more appropriate to such analysis. For the purpose of easy analysis and interpretation, the mean values of each item were interpreted as follows: 1.00-1.49= Strongly Disagree, 1.50-2.49= Disagree, 2.50 - 3.49= undecided, 3.50 - 4.49= Agree, 4.5-5.00= strongly Agree and also for other rating scales: 1.00 -1.49 = very low, 1.50-2.49 = low, 2.50-3.49 = medium, 3.50-4.49 = high and 4.50-5.00 = very high.

The summary of the data were presented using graphs and tables that incorporate various statistical tools. The qualitative data from open ended questionnaires and interview were organized according to their themes, presented and analyzed qualitatively to substantiate the data collected through the questionnaires.

## 4.1 Characteristics of the Respondents

## Table 3: Characteristics of the Respondents

| Characteristic | Teachers | | School principals | | Administration workers | | Woreda experts | |
|---|---|---|---|---|---|---|---|---|
| Sex | Frequency | Percent | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| Male | 97 | 53.9 | 15 | 93.7 | 18 | 75 | 5 | |
| Female | 83 | 46.1 | 1 | 6.2 | 6 | 25 | 3 | |
| Total | 180 | 100 | 16 | 100 | 24 | 100 | 8 | |
| Age | | | | | | | | |
| below 24 years | 7 | 3.9 | | | | | | |
| 25-30 | 42 | 23.3 | | | 7 | | | |
| 31-35 | 62 | 34.4 | 162 | 6.2 | 6 | | | |
| 36-40 | 38 | 21.1 | 13 | 81.2 | 10 | | 8 | |
| 45 and above | 31 | 17.2 | 2 | 12.5 | 1 | | | |
| Total | 180 | 100.0 | 16.0 | 100 | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Service year | | | | | | | | |
| Below 5 year | 17 | 9.4 | | | | | | |
| 6-12 | 40 | 22.2 | 4 | | 14 | | | |
| 13-19 | 99 | 55.0 | 9 | | 6 | | 8 | |
| 20 and above | 24 | 13.3 | 3 | | 4 | | | |
| Total | 180 | 100.0 | 16 | | | | | |
| Educational Level | | | | | | | | |
| Diploma | 10 | | | | 24 | | | |
| BA/BSc | 98 | | 7 | | | | 8 | |
| MA/MSc | 72 | | 9 | | | | | |

As it can be seen from the table 3, the characteristics of the respondents revealed that 97(53.9%) and 83(46.1%) teachers were males and females respectively. Here, the number of female teachers was lower compared to male teachers in the sample schools. Among principals 15(93.7%) were males and one participant (6.2%) was female. From this, female teachers were not much work on the leadership position. Similarly, among the vice principals all three were males and five woreda project experts are males.The FGD 18 are males and 6 are females respectively. Generally, in this study in all sample schools male teachers dominate female teachers.

Item 2 can be seen from the table 3, the majority of the teachers age were found on all ranges, that is 42 (23.3.0%) of the teachers were found in the range of 25-30 years, 62 (34.4%) of the teacher were found to be in the range of 31-35 years, which implies they are at young,

adolescence and adult age respectively. Hence, they are likely in a good position to provide adequate and rational responses to the questions. Among the school principals one of the principals age were found to be at range of 31-35 years and 13 (81.2%) principals were found to be at the age range of 36-40 years. This implies all the respondents are known detail about school plant in the secondary schools of south West Shoa zone.

From the table 3 item 3 the majority of the teachers' respondents were 99 (55%) of teachers and (%) principals have 6-12 respectively. While, 17 (9.4%) and 40 (22.2%) of teachers have below 5 and 13-16 service years. The rest 9 and 24(13.3%) have served for, 20 and above years respectively. Among the principals, 9(66.7%) and 3(33.3%) vice principals have service years of 13-19 years and 20 and above years respectively. As a whole in this study the majority of the respondents 81% have above 5 years experiences. This show the respondents have better understanding of various activities carried out in the school including school plants. This in turn might enable them to provide adequate responses to the questions presented to them concerning practices of change in their school. In addition, the respondents have better experience to identify those major problems encountered about school plants. Therefore, respondents are in a good position to respond to status of school plants and contribution school plant to improvement education in secondary schools of South West Shoa Zone.

With regard to level of education table 3 indicates that, 10 (5.5%), 98 (54.4%) and 72 (40%) teachers were diploma, 1st degree and 2nd degree holders respectively. Among principals, all 16 principals had 1st degree and 2nd. As ( MoE, 2010) stated, the minimum required educational qualification for secondary school teachers were 1st degree. But from above graph 10 (5.5%) teachers' educational qualifications were diploma. But, the majority of the teachers 170 (95.5%) had 1st degree and above. This implies these teachers were in position to provide adequate response to the items presented to them concerning contribution school plant to improvement education in their school. Further all principals and vice principals were 1st degree and 2nd degree holders. This implies that the principals and vice principals were in a good educational qualification to manage school plants.

## 4.2 School Facilities to access improvement quality of education

## Table 4: Schools Facilities to access improvement of quality of education

| | items | Principals | | Teachers | |
|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD |
| 1 | There is a proper distribution of school facilities in my school | 2.62 | .88 | 3.35 | .948 |
| 2 | Attractiveness of the school compound and fencing | 2.5 | 1.154 | 3.22 | 1.02 |
| 3 | Classroom condition (floors, walls, and roofs, shutter, student seats, file cabinet, for student, blackboards, and availability of space to accommodate all the students ) | 3.6 | 1.00 | 3.88 | .945 |
| 4 | Library services (reading room, chairs and tables, shelves, reference books, regular opening hours for the students) | 2.50 | 1.03 | 3.12 | 1.02 |
| 5 | Availability and functionality of portable water | 2.5 | 1.54 | 3.15 | 1.04 |
| 6 | Availability and functionality of pedagogical centre. | 2.00 | .89 | 1.90 | .89 |
| 7 | Staff room (chairs, tables and shelves) | 1.75 | 1.12 | 3.33 | .96 |
| 8 | Provision of first aid in case of accidents | 1.75 | 1.12 | 2.16 | 1.35 |
| 9 | Accessibility of transport facilities | 2.12 | 1.20 | 1.52 | .89 |
| | Average mean | 2.45 | | 2.86 | |

Scales: 1.00 – 1.49 = very low 1.50 – 2.49 = low, 2.50- 3.49 = moderate 3.50 –4.49 = high, 4.50 – 5.00 = very high.

Table 4 summarized responses to question 1-11, which asked about facilities of school access to improve quality of education in secondary school. In item 1 of this table, teachers and school principals rated moderate forproper distribution of school facilities in secondary schools of South West Shoa Zone. This implies there is some gap of distribution schools facilities in the study area.

With regard to item 2 of table 4, the respondents were asked whether the schools attractiveness of the school compound and fencing or not. Accordingly, teachers and school principals responded moderately with (X=2.5, SD=1.15 and X=3.2 &SD=1.02) respectively. This implies that secondary schools of South West Shoa Zone school compound and fence found to be attractive to some extent. Similarly, the observation result show that all of schools compound have fence but not much attractive inside the schools.

As it can be expressed in item 3 of table 4,classroom condition (floor, walls, and roofs, shutter, students seats, file cabinet, blackboard and availability of space to accommodate all the students), Therefore, the mean score of teacher and school principals responses to point (X=3.6 SD=1.0 and X=3.8 ,SD=.95). This shows that the secondary schools had classroom used to teaching and learning. Even the data shown, the interview conducted to administration workers result showed that the school had no have enough classrooms, seats, file cabinet for students.

As item 5 of the above table indicates, the teachers' and principals' response on library service was moderate with X=3.12,SD=1.02 and X=2.5, SD=1.03). This indicates that secondary schools had library service but it there is a gap. Again the interview conducted with administration worker revealed that the school have library but not fulfilled in materials and build in standard of library.

With regard to item 7 of the same table, expressed availability and functionality of pedagogical center, specifically teachers and school principals replied low with(X= 2.00, SD=0.89 and X=1.90 and SD=.89) on this issue respectively. Again the interview and observation result showed that there is no pedagogical center in secondary schools of South West Shoa Zone.

In table 5 last item 9 and 10 the respondents were asked about provision of first aid in case of accidents and accessibility of transportation. Accordingly the teachers and school principal disagreed on the point. This implies there are no first aids in case of accidents and self-transport of secondary schools.

## Analysis of Observation

The FGD conducted with administration worker and observation result indicated that three schools had no enough playgrounds for football and athletics. The data collectively indicate the secondary schools of South West Shoa Zone difference having in playgrounds.

The FGD with administration workers and observation of schools, the most sample schools asserted that there was no enough and separate toilet for girls and boys. One sample school principals said:

*'...frankly speaking the female students used one side of teachers' toilet; this makes shameful girls then they are back to class".*

Similarly, the FGD conducted with administration worker of schools revealed that there is water in the schools but not functional according to their need.

Based on, the data gathered by questionnaire and interview held it is possible to suggest that, secondary schools of South West Shoa Zone have some extent school compound, library service, portable water and staff rooms. In other side the absence of separate toilet for girls and boys, no pedagogical center, no first aids in case of accidents and absence of standard library building, enough classroom in secondary schools. From evidence of respondents on open ended and observation checklist show that cafeteria, bathing room, girls' students' room, the departments' class room, meeting hall, and different clubs room especially mini media are not available in the secondary schools of South West Shoa Zone. But Nafuko (2001) cited (in Kipyego, 2013) in his view indicates that schools that perform well in national examinations have 70-80% of the required learning facilities. These schools perform poorly due to lack of learning facilities coupled with financial difficulties.

## 4.3. The Extent of school Plant Contribution for increasing to Improvement secondary schools

Table 5, item 1-8 summarize the section assessed the extent school plant contribution to improvement of secondary schools educations.

### 4.3.1 Laboratory and ICT Service

### Table 5: Laboratory and ICT Service

| No | Laboratory Service<br>Terms | School principals | | Teachers | |
|---|---|---|---|---|---|
| | | Mean | Std. Deviati | Mean | Std. Deviation |
| 1 | The school has laboratory services ( with the supply of needed equipment, chemicals and manuals) | 1.87 | .61 | 2.21 | .67 |
| 2 | The facilities in the laboratory are used properly in the teaching learning. | 1.75 | .85 | 1.55 | .59 |
| 3 | My school has a laboratory facility for all science subjects. | 1.87 | 1.20 | 2.12 | .409 |
| 4 | There is enough supply of material, tools for teaching learning process in my school laboratory ( with the supply of needed equipment, chemicals and manuals) | 1.50 | 1.03 | 3.18 | .68 |
| | ICT Service | | | | |
| 5 | Availability of computer Service for students | 1.75 | .85 | 1.91 | .37 |
| 6 | Availability of computer Service for teachers and | 2.50 | .83 | 3.02 | 1.11 |
| 8 | Availability of functional duplicating machine in the school | 1.6 | .71 | 2.22 | .67 |
| 8 | The school has internet access for students and teacher | 1.15 | 1.01 | 1.6 | 0.62 |
| | Average mean | 1.75 | | 2.19 | |

Regarding item 1 of table 5, the respondents were asked whether the school has laboratory services (with the supply of needed equipment, chemicals and manuals or not. The mean scores of the teachers and school principals' were 1.623 and 2.2 respectively. The data obtained from observation check list shows that there 6(75%) of secondary schools have no laboratory service in the Zone.

As can be seen in table 5 item 2, the mean scores of the respondents on the facilities in the laboratory to be used properly in the teaching learning were 1.75 and 1.55 for the teachers and school principals respectively. *The data through interview and observation check list shows there is no facilities laboratory used properly in the teaching learning. Even the schools had facilities not used for practice of laboratory since lab technician locked the room for long duration of time.*

In item 3 of table 5 respondents were required to rate the extent their school have a laboratory facilities for all science subjects Based on this, teachers and school principal rated low with mean 1.87 and 2.12 respectively. This implies most schools had no laboratory facilities for all science subjects. The FGD conducted with administration workers result shows there is no facilities for all science subject.Similarly, Negessie (2007) states that the school facilities such as textbooks, references, maps, globs, laboratory equipment and other materials are not requested and supplied procedurally as a result it has created ineffective use of school facilities.

In the same table item 4, the respondents were requested to rate whether there is enough supply of material, tools for teaching learning process in school laboratory ( with the supply of needed equipment, chemicals and manuals) . According, the average mean score 2.35 of respondents' showed that the supply of material, tools for teaching learning process in school laboratory were below the average.

Regarding item 5 of the same table, the respondents were asked availability of computer service for students. Accordingly, the teachers and school leaders showed low number of computer service given for students with mean score 1.9 and 1,75 respectively. Further, the information obtained through FGD from most administration workers confirmed that, the computer service of schools were low in number of students and also present of computer, no electric power in the some schools.

Item 6 of table 5 investigated the extent schools provide necessary information regarding availability of computer service for teachers and administrations. Hence, teachers and school principals rated moderately with (X=3.02 SD=2.5) respectively on the issue. This implies that the secondary schools of the Zone had some sort of computer service for administration and teachers. The interview results also show that there is not much enough computer service for teachers except for administration of the schools.

The last item of table 5, the respondents were asked the school has internet access for students and teacher, accordingly the respondents' an average mean score of 1.35 showed that there was no internet access for teachers and students. The interview and observation checklists confirmed this and also there was no plasma and e-learning in all secondary schools.

### 4.3.2 Library service

### Table 6: Library Services in secondary schools

| No | Items | Mean | SD | Mean | SD |
|---|---|---|---|---|---|
| 1 | There is enough reference books, desks and chairs facilities in the library. | 1.62 | .50 | 3.27 | .57 |
| 2 | There are an up to date reference books in the library. | 1.875 | 1.08781 | 2.71 | .62 |
| 3 | The school library are properly arranged | 1.50 | .516 | 1.58 | .494 |
| 4 | The school library use electronic media | 1.50 | .51 | 2.07 | .307 |
| 5 | The facilities in the library are provided regularly | 1.37 | .50 | 1.96 | .434 |
| | Average mean | 1.573 | | 2.32 | |

In above table summarize item 1-5 the facilities of library in secondary schools, the result of the data show that the number of reference books, desk and chair and presence of update reference book were low with mean score 1.62 and 3.27 teachers and school principals' rate.

Regarding item 3 of table 6, respondents were asked to show their agreement whether the school libraries are properly arranged or not. Apparently teachers and school principals with(X=1.50,SD= 0.56 & X= 1.5,SD=0.49) rate low about issue.

As it is revealed in item 4 of table 6 respondents were requested to rate the degree to the school library use electronic media in the study area. Accordingly, teachers and school principals with (X=1.5,SD=0.51 and X=2.07,Sd=0.307)expressed low rate respectively. *Result of observation and FGD held with administration workers of the schools were show there is no use electronic media in the schools. This indicated that the secondary schools of study area were not practice library use electronic media.*

The last item of the same table, described is the facilities in the library are provided regularly in schools. Accordingly, the teachers and school principals were rated low.

Based the data presented there is no update reference books, library properly arranged, no use electric media and the facilities no provide regular service in secondary schools of Zone.

### 4.3.3 Maintenance service

## Table 7: Maintenance service of schools plants in secondary schools

| No | Items | Mean | SD | Mean | SD |
|---|---|---|---|---|---|
| 1 | Broken chairs and tables are quickly repaired. | 1.00 | .00 | 1.95 | .44 |
| 2 | Damaged doors and windows are immediately replaced. | 1.25 | .447 | 1.97 | .447 |
| 3 | Damaged water pipes are immediately repaired. | 1.12 | .341 | 2.07 | .32 |
| 4 | Ceiling & roofs are easily detected and repaired. | 1.87 | 1.087 | 2.19 | .635 |
| 5 | Grasses on the playing ground, class room's floor and toilets are regularly cleared. | 1.12 | .34 | 1.97 | .447 |
| 6 | Laboratory materials are always maintained to protect from damage. | 1.37 | .50 | 1.90 | .367 |
| 7 | Early repairs or replacements are made to any damaged items. | 2.37 | 1.36 | 2.68 | 1.06 |
| 8 | The school administrators are periodically inspect school plant to detect defects for early maintenance. | 1.75 | 1.34 | 2.60 | .86 |
| | Average mean | 1.48 | | 2.17 | |

**Table 7 summarizes items 1-8 about maintaining service of school plants presence in secondary schools.**

As shown in table 7 item 1, the respondents were asked whether broken chairs and tables are quickly repaired or not. Accordingly, teachers and school principals asserted low maintenance of broken chair and table in secondary school of the zone. Again the FGD result show similar result, one administration worker said:

*….the chair, desk and table are broken every day in the class but not maintained on time, rather than accommodate in front of classroom improperly."*

As shown in table 7 item 2, the respondents were asked that whether damaged doors and windows are immediately replaced or not. Apparently, teachers and school principals were show low replacement of damaged doors and windows of secondary schools of the zone with mean score 1.25 and 1.97 respectively. As result of observation checklist showed that there were many window of classroom free open and damaged door in the schools.

In the above table item 3 expressed the damaged water pipe immediately repaired. On this issues teachers and school principals were rate low with mea score 2.19 and 1.12 respectively. Further, the interview result showed absence of budget not to immediately repairs of water pipe.

On the same table item 4, respondents were asked whether grasses on the playing ground, class rooms' floor and toilets are regularly cleared or not. Hence, the teachers and school principals with (x=1.12 SD=0.34, x=1.97, SD=0.44) rate low on, grass on playing ground, class rooms floor and toilet are regularly cleared respectively. The FGD and observation result confirmed that the toilet is not clean.

Item 6 of table 7 respondents were requested rate whether the laboratory materials always maintained to protect from damage or not. Accordingly, teachers and school principals with mean score 1.37 and 1.90 were rate low about points respectively. These show that in secondary school of the zone laboratory materials were poorly maintained and not regularly kept clean.

For the last item of the same table, the respondents were asked whether the school administrators are periodically inspect school plant to detect defects for early maintenance or

not. Accordingly, the teachers rated moderately on issue with mean score 2,6, whereas the school principals indicated low periodical inspection of school plant to detect defects for early maintenance. The interview result showed that the school administration had no enough knowledge about school plant and not periodical inspect school plant to detect defect for maintenance. But Onwurah (2004) describe in support of the maintenance activities as part of the school plant management added the following: selection of special personnel for operating and maintaining the school plant must be carefully based on skill and knowledge.

## 4.4 Major problems of School Plants in Secondary School

**Table 8: Respondents' View Participation of Stakeholder on accessing school Plant**

| No | Items | Mean | SD | Mean | SD |
|---|---|---|---|---|---|
| 1 | The needs of the school plant have been considered in by community in my school. | 2.37 | 1.36 | 2.17 | .89 |
| 2 | My school has its own source of fund for school plant and facilities. | 1.62 | .50 | 2.83 | .743 |
| 3 | The Planning of school plant is entirely done by the school administrators in my school. | 1.87 | .9574 | 2.1 | .55 |
| 4 | There is a practice of NGOs and the community participation in the school plant planning and management in my school. | 2.37 | 1.62 | 2.22 | .612 |
| 5 | The PTAs have active participation in the school plant planning and management issues in my school. | 1.87 | 1.408 | 2.46 | .543 |
| 6 | Teachers and students are actively participated in the improvement of school facilities used in my school. | 2.12 | 1.31 | 2.23 | .617 |
| 7 | The Education Office provides important school plant records. | 1.78 | .619 | 2.54 | .54 |
| 8 | The government is entirely responsible for the refunding of school plant and facilities in my school. | 2.00 | .89 | 2.461 | .67 |
| 9 | The school is entirely responsible for the refunding of school plant and facilities. | 1.62 | .718 | 2.66 | .84 |
| 10 | The right quality of equipment and facilities are provided in my school. | 1.87 | .80 | 2.45 | .498 |
| 11 | Everything on the school site are itemized and documented. | 1.62 | .885 | 2.22 | .766 |
| 12 | Government formulate maintenance policy for schools | 2.25 | .68 | 2.36 | .515 |

As can be witnessed from table-8 item 1, the mean score (X=2.37, SD=1.05,and X=2.17 SD=.89) of teachers and school principals responses regarding to the needs of the school plant has been considered in relation to community needs in secondary schools of South West Shoa Zone is low level.

In item 2 on the same table, the respondents were asked whether the secondary school has its own source of fund for school plant and facilities or not. The mean score were 1.62 for teachers and 2.82 for school principals. The data show that the secondary school of South West Shoa Zone has no own source of fund for school plants and facilities. The interview conducted with Woreda education project expert is confirming this. One of the Wored Education office experts said:

*…honest speaking, the Woreda education has no budget for school plants even it shortage for stationary and we are ask support from other sectors.*

Item 3 of table 8, the planning of school plant is entirely done by the school administrators in secondary of study area, thus for this item the teachers and school principals rated low with(X=1.87, SD=.95 &X=2.1, SD=.55) respectively. Further the information obtained from FGD indicates the school administration is not plan of school plant. Therefore from analysis it can conclude that the secondary administration not plan on school plant.

As shown in item 4 of table 8, a practice of NGOs and the community participation in the school plant planning and management in secondary schools of zone, The teachers and school principals displayed low level of participation of NGOs and community with mean score 2.37 and 2.22 respectively. As interview conducted with administration worker indicated that there is no NGOs and community participation regarding school plants.

As it can be expressed in item 5 of table 8,the PTAs have active participation in the school plant planning and management issues in secondary schools, accordingly majority of teachers and schools principals were show low level PTAs participation school plant planning and management issues,(X=1.87,SD= 1.04 and X=2.43 SD=.54) respectively. As interview conducted administration worker of schools indicate that the PTAs are participate to solve problems especially on discipline problems and monitoring of financial in schools rather than

school plant. MoE (2006) is state that school cannot succeed without support of the parents and community. It is therefore essential for school principal to develop good relations with parents especially. The simplest level is to ensure that parents and communities are always informed about what is happening in the school. Parents and communities cannot provide the necessary support for learning without a good understanding of what the school actually does. Thus, the school should encourage community participation, and should receive both positive and negative feedback at regular intervals.

Item 6 of table 8 the respondents were asked whether teachers and students are actively participated in the improvement of school facilities used in secondary school or not. The teachers and school principals were low level of teachers and students participation of improvement of school facilities with mean score 2.12 and 2.32 respectively. Likewise, the information obtained through the interview supports the above data that teachers and students did not participate in improvement of school facilities.

As it can be seen from the data respective to item 7 of table 8, to the statement the education office provides important school plant records. The majority of teachers and school principals showed disagreement on the point. The interview conducted with Woreda education office project expert show data show that there is no record about school plants.

Regarding item 8 of table 8, respondents were asked whether the government is entirely responsible for the refunding of school plant and facilities in secondary school or not. Accordingly, teachers and school principals displayed disagreement on issues with overall mean score 2.14 and 2.14 respectively. Further, the interview result obtained from the administration worker showed they mostly get fund from Woreda education which even not sufficient for stationery. The governments not plan to fund for school plant, the schools use budget obtain from school grant used for simple maintenance such as chair and table for students.

Specifically one of the administration workers said:

*"... honestly speaking, the government did not fund for school plant but also not assign enough budget for teaching and learning.*

Item 10 of the above table, the respondents were asked whether the right quality of equipment and facilities are provided in school or not. Apparently, the mean scores of teachers and school principals about the supply of the right quality of equipment and facilities were 1.87 and 2.43 respectively with the average mean 2.15. From this result, one can conclude that the right quality of equipment and facilities provided in their secondary schools was below the average.

As shown in the same table item 11, the respondents were asked whether everything on the school site are itemized and documented. The respondents shown disagreement on ideas with the mean score 1.62 for teachers and 2.22 for school principals with an average mean 1.92. Furthermore the result obtained from the interview of administration worker reveals that, most school sites were not itemized and documented properly. The last item of Table 9 deals whether or not government formulates maintenance policy for schools on school plant. The respondents showed disagreement on issues with overall mean 2.23.The interview conducted with administration workers also confirmed that they have no enough information.

## 4.4 Major problems of School Plants in Secondary School

Table 9 summarize 1- 5 respondents' views about major problems of school plant in secondary schools.

## Table 9: Major problems of School Plants in Secondary School

| No | Items | Teachers | | School Principal | |
|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Mean | Std. Deviation |
| 1 | Poor handling school plants and less facilities | 3.73 | 1.14 | 3.75 | 1.18 |
| 2 | Lack of proper assignment and distribution | 3.56 | 1.12 | 3.93 | .928 |
| 3 | Lack of proper planning in school plant management. | 3.11 | 1.13 | 4.00 | 1.095 |
| 4 | Poor attempts in the maintenance of the school plant. | 3.83 | 1.15 | 4.37 | 1.08 |
| 5 | Insufficient fund for the school plant | 3.43 | 1.07 | 3.81 | 1.10 |
| | Average mean | 3.53 | | 3.97 | |

As seen on item 1 table 9, the respondents were asked about poor handling school plants and less facility present in secondary school of south West Shoa zone. The average mean for this item were 3.74 which indicates teachers agreement on issues. Therefore, the analysis data were shown that in the secondary schools of the study area there is poor handling school plant and less facility. As observed through the checklist, the school plant is not attractive and not handled well.

Regarding item 2 of the same table, the respondents were asked whether the school lack of proper assignment and distribution. Hence, the majority of teachers and school principals showed agreement with mean score 3.56 and 3.93 respectively. This indicated that lack of proper assignment is how it can affect school plant utilization and function.

As described item 3 of table 9, the teachers and principals displayed agreement on lack of proper planning in school plant management in secondary schools of South West Shoa zone with average mean 3.55. The results of group focus discussion with administration worker were confirmed thus issues. The data indicated that the management of the secondary schools not properly plan on school plants. But as Abraham (2003), suggested school plant management is viewed as functions geared towards maximizing the efficiency and effectiveness of the schools. The management functions towards the school plant include planning, procuring, receiving, storage, control and maintenance.

In item 4 of the same table, the respondents were asked about poor attempts in the maintenance of the school plant. Accordingly, the mean of teachers is 3.83 and school principals 4.37 respectively. This indicated the absence of maintains of school plant affect function of schools.

The last item of Table 9 asked the respondents about insufficient fund for the school plant. Accordingly, the mean of teachers is 3.43 and school leaders 3.81 respectively. The average mean is 3.62. This indicated that lack of sufficient fund affect the school plant in school. The result of interview conducted with Woreda education expert of project and planning were shown absence of guide line for school plant management of secondary schools are problems,

## 4.5 Strategies to improve factors affecting school plantation

This section deals with the items related to the strategies to improve factors affecting school plantation. Each item is analyzed based on the data obtained through questionnaire responded by teachers, school principals and further backed by the data obtained through interview from administration worker and Woreda education expert. Accordingly, the respondents view on strategies to improve factors affecting school plantation was presents and analyzed in table 10

## Table 10: Strategies to improve factors affecting school plantation

| No | Items | Teachers | | Principals | |
|---|---|---|---|---|---|
| | | X | | SD | |
| 1 | Facilitate fund raising program by contacting with governmental and NGO. | 3.93 | .78 | 3.87 | .88 |
| 2 | Facilitate capacity building trainings on school plant management. | 3.89 | .86 | 3.87 | .95 |
| 3 | Assure the system of maintaining and saving school plants. | 3.83 | .89 | 4.00 | .89 |
| 4 | Involve all stakeholders in school plants management. | 3.90 | .84 | 3.81 | .91 |
| 5 | Fulfilling all equipment's in school plants so as to improve quality education. | 3.96 | .77 | 4.12 | .80 |
| | Average mean | 3.9 | | 3.93 | |

As seen in item 1of table 10, the respondents were asked if facilitating fund raising program is one of the strategies to improve school plants problem. Accordingly, the mean score for teachers are 3.93 and school principals 3.87 respectively. This indicates that presence of fund raising program help to improve school plants problems.

Item 2 of table 10,the respondents requested to rate whether facilitate capacity building training on school plant management or not. Accordingly, the majority of teachers and school principals agreed on issues. Therefore, capacity building training on school plant management helps to improve the school plant. Further, the interview conducted with administration workers shown there is no capacity building given by Woreda or other body, but the issues help them how to manage school plants.

As it can be seen in item 3 of table 10, concerning assurance of the system of maintaining and saving school plant, the teachers and school principals showed agreement on point with mean score 3.83 and 4.00 respectively. This indicated that assure the system of maintaining and saving school plant is one of the strategies of school plant.

As it can be observed in item number 4 table 10,the majority of teachers and school plant shown agreement on involvement of all stakeholders in school plants management is one of the strategies to keep the school plants.

In the last item of the same table, the respondents were asked fulfilling all equipment's in school plants so as to improve quality education. As data of respondents were shown, fulfilling all equipment's in school plants so as to improve quality of education is part of the strategy. But the interview result indicated that, fulfilling equipment's in school plants that can serve for quality education was one of the problems.

# CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This is the final part of the thesis. It deals with the summary of the major findings, conclusions and recommendations.

## 5.1. Summary

The main objective of this study was to investigate contribution of school plant for access to improvement of secondary school. The study was conducted secondary school in South West Shoa Zone Oromia Regional State. All (12) Woredas and one town administration found in the Zone were included in to the study. Out of thirty(30) secondary schools found in the zone, eight (8) schools were selected using simple random sampling technique specifically lottery method. All (903) teachers, 59 school principals and 8 Woreda education office expert and administration worker in the sample secondary schools were considered as the study population.The study targeted 185 teachers and 16principals as sample population for the study. Two hundred one (201) copies of questionnaire were distributed to sample teachers and school principal who were randomly selected from 30 secondary schools. A total of 228 responses were returned, out of the total returned questionnaires, 196 were usable. Similarly, 8Woreda project education expert and administration worker were interviewed and documents of three schools were reviewed for the purpose of this study. The quantitative data collected from the sample population were systematically coded, tabulated and organized for analysis. Descriptive statistics such as frequencies, percentage, means, and standard deviations were used. Based on the analysis and interpretation of the data, the major findings of the study are summarized as follows.

- As a whole in this study the majority of the respondents 81% have above 5 years experiences. These shows the respondents have better understanding of various programs carried out in the school. With regard to level of education figure 2 indicates that, 10(4.4%), 98(88.5%) and 72(7.1%) teachers were diploma, 1$^{st}$ degree and 2$^{nd}$ degree holders respectively. All 16 principals had 1$^{st}$ degree and 2$^{nd}$ degree respectively in the study area.

- The first objective of this study was concerned with studying examine the status of school plant of secondary schools in South West Shoa Zone. The status of school facilities to improvement quality of education in schools was found to be in poor condition as reveled by the two groups over all mean scores that are found between 2.45 and 2.8which indicates that both group respondents were at the level of low level school facilities in secondary schools. The data of teachers and school principals analysis on the proper distribution of facilities, the school compound have fence and attractive, and playground have a gap in secondary schools of South West Shoa Zone. The result on observation checklist and interview showed the absence of separate toilet for girls and boys, absence provision of first aid in case accident, cafeteria, meeting hall, departments' and different clubs and classrooms were the main problems of secondary schools of South West Shoa Zone.
- Regarding the laboratory service such facilities for all science subject, enough supply of tools equipment and chemicals and laboratory class room are low and absence in secondary school of south west Shoa zone. The overall mean 1.75 for teacher and 2.27 for school principals indicates low presences of laboratory service in secondary schools of south west Shoa zone.
- Concerning availability of ICT and other electronic materials are available in poor conditions as revealed by two groups overall mean 2.1. This indicates the limited number computer for students and teachers that currently increase enrollment of students and internet access.
- From the data obtain from teachers and school principals and observation analysis the on the library there were low facilities and update reference books in secondary schools of South West Shoa zone.
- Concerning maintain service the two respondents were show low maintains service in secondary schools of south West Zhoa Zone. The overall mean score 1.48 for teacher and 2.17 for school principals showed low maintain service for broken chair, table, door and window. And also the other grass playground, classroom and toilet were not clean immediately in secondary South West Shoa.
- As explained by most teachers the participation of students and teachers for improve of school plant were low. From the data it was evident that, the record each item and

documentation, government entirely refunding, maintain police are low in secondary schools of study area.

- The overall mean 3.53 for teachers and 3.97 for principals indicates the poor handing school plant and facilities, lack of proper planning, insufficient funds for school plant and low attempts to maintain are main factor affecting the school plants of secondary of South West Shoa Zone.
- Regarding of strategies the data shown.facilitate fund raising program by contacting with governmental and NGO, facilitate capacity building trainings on school plant management, fulfilling all equipment's in school plants so as to improve quality education, involve all stakeholders in school plants management and assure the system of maintaining and saving school plants are strategies to improve factors affecting school plant in secondary schools of South West Shoa Zone. Therefore, one can understand the above major factors affected school plant and facilities for access to improvement quality education in South West Shoa Zone secondary schools.

## 5.2. Conclusion

Based on the findings of the study, the following conclusions were drawn:

1. Based on findings of the study, it is possible to conclude that the availability of ICT, internet and other electronic materials are available in poor conditions in secondary school of South West Shao zone. This indicates the limited number computer for students and teachers that currently increase enrollment of students. From the data obtain from teachers and school principals and observation analysis the on the library there are low facilities and no update reference books in secondary schools of South West Shoa zone.

2. The findings of the study enable the researcher to conclude that the practice of maintenance facility and activities low maintain service for broken chair, table, door and window in secondary schools study. The grasses on the playing ground and classrooms floor and toilets were not regularly cleared, laboratory materials were not always maintained and teaching aid materials were not always maintained for use. Thus, it is possible to conclude that the practice of maintenance facility was found in a poor

condition in the secondary schools of South West Shoa Zone.On participation of stakeholder from the data it was evident that most teachers the participation of students and teachers for improve of school plant and the record each item and documentation, government entirely refunding, maintain police are low in secondary schools of study area.

3. Lastly, among various factors the poor handing school plant and facilities, lack of proper planning, insufficient funds for school plant and low attempts to maintain are main factor affecting the school plants of secondary of South West Shoa Zone. On other side the strategies such as facilitate fund raising program by contacting with governmental and NGO, facilitate capacity building trainings on school plant management, fulfilling all equipment's in school plants so as to improve quality education, involve all stakeholders in school plants management andassure the system of maintaining and saving school plants are strategies to improve factors affecting school plantation secondary schools of South West Shoa zone.

## 5.3. Recommendations

Based on the findings and limitation of the study, the following recommendations were made:

- ☞ Contributions of plant are vital in secondary schools. Therefore Oromia Education Office,South West Shoa zone education office and , the school principals and the school and community are advised to fulfill the school plant and facilities to secondary schools through creating fundraising activities, budget allocation and increasing stakeholders' participation to promote teaching and learning process.
- ☞ Facilities are indispensable issue in the schools. Thus, woreda education should work for the improvement of facilities such as pedagogical center, clinical center, first aid in case of accidents and toilets for girls should be provide in secondary schools of study area.
- ☞ The regular school plant inspection and a good maintenance program are recommended to protect the existing school plant and facilities. Therefore, the government should provide the facilities and equipment needed in the schools in order to create an environment for effective teaching and learning.

- ☞ They should also assist schools by refunding maintenance costs into educational budget to take care of deterioration of the school plant facilities.
- ☞ Oromia Education office should give training on school plants management for school management to increase their performance.

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# Appendix

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

A questionnaire to be filled by school teachers and school Principals

**Dear respondent**

I am a post graduate (Master) student of Addis Ababa University. I am carrying out a study on the topic: Contribution of School Plant for Access to Secondary School Improvement in South West Shoa Zone Oromia Region State.

Thus, the main purpose of this questionnaire is only to collect relevant information to compliment this research work. You are, therefore, kindly requested to fill the questionnaire in order to give necessary information on the issue related to the study. The success of this study directly depends upon your honest and genuine response to each question. Each data you supply will be used only for the purpose of academic issue and also treated with the most confidentiality.

Thank you in advance for all your cooperation.

General Directions

1. There is no need to write your name

2. For every item, you have to give only one answer.

3. Please give your short and precise response to the open-ended questions

Part I: Background information of the respondent

Please respond to the following questions by putting (√) mark in the box and write on the space provided when necessary.

1. Name of the school: _____

2. Location of school (Woreda /Town)_____

3. Sex: Male ☐ Female ☐

4. Age: below 24 years ☐ 25-34 years ☐

   35-44 years ☐ above 45 years ☐

5. Level of educational qualification

   Below Certificate Level ☐ Certificate ☐ College diploma ☐

   BA/BSc ☐ MA/MSc ☐ PhD ☐ Others (Please specify)_____

6. Year of service: below 5 Years ☐ 6-12 years ☐

   13-19 years ☐ 20 years and above ☐

7. Your position in the school: _____

8. Distance of your residence from your school: [____] km

9. Distance of your school from the market place: [____] km

Part II: Main Questions

The following are the major dimensions which supposed to measure Contribution of School Plant for Access to Secondary School Improvement, through the participation of responsible bodies by the numbers indicated. Please read each statement carefully and put tick "√" mark against each rating scale.

1. What are statuses of school plant of your school?

1= very low low-2 3=moderate 4= high 5= very high

| No. | Items | Scales | | | | |
|---|---|---|---|---|---|---|
| 1 | School Facilities to access quality of education | 1 | 2 | 3 | 4 | 5 |
| 1 | There is a proper distribution of school facilities in my school | | | | | |
| 2 | Attractiveness of the school compound and fencing. | | | | | |
| 3 | There is a Playground in the school | | | | | |
| 4 | Classroom condition (floors, walls, and roofs, shutter, student seats, file cabinet, blackboards, and availability of space to accommodate all the students ) | | | | | |
| 5 | Library services (reading room, chairs and tables, shelves, reference books, regular opening hours for the students) | | | | | |
| 6 | Toilet (quality of the toilet rooms, separate toilet for boys and girls, availability of water adjustment to the toilet rooms) | | | | | |
| 7 | Availability and functionality of portable water. | | | | | |
| 8 | Availability and functionality of pedagogical centre | | | | | |
| 9 | Staff room (chairs, tables and shelves) | | | | | |
| 10 | Provision of first aid in case of accidents. | | | | | |
| 11 | Accessibility of transport facilities. | | | | | |
| 2 | The Extent of school Plant Contribution for increasing Access to Improvement secondary schools | | | | | |
| | Availability of ICT and Other Electronic Materials | | | | | |
| 1 | Availability of computer Service for students | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | Availability of computer Service for teachers and administrators. | | | | | |
| 3 | Availability of functional duplicating machine in the school. | | | | | |
| | Laboratory facilities | | | | | |
| 4 | The school has laboratory services ( with the supply of needed equipment, chemicals and manuals) | | | | | |
| 5 | The facilities in the laboratory are used properly in the teaching learning. | | | | | |
| 6 | My school has a laboratory facilities for all science subjects | | | | | |
| 7 | There is enough supply of material, tools for teaching learning process in my school laboratory ( with the supply of needed equipment, chemicals and manuals) | | | | | |
| | Library service | | | | | |
| 1` | There is enough reference books, desks and chairs facilities in the library. | | | | | |
| 2 | There are an up to date reference books in the library | | | | | |
| 3 | The in my school library are properly arranged. | | | | | |
| 4 | My school library use electronic media | | | | | |
| 5 | The facilities in the library are provided regularly | | | | | |
| | Maintenance of facilities | | | | | |
| 1 | Broken chairs and tables are quickly repaired. | | | | | |
| 2 | Damaged doors and windows are immediately replaced. | | | | | |
| 3 | Damaged water pipes are immediately repaired. | | | | | |
| 4 | Ceiling & roofs are easily detected and repaired. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | Grasses on the playing ground, class room's floor and toilets are regularly cleared. | | | | | |
| 6 | Laboratory materials are always maintained to protect from damage. | | | | | |
| 7 | Early repairs or replacements are made to any damaged items. | | | | | |
| 8 | The school administrators are periodically inspect school plant to detect defects for early maintenance. | | | | | |
| | The other problems | | | | | |
| **3** | **Participation(Involvement) of stallholders accessing school plants** | | | | | |
| 1 | The needs of the school plant have been considered in relation to community needs in my school. | | | | | |
| 2 | My school has its own source of fund for school plant and facilities. | | | | | |
| 3 | The Planning of school plant is entirely done by the school administrators in my school. | | | | | |
| 4 | There is a practice of NGOs and the community participation in the school plant planning and management in my school | | | | | |
| 5 | The PTAs have active participation in the school plant planning and management issues in my school. | | | | | |
| 6 | Teachers and students are actively participated in the improvement of school facilities used in my school. | | | | | |
| 7 | The Education Office provides important school plant records. | | | | | |
| 8 | The government is entirely responsible for the refunding of school plant and facilities in my school. | | | | | |
| 9 | The right quality of equipment and facilities are provided in my school. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 10 | Everything on the school site are itemized and documented. | | | | | |
| 11 | The school is entirely responsible for the refunding of school plant and facilities. | | | | | |
| 12 | Government formulate maintenance policy for schools | | | | | |
| 4 | Major problems of School Plants in Secondary School. | | | | | |
| 1 | Poor handling school plants and less facility. | | | | | |
| 2 | Lack of proper assignment and distribution. | | | | | |
| 3 | Lack of proper planning in school plant management | | | | | |
| 4 | Poor attempts in the maintenance of the school plant | | | | | |
| 5 | Insufficient fund for the school plant | | | | | |
| | **Other problem** | | | | | |
| 5 | Strategies to improve factors affecting school plantation | | | | | |
| 1 | Facilitate fund raising program by contacting with governmental and NGO | | | | | |
| 2 | Facilitate capacity building trainings on school plant management. | | | | | |
| 3 | Assure the system of maintaining and saving school plants. | | | | | |
| 4 | Involve all stakeholders in school plants management | | | | | |
| 5 | Fulfilling all equipment's in school plants so as to improve quality education | | | | | |

What are the major factors that affect school plant to access of education in your school?

_____

What suggestions do you have to improve the various problems and challenges of school plant

_____

_____

Interview for focus group discussion for administrative workers, and planning and project officer

Part – II: The main questions of the focusing group discussion

1. Do you think that you as administrative workers/planning and project are actively involved in managing and planning the school plant?
2. What are the activities of planning for use of school plants? How do you plan for plants in your school?
3. Do you think that the school has a properly use school plants?
4. To what extent do teachers, students, administrative staff participates in the management of school plant?
5. Are there guidelines for school plant management? How does the school apply them?
6. What do you say about contribution of the school plant to increase access to quality education in your school?
7. How does your school carry out the school plant (facilities) and what are the problems regarding to the activity? How would you describe the relationship of school plant with access quality education in your school?
8. How does the scarcity of school plant affect access to improve secondary school education in your school?

9. What do you suggest to improve the functions of school plant management in your school?

## Observation checklist

## Adequacy of infrastructure and physical facilities

| No. | Adequacy of school plant and facilities | present | Absent | remark |
|---|---|---|---|---|
| 1 | Classroom | | | |
| 2 | Staff room | | | |
| 3 | Laboratory | | | |
| 4 | Science kits | | | |
| 5 | Library and aids | | | |
| 6 | Pedagogical centre and aids | | | |
| 7 | Staff room | | | |
| 8 | Examination hall | | | |
| 9 | Toilets | | | |
| 10 | Electricity and generator | | | |
| 11 | Playground | | | |

## Adequacy of Instructional Materials and Equipment

| No. | Facilities | Present | Absent | Remark |
|---|---|---|---|---|
| 1 | Textbook and Reference | | | |
| 2 | Stationary | | | |
| 3 | Teaching aid | | | |
| 4 | Computer | | | |
| 5 | Plasma | | | |
| 6 | Class register | | | |
| 7 | Shelves | | | |

# Appendix D Proportional

1. Bacho (teacher population = 38)

   n = $\frac{38*185}{340}$≈21

2. Dalidaki secondary school (teacher population = 21)

   n = $\frac{21*185}{340}$≈11

3. Chitu secondary school (teacher population = 43)

   n = $\frac{43*185}{340}$≈*23*

4. Teji secondary school (teacher population = 70)

   n = $\frac{70*185}{340}$≈*38*

5. Kersa Busa secondary school (teacher population =23 )

   n = $\frac{63*185}{340}$≈*13*

6. Bantu secondary school (teacher population = 70)

   n = $\frac{70*185}{340}$≈*38*

7. Harbu chulule secondary school (teacher population =44 )

   n = $\frac{44*185}{340}$≈24

8. Gurura Secondary school(teachers population=32)

   $n = \frac{32*185}{340}$≈17