

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**DETERMINANTS OF TEACHERS'
MEDIA UTILISATION PATTERN**

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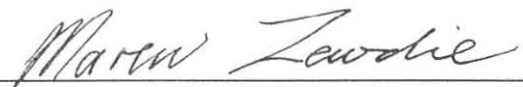
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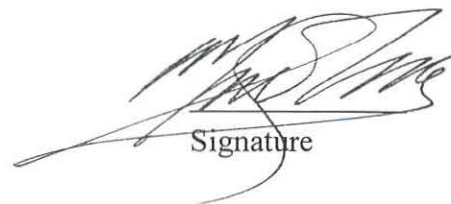
DETERMINANTS OF TEACHERS' MEDIA
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Dedicated to:

My Sister, Seida Abdo who significantly altered my way of living .

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Abstract

This study investigates the determinants of teachers' level of media utilisation pattern on the basis of selected demographic, job related personal variables and work environment factors. Participants are 139 primary school teachers who are randomly selected from rural and urban schools *Wenage* Wereda, *Gedeo* Zone.

A questionnaire, and five scales developed to measure job related personal variable [i.e. level of media use (LMU) scale, Teachers' sense of efficacy of media use (EMU) and efficacy of media choice (EMC) measures, consequence of media use (CMU), and Openness to procure and use media (OPUM)], and measures of work environment variables [i.e. availability of media resource (AMR), manageability of classroom tasks (MCT), and administrative support (AS)] were employed to collect data.

The results suggest that demographic variables were not found to predict level of media use (LMU). On the other hand, among job related personal and environmental variables, teacher's sense of efficacy of media choice (EMC), consequence of media use (CMU), and availability of media resources (AMR) emerged as major determinants of teacher's media utilisation pattern.

Finally, the practical implications of the results of the present study are indicated.

Acronyms Used in the Text

AS: Administrative Support

AMR: Availability of Media Resources

CMU: Consequence of Media Use

EMC: Efficacy of Media Choice

EMU: Efficacy of Media Use

LMU: Level of Media Use

OPUM: Openness to Procure and Use Media

MCT: Manageability of Classroom Tasks

MOE: Ministry of Education

NETP: New Education and Training Policy

SNNPAR: Southern Nations Nationalities Administrative Region

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Problem

Research has shown that there is no one single best method of teaching and instructional material for all students and at all times. Students have different levels of intelligence, motivation, learning style, etc. Teachers differ in their choice of instructional materials and teaching methods, teaching styles, preference, interest, etc. The question of identifying one single best method of providing instruction, which matches these entire variables, still remains unanswerable.

As a result, educators have been advocating the importance of helping students to become responsible for their own learning. In their attempts to match instruction with individual differences, educators are increasingly engaged in creating high quality educational materials. Interest has been further stimulated by the realisation that the traditional method of teaching is no longer appropriate to facilitate learning at a faster rate.

This has resulted in increased recognition of a new paradigm shift in instructional approaches. Research indicates that the use of instructional media has a positive effect

on teachers and students alike. Instructional media stimulates teachers' creativity and enhance their level of commitment in their professional growth. Instructional materials also affect students, learning performance and increasing students' performance to learn. One of the essential decisions that must be made in the planning and implementation of educational activities is what instructional material to incorporate as a vehicle for the provision of instruction. Planners and teachers often select a great variety of instructional materials that will enable learner to master the desired instructional objectives.

Several medium selection models have been made available for teachers. Most writers on media selection models agree that there is no one single medium that is universally superior to all others for all types of learners. They also agree that it is not possible to identify a single best medium that is equally appropriate in every situation. Thus, Shrumm (1997) argue that " There is no cookbook of recipes for medium selection that can be applied in every educational system. It is necessary to consider local needs, situational and resources, and then interpret such guidelines as exist."

To this regard, Gagn .et al (1992) share a similar view. They warn American writers to avoid suggesting "American Solution" which might not work in other educational context. Truly, there are three alternatives for every teacher and in every school for obtaining the required instructional materials Kemp&Smellie(1994). The first alternative is to select instructional materials that may have been made available. The

second option is to modify materials, and last to decide to produce new material based on the lesson objectives.

Nevertheless, teachers' decision for procuring and utilising instructional materials may vary greatly from teacher to teacher as well as from one school to another. This is because instructional materials may not be available in sufficient quantity in some schools, nor do teachers prepare, or modify materials in the same way.

Several factors may influence the degree of effort that teachers demonstrate for procuring and obtaining instructional materials. The main sources of influence for individual teacher and generally any staff in any particular school may vary greatly. However, there are a number of scholars who have demonstrated the main determinant of teachers' choice and use of instructional materials. Overall the factors appear to fall into the following three categories: environmental, demographic, and personal variables (Gagne, et. al., 1992).

The nature of the environment in which teachers work has often been identified as major sources of influence. Accordingly, different features of the environment may create an opportunity or a challenge for different teachers. Some teaching or learning environment can make it easier for some teachers to obtain and utilise instructional materials at a higher level than others.

Among the frequently mentioned environmental factors the following are the major ones: size of school budget, size of class, capability for developing new materials,

availability of equipment and instructional materials; adequacy of resources types of the curriculum, time, personnel available, etc can affect the success of teachers (Gagne et.al 1992.).

The control that administrators and supervisors have on the work of teachers can also be another feature of the teaching environment. Administrators and supervisors are responsible for promoting effective use of instructional materials and encouraging teachers to make effective use of instructional materials. Exploiting school Pedagogical Centres can also be an important source of positive influence to maximize effective use of instructional materials. Teachers can also benefit if they seek and secure adequate support from SPC- coordinators Establishing healthier relationship with SPC- coordinators and colleagues may enhance teachers' success.

Cultural and socio-economic condition of a given environment can influence the use of instructional materials. Research has repeatedly shown that different individuals in different cultural and socio-economic status may respond differently to a given instructional material Salomon & Leigh (1984). Thus, it becomes logical to argue that teacher procurement and utilisation decision should be based on the attitude and culture of a given location.

The second main determinant of teacher procurement and use of instructional materials has been associated to demographic variable. Factors such as experience, gender, qualification, age and location of residence are often included under the discussions of

these main influence variables. However, there still exists a certain degree of inconsistencies among scholars pertaining to the degree and amount of influences of these variables on the level of using instructional materials.

The third factors are those, which purports to explain the effect of personal variable on successful exploitation of instructional materials. Attitude of teachers, commitment, preference, and other psychological variables may adversely or positively affect utilisation of instructional materials. It is true that teachers may experience burnout; a condition defined as a negative pattern of responding to the students, colleagues to, work environment and to the teaching profession in general. Thus, it becomes important to consider this dimension of determinants, which may influence teachers' choice of instructional materials.

Despite the general assertion that instructional media plays to the success of education, effective use of media has not been fully realised yet in Ethiopian schools. Several factors have been identified as significantly affecting effective use of instructional materials. Several researches have been conducted to examine into the nature of teachers' choice and utilisation practice. The results of these researches indicate the very disappointing negligence on the part of planners as well as practitioners.

For example, Amare (1999) has made a content analysis of the New Education and Training Policy (NETP) document. His finding reveals that instructional materials seem to have been marginalized in the policy document. He believes that planners have

dangerously oversimplified the place of instructional materials, This is evident in one of the phrases used to refer to instruction materials i.e., *Education Support*. Amare (1999).

At the school level studies have made it clear that unavailability of instructional materials is a major problem. (Amare, 1998). Besides inappropriate utilisation of these materials by the teachers, has also been observed (Sommer, 1999). This contrasting evidence indicates that even when materials are available, teachers do not strive to make effective use of them. On the one hand, instructional materials are unavailable at the desired quantity. On the contrary, teachers do not utilise them properly. Besides, although the total budget allocated to instructional materials is inadequate, not utilised efficiently in some schools.

School pedagogical centres (SPCS) have been established with the aim to increase the amount of choice open to teachers so that they can, in theory select, prepare, or utilise appropriate instructional materials of their choice. In practice, however, SPCs often have been criticised for they do not provide the expected services (Berhane, 1999). Moreover, Tilahun (1999) indicates that qualification and experiences are negatively correlated with primary school teachers' use of instructional materials. Inexperienced teachers were observed to use instructional materials better than those who are more qualified and more experienced in teaching (Tilahun, 1999).

Teachers are responsible for deciding which of the instructional material that are feasible in their schools situations should be considered for preparation and utilisation in

order to meet instructional objectives. Yet, many teachers are reluctant to incorporate instructional materials in their teaching. The various studies that have been conducted so far are descriptive in their nature. These studies have described the frustrating educational situations in general and insignificant use of instructional materials in particular. Nevertheless, little attempt has been made to examine factors that influence teachers' choice of instructional materials to incorporate or not to incorporate in their teaching.

1.2 Statement of the problem

The purpose of this study was to identify factors that predict the level of media use among primary school teachers in *Gedo Zone*. On the basis of this, relevant demographic, job related personal variables, and work environment factors that are assumed to relate with teacher's level of media use were identified. The investigation of the degree to which each predictor variable is important in relation to the criterion variable will be addressed in this paper.

Thus, to this effect the following questions are identified to guide the present study.

1. Do teacher's background demographic characteristics significantly related with their level of media use?
2. Do teacher's job related personal variables significantly predict their level of media use?

3. To what extent the work environment variables predict teacher's level of media use?
4. Which predictor variable (s) is/are the most significant determinant of teacher's level of media use?

1.3 Significance of the study

An awareness of some of the factors that help explain, or predict teachers' utilization decision of the various instructional materials may help to understand school teachers at the school level cope with their jobs. On top of that, knowledge about the level of use of media and the impact of the associated teachers' demographic, work environment and personality factors would give an insight for curriculum planners, educational administrators and teachers. Among others, some of the benefits these stakeholders get among others include the following:

- Curriculum planners could design appropriate strategies for intervention that would ultimately foster the quality and patten of media use for the betterment of learning and instruction.
- Educational administration can draw lessons from the study by observing the setbacks that classroom teaching suffers due to unfavourable work environment and improve the conditions of the workplace.
- Teachers could also learn the importance that should be attached to media as the integral part effective instruction.

1.4. Delimitation of the study

This study is delimited in terms of its scope and coverage. That is, the study confined itself to primary level. The inclusions of kindergarten teachers should have been considered. Since, the quality of children's learning at this level depends, to a large extent, on teachers' level of media use. On the other hand, it would have been more appropriate to examine the level of instructional media use through a combination of observational and self-reported measurement. However, insufficiency of time prohibited the researcher to observe what is occurring in the actual classroom situations. Hence, the method used to examine teachers' level of media use is a self-reported measure. Due to this, the present paper was delimited to the study of instructional media level of use rather than their selection practices.

The research site selected for the study is *Gedeo Zone* with the assumption that data for the study can easily be secured from this Zone. Because the researcher has been living in the Zone for several years it would be easier for him to contact key informants, locate sample schools, obtain the necessary support where necessary.

1.5 Operational Definition

In this section, key variables of the job related personal variables are defined. These included: Teacher's sense of personal efficacy of media use (EMU) and choice (EMC), Consequence of media use (CMU), and Openness to procure and use media (OPUM).

Teacher's sense of personal efficacy in media choice and use

Self-efficacy was defined in two ways that are teacher's sense of personal efficacy in the choice of instructional media, and teacher's sense of personal efficacy in the using instructional media.

a) *Self-efficacy for media choice*: refers to teachers' self-perceived abilities to organise and execute the courses of actions required to obtain media. Organising and executing the courses of actions require considering availabilityselection options, or ability to have a control over three available media choices.

- Ability to make available media accessible from school.
- Ability to control school media services for modifying or preparing media that have been recommended by curriculum planners from local resources.
- Ability to obtain media from one's own personal, engagement, and ability to obtain the support of others (students, colleagues, etc.) to obtain required media. In other words,
- Being able to control available alternatives including resources, available materials, and paraprofessional media services.
- Being able to obtain media from scratch.
 - Being able to implement instructional media in the classroom in order to facilitate the learning of their students.

b) *Self-efficacy for media use*

Teachers' self-perceived ability to arrange the conditions of media use in the classroom in order to facilitate the learning of their students.

Thus, teachers are required to contend periodically with three activities. These are:

1. Obtaining the required media that may have been made available
2. Modifying inappropriate media
3. Preparing media from scratch
4. Arranging the conditions of media use in the classroom in order to facilitate learning.

Consequence of choice and use

As a result of their previous engagement, teachers experience positive or negative consequences while they procure and utilise media.

Thus, teachers who experienced negative consequences or are not likely to demonstrate increased effort in arranging the conditions of media use. There teachers many also maintain their self-efficacy (a teaching of effectiveness). Such teachers would experience little stress for being unable to become involved in media related tasks.

CHAPTER TWO

LITERATURE

2.1. The Role of Instructional Media in Education

The modern conception of education held among scholars has thrown new light into educational practices. Not long ago, educators have provided instruction based on their knowledge and experiences. They conceived of education as a mere transmission of knowledge to the learners. Learners too were regarded as passive recipient of knowledge and information. They were assumed to possess homogeneous characteristics. However the scientific studies about the behaviour of individuals have thrown new light into newer conception of education and to a new paradigm shift in the practices of education.

Today, the practice is different. Research has shown that learners are different in terms of their learning styles, level of intelligence, interest, motivation etc. Individual difference in teaching has also been realised. Teachers differ in their teaching styles, materials and content selection, motivation, interest etc. The variations are too numerous to mention that attempting to quest for searching one single method of teaching/learning still remains unanswerable.

Recent attempt to resolve these situations has aimed to place learners at the centre of education. Consequently, greater responsibility for learning has fallen on the shoulder of each individual student. As a result, the importance of helping students to become responsible for their own learning has widely been advocated by educators and researchers alike.

Gagne et.al (1992) have rightly described the nature of contemporary instructional practices as an activity directed “to activate and support the learning of the individual student.” Increasingly, newer and exciting instructional strategies such as flexible scheduling, self-paced instruction, and student-centred methods of teaching have received greater attention in an attempt to facilitate the learning of individual students. Consequent upon this paradigm shift, the manifold roles that instructional media plays in education cannot be overemphasised. Educators, teachers and students are witnessing the benefits accrued from effective use of instructional materials. Instructional media have created better opportunities for teachers, learners, and educational planners to enhance their performances.

Several names of media exist today. Instructional technology (Knirk and Kent, 1986); educational media (Brown & Kenneth, 1965); instructional media (Heinch et.al., 1999; Gagne et.al, 1992); audio-visual materials (Dale, 1969) and teaching aids (Romoszowski, 1968) are some of the terms that frequently appear in most educational literature.

However, unlike the other terms listed above, some scholars have criticised the use of the last term, i.e., teaching aids. For example (Amare, 1999); Haney and Elden (1980) have warned the danger of labelling instructional media as teaching aids. They argue that the use of the term exacerbates the dangerous over simplistic views and conceptions of education in line with the traditional paradigm. They further noted that it marginalizes the contribution of instructional materials to education.

Despite the varying names used to refer to instructional media, the definition given by most scholars clarify the potential of media in performing most of the instructional functions (Gagne, et.al 1992). Instructional media stimulate the various senses of learners to become actively involved in the learning tasks. The contribution of instructional media to education is clearly understandable in any instructional situations.

Varieties of instructional media reduce variation in learning among students (Kemp & Donc, 1994). The use of speaking-listening approach as a dominant teaching medium has been criticised for it only favours insignificant proportion of the student population who are easily distinguished by their "A grades" (Knirk & Kent, 1986). Some students learn by reading, others learn by listening and most students learn both by listening and reading. Thus, increased variety of instructional materials is needed to match the variations in learning styles.

Instructional materials enhance the quality of students learning. Research indicates the positive relationship between student's engagement in academically relevant tasks and

learning. Media creates greater opportunities for students to become involved in relevant learning tasks.

Media allow teachers to play a new exciting role. For instance, instructional materials reduce the burden of repeated explanation and tedious repetition of contents. Different scholars have also argued that appropriately selected instructional materials can perform most of the teaching functions. The teacher's main task has become not the dissemination of information, but the provision of a wide variety of learning experiences. As a result adequate time can be saved to help each individual learner. (Heinich et.al., 1999) write the role of media in maintaining structure and flexibility within a lesson. They further made it clear that maintaining structure and flexibility motivates learners and attracts their attention to the learning tasks. The statement given by Thorondike (cited in Knirc,1986) clearly illustrates this point: "A human labour (the teacher) should not be wasted for what 10 sheet of paper can do."

One significant contribution of media is in conventional instructional situations where attempt is made for the provision of equitable educational practices. Media have made the appearance of mainstreaming phenomenon in education. Students who are traditionally regarded as "disabled" "handicapped" or "retarded" are receiving equitable education with little difficulty. In such cases the students who have got potential health problems heavily use media.

The introduction of distance education as an alternative ways of providing education is mainly, due to the availability of rich amount of quality instructional media. Regardless of their geographical locations, students are learning at their own pace and time through this type of instructional strategy. Throughout the world, most countries have long started to introduce this new innovation in their educational systems.

2.2. Taxonomies of Instructional Media

Numerous attempts have been made by many scholars to categorize media into different groups of media characteristics. Different criteria have been used as a basis of media categorisation process. It is based on the nature of the content of the instructional message contained in specific media items (Print, motion and picture)(Romistowski, 1979); according to the types of sensory mode (Dale; 1969) or stimulus mode (Rowntree, 1992); by the method of use (McLuhan: 1969); and by the technological sophistication or cost of the media (Schram, 1974). Knowledge of different media characteristics is important to make sound and rational economic, instructional, logistic and human decisions. A brief description of the different media characteristics is presented in the following paragraphs.

An early classification by (Dale, 1969) placed media along a continuum of learning experiences that ranged from concrete to abstract. In his cone of experience, Dale has identified types of media according to the type of sensory mode they stimulate. Accordingly, as one goes up the scale from “direct purposeful experiences” the degree of abstractness of media increases, while the potential of media to provide concrete

Some scholars refute McLuhan's view of media classification, particularly his placement of TV into cool media group. For example, Finklistin (1970) after making an extensive review of McLuhan's work, criticized McLuhan's work for it over estimated media factor and over simplified the influence of human factor in the process of interaction. What matters to Finklistin is not only the nature attributed to the media, but also the manner in which the participant used the media.

Contrasting view against McLuhan's conception of TV is also noticeable in the work of Mander (1978). He has presented excellent opposing argument against the use of educational TV. To Mander, TV is hot and non-involved. He presented well-reasoned cases to completely avoid TV in the educational circle. For example, he has mentioned evidences, which states that the quantity and quality of learning is directly proportional to the amount of effort that the learner expends in the learning task. Mander has argued that TV is hot for it "suppresses conscious thinking" and forces learners to remain passive in the task. Besides, he has presented economic, political and pedagogical rationale against TV. Other researchers who attempt to prove these opposing points of views have not been productive due to the many weaknesses associated to media comparison research methodologies (Koumi, 1994)/

Schrum (1974) talks of "big" versus "little" media. The basis of his classification is the technological sophistication of the media. Because high-tech media are expensive; he argued that specific media items under the big media class are television, computers, overhead projectors sound films, and computer assisted instruction. Little media are

those media that can easily be obtained at a lower cost. Slides, filmstrips, radio, programmed text, projected transparencies; chalkboards are some of the components that fall into little media group.

Another attempt to classify media was made by Gange et.al. (1992). They categorized media according to the different types of learning outcomes, which can broadly be placed into four types of educational outcomes. Namely:

1. Knowledge
2. Intellectual skills
3. Motor learning outcomes or skill, and
4. Attitude learning depending on the types of intended out comes.

Lewis (1970) discusses the characteristics of different media from the point of view of developer of commercial instructional materials. He has listed three forms of media classification systems used by theses group of individuals. According to Lewis (1970), the classification method that the developer of instructional materials starts with the categorization of four basic sensory channels: sight, sound, sight and sound, and manipulation. Second, he has reported that the way the media is used as a second consideration of instructional materials developers categorization processes. Accordingly three systems have been identified: independent study storage, retrieval system, and phenomenon. Thus, classification is by sensory mode and by method of use Lewis (1970).

2.3. The Selection of Instructional Materials

Any goal-oriented task requires planning. Likewise, because education is directed to the achievement of certain ends; its practices are usually planned rather than haphazard. The process of planning education involves making decisions on what to teach, when to teach, and how to teach to achieve the desired knowledge, skills and attitudinal outcomes. In education a hit-or-miss approach is wasteful, undesirable, and should be avoided.

Selecting instructional materials is an integral element of educational planning process. Instructional planners as well as teachers are frequently engaged in the selection of media and methods. They make decisions on what media to incorporate in the teaching methods and how to use the selected media to their maximum advantages.

There are different stages of making media utilization decisions. Firstly, the overall design of the curriculum must be decided: i.e. the sequence of the curriculum components that will be covered and the instructional time must be decided. Secondly, the instructional strategy within which learning take place (formal or non-formal situation) must be identified. Thirdly the specific media item must be selected or produced.

The selection of instructional media is important, but it is not as important as their utilization. No matter how costly or technologically sophisticated the selected media

for educational purpose This involves studying the characteristics of media users (teachers and students).

In some cases more complex media are selected than are needed (Schram, 1974). Research has indicated that less expensive alternative media are as equally effective as the complex ones. Schrumm (1977) demonstrated that big media are misused to present materials that could be presented more effectively by simple media alternatives, as it detracts money from already identified needs.

Currently, educators are advocating the importance of creating increased opportunities for teachers to select materials within an easy reach. However, the amount and quantity of options open to teachers and instructional designers may vary considerably from one location to another depending on several factors. For example, there is a big difference between industrialised nations and most African countries. It would not surprise anyone to state that some of the little media (such as slides, filmstrips, photographs, etc) are still big media in the context of most African countries.

In conventional classroom situations, Gagne et.al (1992) write that teacher select available instructional media and rarely produce their own materials. This is particularly true in areas where so many media choices are available. However, this does not mean that teachers' self-produced media are less important. Availability does not guarantee its appropriateness to the objectives that are taken for granted. It is to mean that availability is important and a necessary condition as it broadens the range of available alternative media selection options.

Thus, unavailability of media in sufficient quantity may reduce the number of alternative consideration. To this end, teachers in most African schools are more threatened than their counterparts in developed countries. To this regard, Hugh (1979) noted that curriculum demand on teachers both in preparation time and “waste” materials to be collected may be unrealistic in the prevailing school conditions.

In either case, teachers are expected to consider the range of alternative options available to them if they are to become successful in individualization of learning and encouragement of active student participation. This media selection function requires the arrangement of conditions for effective use of media. It also involves trying to make the best use of available materials and resources.

Several media selection models have been made available for use to help teachers and planners make a rational choice of media. These models vary in terms of their degree of complexity and many scholars suggest the use of simpler ones. For instance, Knirk & Kent (1986) supported this idea citing, Robert Meagers, idea (who is a successful commercial instructional developer) which stressed, “A paper is a good media unless a good case can be presented for another.”

Furthermore, Knumi (1994), after an extensive review of various media selection models, demonstrated that there is little agreement on the adequacy of existing media selection models. He further noted that media deployment efforts are more controlled by logistic, economic, and human factor than by pedagogical one. He then

recommended consideration of sound pedagogical reasons for choosing one medium over another.

2.4 Determinants of Teachers' Choice of Instructional Media

Several attempts have been made to develop research models for the study of teaching and learning. Since the beginning of educational research, earlier models on teaching effectiveness have oversimplified the influence of teacher's cognition. However, latter research program into the study of teachers thinking and decision-making processes represent an important break through in the field of research on teaching. This has brought a new light into the practices and research methodologies. Consequently, several scholars are using a more broader research models.

One of the earliest models to study teaching effectiveness was developed by Biddle (1964). According to this model teaching effectiveness is a function of seven sets of variables (1) *Formative experience* (background characteristics) (2) *Teacher properties* (attitudes, beliefs emotions, etc.) (3) *Teacher behaviour* (observable teacher actions) (4) *Immediate effect* (observable students responses to the behaviour of the teacher) (5) *Long-term consequences* (the effects of teaching on the students achievement and the teaching profession in general), (6) *Classroom context*, and (7) *Community context*.

In 1974 Biddle together with Dunkin constructed another model for research on teaching effectiveness cited in Shulman (1985). According to Shulman, Biddle and Dunkin identified four broad cases of influence variables: Teacher characteristics and

post experiences and other properties that influence their teaching; the context with in which teaching is conducted (include such variables as student characteristics, the class room, the school, and the community); process variables (observable actions of the students and teachers), and ; product variables (referring to immediate and long term effects of teaching).

For a long time, the two models described above had been dominating the field of research on teaching and its effectiveness. However, they had failed to represent the psychological functioning of teachers as professionals; as it related to teaching and its effectiveness. To this regard, Shulman (1985) has noted the inadequacies of past research trends. After an extensive review of research in the field, she further made it clear that the phenomenon of cognitive research programs have thrown light into the field of research on teaching. Based on the reviews, Shulman has also outlined major determinants of teaching and its effectiveness.

Shulman (1985) conceived of teaching as an activity involving the work and experiences of both teachers and students, in which both parties are involved in thinking and acting in a given context. Thus, Shulman presented a “*synoptic map*” which indicated four broader sets of variables: (1) *Capacities* (background characteristics of the participants); (2) *Action* (observable behaviours of students and teachers); (3) *Thoughts* (thinking or cognitive activities that goes on in the minds of both parties); and (4) *Context* (external or environmental influences on the participants).

Clark and Peterson (1985) developed another comprehensive model for research on teaching. Their model is an integrative one for it describes the major determinants of teaching and their relationship with teaching effectiveness. They argued that models used in research on teaching are linear or unidirectional. They criticized that such models over simplify the complex causal relationship implicated in human behavior. Cognizant of this, they constructed their model and relationships, in such a way that the cyclic features of the variables are easily recognized.

Clark and Peterson have also argued that the process of teaching can fully be understood if and only if researchers are able to examine the relationship between action and behavior of an individual and the individual's critical reasoned belief about the behavior observed. They conceived of teaching as a function of three important variables: (1) *Teachers thought process* (the psychological activities of teachers as professionals); (2) *Teacher behaviour and action* (the observable acts and behavior of teachers and students), and 3) *Opportunities and constraints* (external and environmental variables).

Clark and Peterson see teachers thought process into three interrelated elements: Teacher planning, teacher interactive decision, and teacher's theories and beliefs. They defined teacher planning as the cognitive thoughts teachers have before and after instruction. They distinguished teacher-planning thought from teacher's interactive thought and decision making in that the latter is not predated and therefore are not planned. The third variable, i.e. teacher's theories and belief has been conceived of as

the knowledge and belief which enable teachers make planning and interactive decisions and in turn influenced by these decisions.

Researchers, particularly those who adhere to use cognitive methods of research on teaching, have conceived of teaching as a “process by which teachers make reasonable decisions with the intent of helping students reach worthwhile educational outcomes. . .”

Shevelson, Webb and Leigh (1985). Deciding to choose to incorporate or not to choose to incorporate instructional materials in the teaching methods is an essential component of teaching functions. Thus, it can be argued that teachers make decisions about the amount and quantity of instructional materials to incorporate in their teaching with the intention to facilitate the learning of their students.

Shevelson, Webb and Leigh (1985) indicate that such description of teaching is particularly useful to study the planning aspects of teaching. The selection of instructional materials is one aspect of teachers planning tasks (Gagne, Briggs and Walker (1992); Callhan and Clark (1988); Arends (1997)).

Researchers have defined planning in two ways (Clark and Peterson 1985). First they have defined planning as „ . . . the psychological activities of teachers as professionals”. This definition, according to Clark and Peterson comes from psychologists’ point of views. The second definition, they further noted refers to “the things that teachers do when they say that they are planning” which implies a phenomenological approach to research on teacher planning. Selecting instructional materials, unlike utilization behavior, fits to the psychological description of teaching in general and the planning of

teaching in particular. This is because the interactive nature of the teacher with the instructional material and the students is unpredictable and hence is not planned. Furthermore, the type of media to utilize, the amount and quantity of media to incorporate in the teaching are predictable and is planned.

Taken together, review of educational literature in terms of variables that explain teaching behaviour reveal a number of variables that are likely to explain teacher's media utilisation behaviour. Based on the discussion presented above the next section describes three sets of variables pertinent to the determinants of teachers' media utilisation behaviour .

2.4.1 Demographic Variables

Included under this category are relevant past experiences, acquired or developed through time. These are teaching experience, qualification, sex and age.

The amounts of experience teachers have with teaching is one of the factors that influences teacher's choice of instructional media. As stated by Erickson (1968) past experience with the use of instructional material enriches teachers' readiness for new experiences. Because experienced teachers have realised the benefits accrued from effective use of instructional material, and hence they are likely to incorporate instructional media more than new entrants to teaching profession. Moreover, it is argued that experienced teachers develop images of previous lessons (Clark and

Peterson, 1985) to guide their future in a better way. Thus, experience in teaching can influence the level to which instructional materials are utilised.

The second influence under this category is qualification. It has been argued that additional years of education contribute to effective use of instructional media. For instance Brown and Nurberg (1965) demonstrate the positive influence that well trained teachers have on good utilisation of media. They further state that not only do such teachers possess skills and knowledge they also arrange the condition of media utilisation. This implies that highly qualified teachers consider the range of available options to procure and utilise media better than their less qualified counter parts.

Efficient use of instructional media requires knowledge of procuring instructional materials. One aspect of procurement involves knowledge to select, modify or produce materials. However, some scholars criticise direct involvement of teachers in these activities (for example, Knirk and Gustafson, 1986). They reasoned that engagement in these activities reduces the time available for other teaching jobs like planning, grading papers, etc., and hence such a practice is “a misuse of talent”.

On the other hand, Haney and Eldon (1980) have outlined a list of competencies expected of teachers. Accordingly, teachers are expected to possess a wide range of skills, knowledge, and attitude, which enable them select, modify, prepare or produce, and utilise instructional materials. Thus, it became important to broaden the competencies of teachers in these dimensions.

Other scholars have stressed on the importance of improving media utilisation practices through the provision of in-service teacher education programs Erickson, 1968; Brown and Nurburg, (1965). This is particularly important if new instructional media or materials are introduced in the educational system. Diamond (1977) pointed out the potential danger, which might arise from new media innovation not accompanied with appropriate in-service training. Besides, frequent refreshment courses and workshops are thought to promote the personal as well as professional competencies of teachers.

Thus, it is expected that innovation experiences or acceptances, the frequency duration and type of in-service and other training programs can explain teachers' media utilization decisions.

The positive relationship between teaching effectiveness and some elements of demographic variables is reported in the study of Turner and Fattu as cited in Richey (1070). According to this report 1) Teachers who took method courses performed better than those who have had none 2) Degree program education students from teacher education collages performed significantly better than graduates in other areas including graduates of liberal arts. Richey further quoted the findings of same authors, which indicated the positive relationship between years of teaching experience and teaching performances. Accordingly, it is indicated that: 1) teachers who have had teaching experiences perform significantly better than those with no years of teaching experiences (2) teachers with one years of experiences perform significantly better than those without experiences (3) teachers with three to five years of experiences perform significantly better than those with one years of experiences, and (4) that teachers in

large school districts where in-service teacher education program is provided demonstrates a higher level of teaching effectiveness than their counterparts who work in small school districts.

The relationship between age, sex and ethnicity and the level to which instructional materials are utilized has not clearly been established. However, experience tells us that individuals because of their sex, age and ethnic background are uniquely treated in most societies. There are also evidences, which indicate the difference in composition of male and female in different professions. For example, in United States of America the proportion of female teachers is higher than male teachers (Feinam and Robert (1985)), whereas the reverse is true in countries like Ethiopia (MOE, 1999).

The impact of democratisation process and the practices of regional administration of primary education throughout the country has not been fully examined in relation to ethnic composition. Despite this fact however, my attempt to see the perception of teachers in relation to these practices may explain the variation in teaching and media utilization decisions.

2.4.3 Personal Factor

Today, along with other duties, teachers are expected to accomplish several professional tasks. The tasks involved in teaching are all directed to their realization of educational goals. In contrast to the traditional educators where the society expected good moral

character from teachers, contemporary teachers are expected and are held accountable for using “best practices” derived from a scientific knowledge base (Arendes, 1997).

To this end, teachers are supposed to repeatedly make similar kinds of decisions about teaching within which media utilization is one element. Teachers have as many reasons as the types of decisions they make. Their actions, behaviours and decisions are all accompanied and guided by the reasons and beliefs they hold. Effective teachers make reasonable decisions to achieve success in teaching and these are based on premise beliefs held to be professional and true, beliefs held by teachers about how students learn and about pedagogy (Arendes, 1997).

Planning for effective utilization of media involves much more than being admitted to teacher education, relieving what ever forms of training such as in-service programs, refreshment courses, etc. Training of education of all sorts can count for nothing unless teachers are to apply the knowledge’s and skills that they have gained in their training.

Currently, researchers have conceived of teacher’s knowledge into different forms. Feiman and Robert (1985) see teacher’s knowledge in tow different ways 1) *Professional and technical knowledge* as it differs from (2) *Practical knowledge*. Citting, Buchman (1983a), they explain the purpose of practical knowledge as a means to inform wise action, but not to advance general understanding. They further noted the changing research trend from searching for former types of knowledge to the latter

forms of knowledge (practical knowledge) to the latter forms of knowledge i.e., the beliefs, insights and habits that enable teachers to do their works.

The statement cited below makes it clear that completion of any educational or training program is a necessary, but it is only one aspect of the various requirements, which leads to teaching success. To this regard, Brown & Kenneth (1965) writes

„ . . . Good utilization of educational media is primarily a matter of human understanding skill, and motivation. If required well-trained competent teachers who know media and materials and how to arrange the conditions of their use for optimum results. Of course highly qualified teachers alone will not suffice . . . ”

The selection and use of media is a local process. The number and amount of media choice is less important unless teachers are willing to use it. The full values of media to contribute to education depend on how teachers attempt to make the best use of available media and resources. In the first place, teacher's preference is the most important variable that influences media utilization decisions. Based on their past experiences, teachers develop a preference to a certain types of media. Some may have a preference to audio media. Others prefer to use visuals. Teacher's predisposition about certain types of media may be a cause for their preferences. And Diamond, (1977) and Romoiszewski (1974) suggests that „ . . . it is no good to have a perfect design if you are unable to implement it.”

The second influence on media selection and use of media is teacher's own teaching philosophy. The teacher's view of teaching and learning can broadly be categorized into

two types. The first is a teacher with traditional view of teaching and education in general. This view marginalizes the importance teachers attach to the use values of instructional materials. It is unlikely that teachers with such a view will tend to incorporate media in their teaching. In contrast, teachers who hold the modern conception of education and its practices will decide to individualize learning by making use of media at their disposal. Unlike the traditionalists who perceive their role as a transmitter of information, the teacher with current conception of teaching/learning perceive their role as facilitators, counsellors, co-ordinators, etc. There are a number of evidences that asserted the role that perceived ability plays in directing one's actions and behaviour. For instance, Romiszowiski (1974) write that the feeling of the teaching staff has been found to be the most important variable that affected some experimental research studies.

Openness to consider the range of available alternatives to obtain media may vary from one teacher to another. Open-minded teacher may tend to consider alternative range of options when they are confronted with equally alternative situations Romiszowiski (1974). Such teacher as, Romiszouiski writes, "will follow his instinct and do his own things".

It is with this understanding that several researchers have long started to investigate the influence of attitudes and beliefs as a factor to distinguish effective teachers from ineffective ones. Nevertheless, these have been Ashton criticized past research

traditions (1985). She has argued that they were unable to examine the influences of other variables on teacher's motivation and behaviour.

Based on Bandura's theory of motivation and behaviour, (which explained the reciprocal relationship between one's behaviour and taught) Ashton strongly stressed the importance of considering teacher's sense of self-efficacy as a critical determinant of teacher motivation and behaviour.

By way of strengthen her emphasis on self-efficacy; she forwarded comment to contemporary researchers who are interested in the study of attitudes and beliefs. Because past research attempts had failed to incorporate teacher's sense of self-efficacy, attitudes beliefs, the study of teacher's motivation and behaviour had been relatively unproductive.

Having this in mind, it can thus be argued that teachers' media utilization decision is a function of their personal sense of self-efficacy. Thus failure to incorporate instructional media may be partly due to a low sense of teacher's personal sense of effectiveness in utilizing or obtaining media, and partly due to their belief about the probable environmental constraints that may impinge upon their self-efficacy perceptions.

On the contrary, teachers may believe that certain features of teaching environment may create greater opportunities for teachers in order to procure and utilize media to their

maximum. However the fact that teacher's low sense of self-perceived ability (a feeling of lack of ability) may become an obstacle against media deployment efforts. In other words, teachers may feel that they can make instructional materials available within an easy reach to themselves, but may feel that they personally lack the skill in utilizing the media in classroom situations.

Arguably, it can thus be argued that teachers' self-perceived ability may play an important role in explaining their media utilization behaviour. Thus, teachers' sense of self-efficacy as a person who is engaged in media deployment effort should be considered as an important variable in any research activities designed to study classroom media utilization practices.

2.4.3. Work Environment Variables

The relationship between the behaviour of a teacher and the environment has been reported in several studies related with teaching effectiveness. Biddle (1964) conceived of the environment as a context within which both teaching and learning takes place. In the same way, Clarck and Peterson (1986) see it as the degree to which involvement in decision-making is provided or what they call "opportunities and constraints" to explain school effectiveness. Several environmental variables are likely to influence the levels of media use. There are some important sub-categories such as reasonable work situation, physical condition the (nature or complexity) of the school, presence of

support and encouragement, and external pressure or demand which comprise environmental factors.

Several scholars have reported the positive relationship between optimum working condition and professional success. For example Erikson (1968) writes that teachers cannot utilize instructional media unless the materials are available to them. Educators such as Gagne et.al (1992), Haney and Elden (1980), Heinich et.al. also (1999) share a similar view. Teachers are expected to become involved in several tasks. These may include participation in curricular and, extracurricular activities, professional jobs, research works, and in some cases in administrative and clerical works. Surely, the time spent in one activity is time lost in another activity. the amount of time that teachers spend in curricular tasks and other activities should parallel the types and amount of tasks that may lead to the realization of educational objectives. It is argued that inappropriate assignment given to teachers is a misuse of talent and time. For instance, Arendes (1997) criticizes assigning teachers to prepare and produce instructional materials. He reasoned that if teachers were expected to produce instructional materials they would be threatened to accomplish other tasks such as lesson planning and grading students. Teachers who work with visible school media policies will tend to demonstrate reasonable effort to utilize media in line with the policy. School media utilization policy may very considerably ranging from loose polices to highly formulated ones.

Furthermore, several environmental features have been identified as influencing teacher's choice of instructional media and are therefore expected to affect their behaviour. One feature of the environment is class size. Arguably, a teacher confronted with large class size is unlikely to approach each and every individual student due to the insufficiency of time allocated for a particular instruction. Second, the quantity and quality of available materials within a given school environment is an important factor to have a positive or negative influence on the level to which media are utilized. Some features of the environment may become an obstacle for teachers for they create few opportunities for media utilization. Other features of school environment may brooder many media selection options for teachers, which is evidenced by the availability of a rich amount of instructional media.

The influence of the principal as well as supervisors on teachers' work has been reported in a number of studies. The recognition and support that teachers receive from administrators and supervisors has been known to relate to the level of job satisfaction (Cark and Peterson (1986); Ashton (1985); Erickson (1968) and Haney and Eldon (1980)). Another aspect of administrators' role that has implication for teachers' choice of instructional materials is their control over scarce resource allocation. Moreover the role of the principle in determining teaching loads, class size, equipment provision, the approval of budget and other support services for the work of the teachers.

The particular characteristic of the school district has also important implications on teacher's choice of instructional media. For example Gagne et.al (1992) have noted the

importance of considering the "assumed learning environment" while selecting instructional materials. They also pointed out the influence of such environmental variables as social economic and cultural determinants on teachers' choice of instructional media.

In general, there are many formula and informal features of the environment that surround teachers; including the availability of school pedagogical centres. Knirk and Kent (1986) have argued that maximum media deployment effort is the result of paraprofessional support available to teachers. What are called teachers centres or school pedagogical centres staffed with specially trained individuals are the major sources of paraprofessional supports. It is argued that media specialists play an important role in realizing the contribution of media to education Erikson (1968); Arends (1997); Riegu (1977). Moreover, strong collegial support may encourage and sustain optimum media deployment effort, enabling teachers more successful in their teaching endeavour.

In sum, the discussions and arguments presented throughout this paper, have consistently shown that teachers' choice of instructional materials is influenced by three interrelated variables. Thus, the construct of teachers' choice of instructional materials can be conceived of as three interrelated variables influencing teachers' thoughts and decision-making behavior pertaining to the utilization of instructional media. The first variable is demographic variable, which include such factors as experience, qualification, training etc. The second variable is related to the role that teachers'

perceive of their teaching in general and instructional materials in particular; teachers self perceived tendency to procure and utilize, teachers self perceived ability considering the range of alternative media selection and utilization possibilities.

Finally, teachers' perception of their work environment such as their perception about the work condition of the environment, the physical condition of the environment, the support they receive from the environment (human and non-human), and teachers' perception about the influence of external pressure and demand are all expected to explain or predict the nature of teachers' choice of instructional materials. The figure presented below, summarizes the points that have already been discussed elsewhere in the paper.

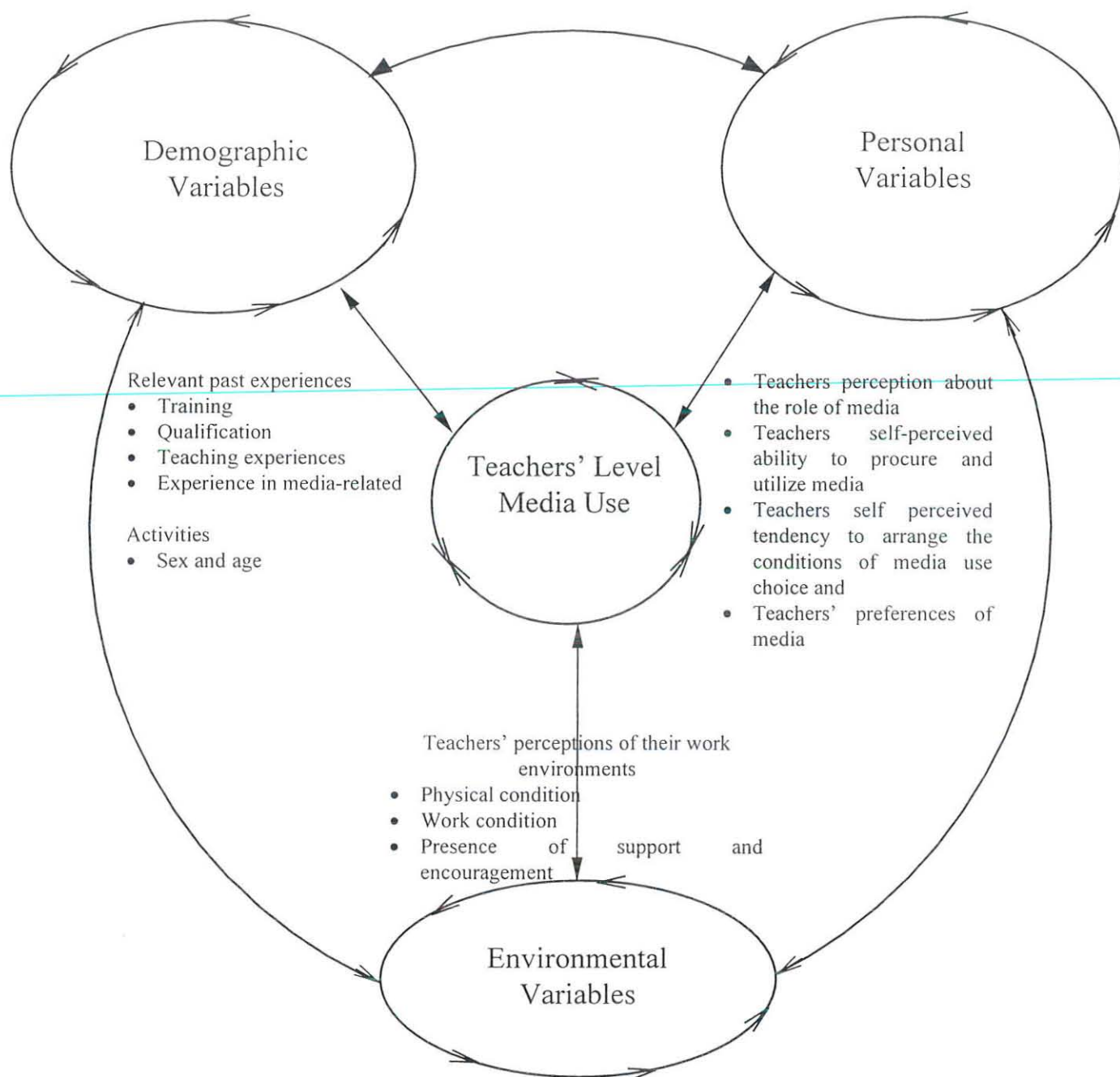


Figure 2.1. The Proposed Conceptual Framework of the Study

Thus, based on the discussion presented above determinants of teachers choice of instructional materials can be conceived as three interrelated variables influencing teacher's media utilization decision.

The first variable can be conceived as demographic, which includes such factors as experiences, training or qualification, age, sex, ethnicity. It is expected that these variables may explain teacher's decision to utilize or not to utilize instructional media.

The second category is personal variable. The extent to which individual teacher attempts to make the best use of media can be explained by examining such personal traits as: knowledge that enables teachers to utilize media and belief about media use.

These are the "thought processes" that teachers engage in to arrive at media utilization decision Clark and Peterson (1985). Belief about the role of media, knowledge that enable teachers to utilize media, self-efficacy and perceived ability to average the conditions of utilization, openness to consider the range of available options, are included under this category. It is expected that personal variables may predict level of media utilization decision.

Third, the importance of asking research participants (teachers) to give a description of their work environment has long been asserted. Thus certain variables are grouped under environmental variable class. It is expected that some teaching environment make it easier for many teachers to increase the amount and quantity of choice of media than others so that the mean of the classes of teachers' response to environmental perception inventories can be an indication of the level of media utilisation decisions. Hence, the next section will further illustrate the characteristics of these major categories of variables in detail.

CHAPTER THREE

METHOD OF THE STUDY

The study was designed in a way that the major determinants of primary school teachers' media utilisation pattern could be identified. The intent was to discover some of the factors that help explain or predict the level to which instructional materials were utilised.

In this section, the design of the study presented by describing the nature of the participants, the kind of data collecting instruments employed, the procedure followed to obtain the necessary data, and finally, the statistical techniques used to analyse the obtained information. In the pages that follow, the above-mentioned points are illustrated.

3.1 Participants

The target populations in this study were 697 (24.4 % female and male 75.6 %) primary school teachers in *Wenago* Wereda, which was randomly selected out the four Weredas in *Gedeo* Zone. Of these, 150 teachers selected from four rural and five urban primary schools using a simple random sampling procedure. The tryout study, however, included 40 teachers from one urban and one rural school that were not considered for the major study.

A questionnaire, which included a total of 72 items, was administered to all teachers during the tryout data collection. However, data was obtained from 38 teachers who had returned the questionnaire. Two of the non-respondents were from the urban school. The teaching experience of the participant teachers reported to be from 2 years to 25 years. In terms of their sex, 9 teachers were female while 29 teachers were male.

For the major study, however, data were collected from 9 schools. The total number of subjects participated in the study were 150. This number accounted for 21.5% of primary school teachers in the Wereda, which was considered for the study. Of the 150 teachers participated, however, data were obtained on 139 of them who completed and returned the questionnaire. The participants who did not return were 11. Of these, 9 were from urban and 2 were from rural schools respectively. The total response rate was 92.6%. The proportion of response was considered to be high and acceptable for further analysis (Wersima, 2000).

3.2. Instrumentation

A survey questionnaire was developed by the investigator in order to secure the necessary data. Both open ended and closed ended items were used for the pilot study. A 12-page questionnaire was developed based on the analysis of the pilot study.

Items for the pilot study were constructed based on visits to schools, informal talk with school principals and teachers, a syllabus analysis and an extensive review of literature that previous researchers had thought to have a relationship with the level of media use.

Preliminary analysis was made to remove the ambiguity of some of the items were eliminated from the final instrument. This was done by conducting a tryout study on a sample of 38 primary school teachers. Finally, 15 items were eliminated from the major data collection instruments due to low logical validity and marginal total-item correlation.

The final instrument included 84 items in two sections. The first section asked respondents to indicate demographic information. A total of 24 items were used. The items included Gender, grade level, teaching experience, and which type (s) of subject(s) taught by the respondent teacher.

The second section of the questionnaire included five measures namely media choice/use scale, self-efficacy measure for media use, self-efficacy measure for media choice, measure of consequences of media use, openness to procure and use, and measure of the work environment factors. The following pages describe the nature of the criterion, independent and demographic variables.

3.2.1 Criterion Variable of the Study

The criterion variable in the study was teacher's level of media use (LMU). The Investigator as described below developed the LMU.

Measure of the Level of Media Use

Eight specific media items were selected for inclusion in the criterion measure. These are (1) Drawings; (2) printed pictures; (3) models and mock-ups; (4) globes; (5) charts;

(6) sash-board; (7) TV broadcast, and radio broadcast program and (8) flash card . Materials such as teachers guide, student text, duster, black board, etc, were excluded due to regular reported use by all teachers included in the pilot story.

There were eight items assessing the level of media use over the last month. The data was collected in early April; analysis was made to uncover the distribution of teachers level of media use. A seven point likert type scale was used for each media item; ranging from "every day" (7- point)" to not at all (1 - point). Total level of use was determined by summing up scores across the eight items for each individual participate included in the study.

The maximum possible score in this scale was $8 \times 7 = 56$; while the minimum possible score was $8 \times 1 = 8$. Accordingly, high score on the scale indicated high frequency of use and low score on the scale meant low frequency of reported media use.

3.2.2 Independent Variables of the Study

The independent variables of the study included personal variables, work environment, and background demographic characteristics of the respondents. The following part describes these predictor variables.

Personal Variables

1. Self - Efficacy in Media Choice and Use.

The items measured one's self-perceived ability use to consider the range of alternatives to procure and use media in the classroom. There were 24 items

included in this measure. The measures represent two different dimensions of self-efficacy namely: efficacy of media use (EMU) and efficacy of media choice (EMC).

There were 14 items specifically designed for measuring one's efficacy to obtain media. The 10 items were included to measure efficacy of media use in the classroom. All items were measured along a five-point likert-type scale (ranging from strongly agree to strongly disagree). The level of agreement ranged from strongly agree (5 point in the scale) to stringing disagree (one point in the scale). The codes of negatively started items were reversed to ensure that high score on the scale reflects high efficacy and low scores on the scale low sense of efficacy.

2. *Openness to Procure and Use Media (OPUM)*

The behavioural intention component of teachers thought to procure and use media in their classroom instructional engagement was measured using openness to procure and use media (OPUM). Only seven items were incorporated in this measure. The type of response set employed in this measure was similar to other measures of personal variables. All items were stated in the positive direction. The items were summed up to give the composite OPUM score. Thus, high score in this measure indicate high degree of openness to procure and use media.

3. Consequence of Media Use

Ten-items were developed to assess teacher's negative or positive belief about future media use that was developed as a result of previous engagement in obtaining or utilising instructional media. The respondent teachers had rated the items based on a five-point scale. The measure of this construct include items such as " using media during classroom lesson wastes instructional time", " given the task of teaching, it is difficult for me to prepare media", and " teachers need training on how they can prepare and effectively use instructional media". The negatively worded items were reverse coded before computing the composite scores for all individuals. Thus, low scores indicate low attitude for the consequence of media use and vies-versa.

Environmental variables /Measure of Work Environment/

The investigator prepared 10 –item „working condition measure“ during the pilot study. Initially and during the pilot study, thirteen items were included. However three items were eliminated form the final instrument due to factor-item correlation. Thus, only ten items qualified for the major study as indicated in the results section.

Thus, the 10 items that purported to represent environmental variables in context of sampled primary schools were subjected to Factor Analysis. A statistical technique that helps to identify items tapping the same construct (Brymen & Crammer, 1994: 257)

Extraction of environmental factors was made using principal component analysis and rotated employing a Varimax rotation procedure. The justification for employing the Varimax rotation option was to identify the independent dimension of the constructs tapping different factors of work environment represented by a given number of items (Brymen & Crammer, 1994)

The sampling adequacy of the measure was checked based on Kaiser - Meyer - Olkin (KMO) sampling adequacy measure. Accordingly, KMO was found to be 0.763 with Bartlett's test of sphericity = 247.78, $p < .0001$). This indicates that the sample size considered to run the analysis was adequate. This in turn implied that the obtained results that emerged from the statistical analysis were tenable (SPSS Advanced User's Guide, 1990).

Questionnaire

A 5-page questionnaire was designed to assess the respondents' demographic characteristics and other background variables. These included: age, gender, qualification level, teaching experience, level of school taught (i.e. first cycle or second cycle), type of school subject(s) taught, rank along the career ladder, place of residence, whether or not the respondent had participated in media related training or not. The responses were analysed based on the codes provided in the response set.

Reliability Estimates of the Instruments.

After conducting the tryout data collection, the measures were subjected to a reliability analysis to determine the internal consistencies of the measures developed. Consequently, a coefficient alpha was computed for personal and work environment measures.

Table 3.1 shows the estimated internal consistency reliabilities of these measures.

Table 3.1. Internal-consistency reliability of measures of the study.

No.	Measures	Reliability	Number Items
1	Efficacy to Media Choice (EMC)	0.68	14
2	Efficacy of Media Use (EMU)	0.70	10
3	Consequences of Media Use (CMU)	0.62	10
4	Openness to Procure and Use Media	0.83	7
5	Work Environment Measure	0.68	10
6.	Level of Media Use (LMU)	0.71	8

As can be seen in Table 3.1, the internal consistency reliabilities were estimated using Chronbac alpha. The obtained reliabilities ranged from .62 to .83. Based on the obtained reliability coefficients, the quality of the measures could be judged from moderate ($r = .62$) to high ($r = .83$) even though the obtained low coefficient could be attributable to short length of the test (Wiersima, 2000)

3.3 Procedure of Data Collection

Before conducting the data collection, however, pertinent to the research objective, appropriate literature was reviewed. Consequently, the major determinants of

influencing the frequencies with which teachers utilise instructional media, implement recommended educational practices in general and in the level of media use in particular were identified. On the basis of this, the measuring instruments were developed. Following this, an attempt was made to collect the required data in three different phases.

The three phases of data collection are described below.

First Phase

The concern for validating the major criterion variable of the present study initiated the need to visit the Southern Nations Nationalities Administrative (SNNPAR) Education Bureau. This visit was aimed at reviewing selected primary school syllabi in order to identify media items that have been recommended by curriculum planners. The Curriculum Department of SNNPAR Education Bureau arranged the conditions necessary to conduct the review media items that appeared in two semesters for each grade level that were considered for inclusion in the criterion measure. These media were further categorised into eight groups in order to avoid ambiguity.

Furthermore, criticism about the feasibility of implementing these media items was sought from the curriculum department of the Regional Education Office. They were selected partly because of their familiarity with the recommended instructional media, the curriculum and partly due to the fact that they were involved in supervision tasks.

Thus, they were expected to provide reliable information about the feasibility of implementing these items.

Accordingly, except for two comments on specific media items: T.V. and Radio, they gave assurance about the feasibility of implementing the remaining media items in the context of our schools. They also expressed their expectation that urban schools, more than their rural counterparts could take advantage of incorporating radio broadcasts in their programs. Acknowledging their concern, and being aware of these facts broadcast media items (TV and Radio) were intentionally considered in order to see the influence of geographical locations. Overall, it took fifteen days to complete the first phase.

Phase Two

During this phase, three schools were visited. The purpose was to assess the extent of variations in patterns of media services that have been already made available. Accordingly, based on the suggestion of the planning officer from the Zone Education Office, three schools were randomly selected in *Wonago* Wereda during the Pilot study to determine level of media use- the criterion measure.

To this effect, four weekly lesson plans were selected from 20 teachers who participated in the Pilot study. Analysis of the lesson plans revealed little variation among these teachers in terms of level of media use. Equipments such as dusters and chalk frequently applied in these plans. This suggested a need for other ways of measuring the frequency with which teachers utilise media. The pitfall of a lesson plan for the research purpose is

well recognised by other scholars. For example, (Shulman, 1996; Clark ,1986) pointed out that the quality of lesson plans is influenced by excessive teaching tasks (exams and engagement in non-instructional tasks; , fear of supervisors and administrators and by teachers level of teaching experience. However, self-reported level of media use indicated variation in the criterion measure. Accordingly, teachers who were rated as high media users also reported high level of use were rated less level of use were rated as low level media users. This warranted self-reported measure for the criterion variable.

Thus, the eight-item LMU measure was developed by the investigator to collect data on the criterion variable.

Phase Three

Following the second phase, the third phase was went on to validate the data collection instruments of the personality variables (That included: Teacher's efficacy of media choice (EMC), teachers' efficacy of media use (EMU), Openness to procure and use media (OPMU), and consequence of media use (CMU)) and work environment factors that were identified after extensively reviewing the existing literature in the area.

The draft instruments were first administered to the 40-tryout sample teachers to determine the reliabilities of the measures had been developed. The procedure employed to collect data using the above-mentioned measures in both the Pilot study and the main study was by dispatching both the questionnaire and the five scales simultaneously. On top of that, the questionnaire was accompanied by a cover letter that assures the respondent teachers about the confidentiality of their responses.

3.4 Method of Data Analysis

In this study, descriptive statistics, bivariate correlation and one-way ANOVA were employed to examine the influence of demography personal the environmental variables on the level of reported media use. Following this, a principal component analysis procedure of the factor analysis was employed to identify the different dimensions of work environment factors. This was because of the need to identify the impact of the work environment variables on the level of media use (LMU). Finally, the multiple regression model was fitted to this data in order to examine the relative contribution of each of the predictor variables that involved work environment and personal variables on the criterion.

Through out this study, all statistical significance tests were made at alpha 0.05 level. However, all observed statistical tests were reported. Data entry and analysis was made using the SPSSWIN version 6.1. Statistical software.

CHAPTER FOUR

RESULTS

This section presents answers to the major questions that guide this study. The questions were to see whether teachers' reported level of media use relates to demographic, personal, and environmental variables and if so which variable discriminates most the level of media use.

Specifically, the objective of this paper was to assess (a) the extent to which teachers' background demographic variables related to level of use (LMU), (b) to reveal the degree to which personal variables (i.e. namely, efficacy of media use (EMU), efficacy of media choice (EMC), consequence of media use (CMU), openness to use media (OPMU)) predict the level of media use, (c) to uncover the efficacy of work environment variables in predicting LMU, and (d) to unravel the major determinants of LMU among the demographic, work environment, and personal variables.

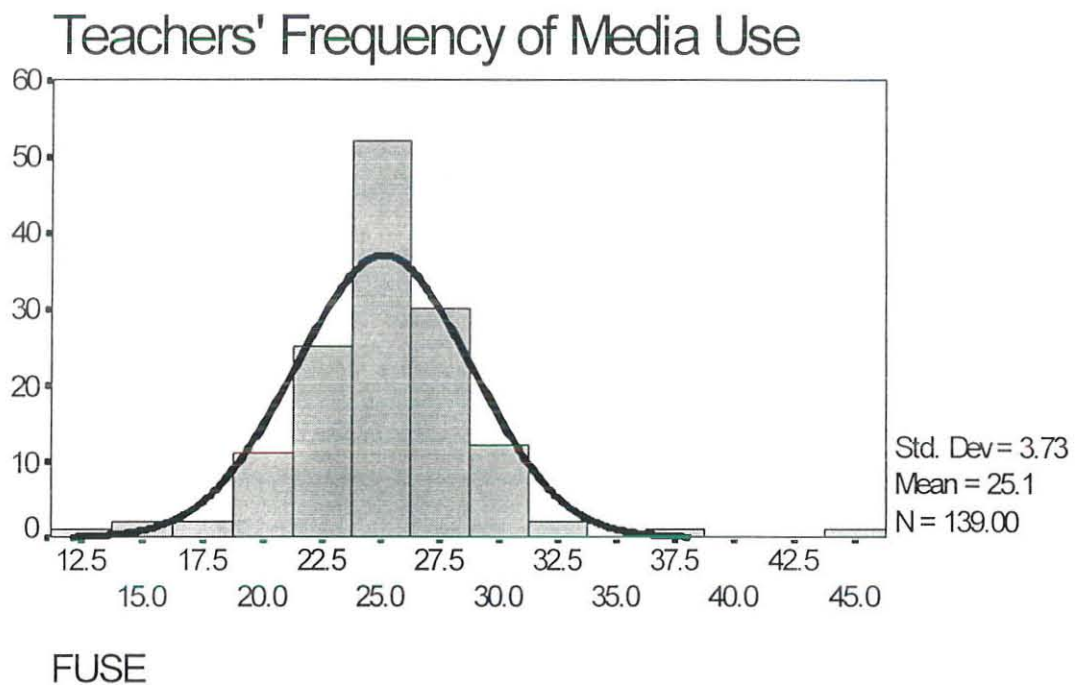
The results of the statistical analyses are presented hereunder.

4.1. Relationship between Demographic variables and Teachers' Level of Media Use

Before describing the association, it appears important to present an account of the criterion variable: Teachers' level of media use.

Analysis of the data revealed that instructional materials are under-utilised. The level to which teachers utilize media was measured using a seven-point likert-type scale for eight specific media items. The level of media use was found to be low as revealed by the observed mean (Mean = 25.12, SD = 3.73). The graph below (see: Figure 4.1) illustrates this finding. That is, the majority of the teachers do not use media as it was to be incorporated in the actual teaching-learning situation.

Fig 4.1 Teachers' Frequency of Media Utilization Pattern



In order to find out statistically significant differences across demographic variables a series of univariate analysis of variance (ANOVA) were performed. Table 4.2 depicts the results of a descriptive statistics and a one-way ANOVA.

Table 4.1. Number of Cases, Means, SDs, and One-way ANOVA analysis of level of media use by selected demographic variables.

Background Variables	N	Mean	SD	F-test
Gender				
Male	101	25.05	3.46	0.14
Female	38	25.32	4.42	(ns)
Age				
20-30 Years	41	25.17	4.23	0.68
31-40 years	69	25.01	3.38	(ns)
41-50 years	24	25.71	1.82	
51 years and over	5	23.3	2.86	
Residence				
Urban	79	24.86	3.34	0.89
Rural	60	25.47	4.19	(ns ^a)
Qualification				
12th grade or below	12	23.92	2.84	0.97
TTI	103	25.12	3.92	(ns)
Diploma	24	25.75	3.22	
Experience				
10 years or below	39	25.67	4.47	0.59
11-15 years	28	25.04	4.42	(ns)
16 years and over	72	24.86	2.95	
Grade Level				
First Cycle	67	25.01	4.60	
Second cycle	72	25.22	2.73	
Career Ladder				
Junior Teacher	11	25.18	2.92	0.70
Associate Teacher	15	25.87	2.64	(ns)
Fulfil aged Teacher	38	24.79	4.55	
Senior Teacher	63	24.87	3.79	
Associate Lead Teacher	12	26.05	1.88	
Ever participated in Training				
Participated	35	25.31	2.85	0.84
Not participated	104	25.06	3.99	(ns)
Subject area				
Languages	62	25.27	4.04	0.67
Mathematics	18	25.56	4.25	(ns)
Social Sciences	11	25.91	2.91	
Natural Sciences	38	24.84	3.24	
Aesthetics	10	23.60	3.44	

^a ns= no statistically significant difference

As portrayed in Table 4.1, no demographic characteristics of the respondent teachers were related to the level of media use that achieved a statistical significance. That is, the observed marginal differences are merely due to chance factors rather than something that could be attributable to real differences.

4.2. Relationship between Level of Media Use and Personal Variables

As indicated, one of the major questions that this study attempted to answer was the extent to which personal variables i.e. teacher's efficacy in media choice (EMC) and efficacy of media Use (EMC), perceived consequence of media use (CMU), and openness to procure and use media (OPUM), and teachers' job satisfaction are associated with teachers level of media use. To this effect, Pearson product moment correlation analyses were computed to uncover the bivariate linear association of the criterion and personal variables.

The results of the inter-correlation of the criterion variable and the major variables of the study are presented in Table 4.2 below.

Table 4.2 Inter-correlation Matrix of Level of media use with personal and environmental Variables (N= 139).

Criterion Variable	1	2	3	4	5	7	8	9	Mean	SD
Level of Media Use (LMU)	-	0.14*	.62***	.06	.35***	.18**	-.09	.14*	25.53	3.76
Personal Variables										
Efficacy of Media Use (EMU)		-	.23***	.18**	.30***	.11	-.05	.14*	32.43	5.92
Consequence of media Use (CMU)			-	.34***	.17**	.21**	.06	.19**	39.59	4.98
Openness to procure media and Use (OPUM)				-	.24***	.17**	.04	.15*	29.9	3.70
Efficacy of Media Choice (EMC)					-	.44***	.05	.29***	47.81	9.09
Environmental Factors										
Availability of Media Resources (AMR)						-	.20**	.46***	10.53	3.30
Manageability of Classroom Tasks (MCT)							-	.18**	9.1	2.86
Administrative Support (AS)								-	9.71	2.51

* p < .01

** p < .001

*** p < .0001

The results reveal that with the exception of OPUM, all other personal variables were significantly associated with the reported level of media use (LMU). Specifically, efficacy of media choice (EMC), efficacy of media use (EMU), consequence of media use (CMU), and teachers' job satisfaction were found to be markedly related the level of media use (LMU). In other words, teachers who are satisfied with their jobs tend to report frequent use of media as opposed to those with low level of reported job satisfaction. Similarly, high scores in efficacy of media use were found to substantially relate to high level of media use.

On the same way, consequence of media use (CMU) was also related to the level of media use. That is, the pleasurable experience that teachers had developed while they organize and execute the course of actions required to consider available media choice alternatives tend to foster experience the level of media use. Teachers also experience positive consequences as they incorporate media in their teaching, which was evidenced by a significant level of association to the level of media use.

4.3. Effect of Environmental Variables on Level of Media Use

As indicated earlier, it has been stated that among other variables attempt has been made to examine the extent to which environmental variables affect the level of media use in the stated population. An instrument specifically designed to measure teacher's perception of their environment was incorporated in the questionnaire. There ten-items were included in this measure.

In order to identify items that represent different dimensions of the work environment a factor analysis technique was employed. Accordingly, a principal component analysis was run to identify the dimensions of work environment. Further, the obtained factors were rotated using the Varimax option to increase the interpretability of the factors (SPSS Advanced User's Guide, 1990).

The summary of the results of the factor analysis are presented in Table 3.4.

Table 4.3. Factor loadings of the rotated work environment factors.

Item No.	Factor Loadings	Work environment Items
Factor I: Availability of Media Resources		
10	.5590	Paraprofessional support in easily obtainable.
4	.5718	In my school, ready-made instructional materials are available.
7	.8300	Available school media are easily accessible.
8	.7894	Local materials that are needed for media preparation can easily be obtained
Factor II: Manageability of Classroom Tasks		
1	.5590	My weekly teaching load is reasonable.
3	.7432	The class-size is appropriate for my instructional tasks
9	.6323	Classroom physical conditions are comfortable.
Factor III. Administrative Support		
2	.8519	The school administration assigns reasonable co-curricular assignments.
5	.4386	The school principal is supportive
6	.3466	The school has adequate media storage and preparation space.

*KMO- measure of sampling adequacy = .7633. Bartlett's Test of Sphericity = 247.78, $p < .0001$

As can be seen from the Table 4.3, Factor I included four items. All items in factor one reflect the school environment with regard to quantity and amount of media choice alternatives.

Factor II represent the extent to which teachers' assess the manageability of classroom tasks. This included items that measure appropriateness of class-size, teaching load, and classroom physical conditions. This factor is categorized under environmental variables because these are not under the control of teachers.

Factor III underlie an aspect of the work environmental factor that refer to administrative support. This incorporated items such as reasonable assignment of extra-curricular tasks that encourage media choice, faire implementation of school rules by school principals, and availability of space for media storage and preparation.

After having identified the three dimensions of the work environment variables, a Pearson coefficient of correlation was computed between the level of media use and the three work environment factors. Table 4.4 summarizes the descriptive statistics and zero-order correlation between the work environment and level of media use.

Table 4.4. Means, SD, and Correlation coefficients of Work environment factors and Level of Media Use.

Criterion Variable	Mean	SD	r
Level of Media Use (LMU)	25.53	3.79	-
Environmental Factors			
Availability of Media Resources (AMR)	10.53	3.30	.18**
Manageability of Classroom Tasks (MCT)	9.01	2.86	-.01
Administrative Support (AS)	9.71	2.51	.073*

* p < .10, ** p < .05

As depicted in Table 4.4, level of media use (LMU) was significantly correlated ($r = .18, p < .001$) with availability of media resources (AMR). In addition, administrative support (AS) moderately correlated ($r = .073, p < .10$) with level of media use even though not correlated to the accepted level. On the contrary, manageability of classroom tasks did not produce statistical significance with level of media use.

In order to investigate the relative contribution of each of the predictor variables in determining the level of media use a multiple regression analysis was fitted. The result is depicted in Table 4.5

Table 4.5. Multiple Regression analysis of Level of Media Use as Criterion Variable.

Variables	B	β	t
Personal Variables			
Efficacy of Media Use (EMU)	-.0552	-.0866	-1.341
Consequence of media Use (CMU)	.5095	.6756	10.39***
Openness to procure media and Use (OPUM)	.0533	.0832	1.28
Efficacy of Media Choice (EMC)	.1631	.4012	5.74***
Environmental Factors			
Availability of Media Resources (AMR)	.2821	.2506	3.32**
Manageability of Classroom Tasks (MCT)	.0671	.0452	.719
Administrative Support (AS)	.0169	.0131	.188
R = .733			
R ² = .5378 F = 18.76 Signif. F = .0000			
Adjusted R ² = .5092			

* p < .01

** p < .001

Table 4.5 portrays the overall contribution of eight predictor variables accounted for 53.7% of the total variance. ($R = .733$, $R^2 = .537$); $F(8,129) = 18.77$; ($p < .00001$) when the relative contribution of each independent variable was examined it was observed that four of the eight major predictor variables were found to be important determinants of the level to which instructional media are utilized. Specifically speaking each independent contributions of the four major determinants it was found out that consequence of use ($\beta = .6756$, $p < .0001$); efficacy of media use ($\beta = .4012$, $p < .0001$); and availability of media resources ($\beta = .2506$, $p < .001$). The result generally revealed that personal variables significantly explained the level of teachers' level of media use as compared to other demographic and environmental variables.

Overall, the results of the statistical analyses disclosed that the average level of media use was found to be generally low. Further, all demographic background variables were not found to relate to LMU that achieved statistical significance. Among the work environment variables considered however, availability of media resources (AMR) was substantially and positively related with LMU. Regarding the personal variables, EMC and CMU positively and significantly predicted LMU. This finding portray that high level of media use was associated availability of media resources, and high sense of teacher efficacy to media choice, and a positive belief about the importance of media use experienced by teachers as a result of previous engagement in the activity.

CHAPTER FIVE

DISCUSSION

This study has examined the level to which instructional media are utilized by primary school teachers and its relationship with three major predictor variables: Demographic, personal and environmental. The relative contribution of each of the predictor variables to explaining the amount and quantity of implementing instructional media has also been investigated. On the basis of the results data the following results were obtained.

First, the study revealed that instructional media are under utilized. The average frequency of use was only once in three weeks of instructional time. Second, important demographic variables did not explain or predict were not related to the teachers' reported level of media use. Third personal variables were significantly related to teachers of instructional media use. The impact of each of these variables on the frequency of utilising media is discussed in this section.

5.1 Impact of Demographic variables on the level of media use

The various media literature demonstrates the link between demographic variables and level of implementing instructional media. For example, variables such as geographical location of school, type of subjects taught, grade level or age of the students, as well as teachers characteristics are frequently mentioned. As a result, this study also considered demographic variables to assess the possible impact on level of media use. According to the univariate ANOVA, all background demographic variables were not found to predict

teachers' level of media use. Which implies teacher's age, gender, place of residence, teaching experience, level of primary taught, rank, and participation in training regarding the NETP, subject area taught did not found to significantly influence teachers level of media use.

Teaching experience and qualification level was expected to relate to the degree of implementing recommended educational practices. Nevertheless, the findings in this study contradicted our general assumption that level media should increase as one get more experience and level of qualification. One study in Ethiopian context also violated this assumption. The study claimed to find (Tilahun, 1999) a reverse association of level of media use with teaching experience and level of qualification. According to his finding, highly experienced and qualified teachers tend to be low level users, while less qualified and less experienced teachers were found to show higher tendency of instructional media use. Tilahun's finding could also be attributed to a study by Gaith and Yaghi (1999) in a sense that teachers sense of personal efficacy declines as teachers' stay more in teaching due to possible effect of burnout.

Empirical data or correlational research that examined the impact of demographic variables other than the commonly assessed teachers' characteristics are sketchy in Ethiopian reality. However, the findings in this study contradict fail to meet our expectation that place of residence should have an impact on the level of media use. For example, school location is expected to dictate media choice opportunities. As the finding suggests however, teachers who work in two different locations (urban and rural) did not differ in their level of media

use. Urban school, because of their geographical access to electric power are expected to take advantages over schools in rural localities thorough implementing educational TV broadcasting programs, which are launched throughout the country.

In addition, this study examined the influence of career ladder (school position) on level of use. Similar to other teachers' background variables, significant relationship was not observed. Becoming engaged in implementing instructional media is thought to stimulate teachers' continued professional growth (TGE, 1994). However, Tekeste (1986) is implementing such a practice is doubtful about its proper implementation due to unfavourable working condition and other constraints.

As indicated in the results section, grade level was not found to relate to LMU. Various media selection models reveal that students' characteristics dictate media selection process. For example, students particularly those in the First Cycle primary level have a natural tendency to learn more through manipulating things. (Henrich et. al., 1999) indicated in this regard that such children, because of their age are unable to learn from abstract media or teacher's talk. Contrary to this assertion, however, no difference was observed between First cycle and Second cycle primary teachers in the LMU. This finding is inconsistent with the recommended media in the curriculum. This may be partly due to, unchanged traditional views that teachers hold about teaching and their practices.

The type of school subjects heavily influences Media utilization decision. In this regard, Diamond (1996) writes, " selecting instructional media is like buying a pair of shoe". He

argued that decision about a particular media should be based on the instructional objectives. Gagne et.al. (1992) have categorized different media into different groups. However, the present finding failed to reveal this fact.

5.2.The impact of personal and work environment variables on the level of media use

The inclusion of personal variables as discussed earlier has made this paper significant. Previous researchers in the field attempted to include similar sets of variables, but in a different conception (see for example in Tilahun, 1999, Berhane, 1999). They explained attitude thinking that one's thought is linearly related with behaviour. They explained behavior as a person's reasoned action.

On the contrary, scholars such as Ashton (1986); Ajzan (1987) argued that behaviour is not explained in a linear fashion as an antecedent or consequence of stimulus. For example, Ashton basing her argument on Bandura's self-efficacy theory substantiates this line of argument. She pointed out that behaviour is more explained by self-efficacy through one's perception of effectiveness for achieving an outcome leading to that behaviour. In the same why, Simonson and Nancy (1996) reported that theory of reasoned action is incomplete to used as a robust indicator of behaviour particularly to behaviour which require control of available resources. He further noted that one's reported level of control on environmental influence raised the regression coefficient to .77 level. Holloway (1996) commented that implementation of technological equipment can be studied using Bandura's theory of self-efficacy.

In this study, such personality variables mentioned elsewhere in this paper were included. These variables were found to explain the variation in the frequency media is utilised. Based on the results, personal variables found to substantially correlate with LMU. Specifically speaking, teacher's sense of personal efficacy in media choice (EMC) and use (EMU), and consequence of media use (CMU) found to show a marked relationship with the LMU. In addition, the teachers sense of efficacy in media choice (EMC) and consequence of media use (CMU) as two of the major determinants of teachers' pattern of media utilisation along with one work environment variable (i.e. availability of media resources (AMR)). Thus, the overall shared variance of personal and environmental variables in explaining the dependent variable was 53.7% of the total variance. This much explained variance in social and behavioural science research is considered to be very high (Cohen, 1977).

Similar findings that revealed the importance of personal variables, particularly of teachers' sense of personal efficacy in positively contributing for instructional innovation (Ghaith & Shaaban, 1999) and extra-role behaviour (Somech, A & Drach-Zahavy, 2000) was found in other contexts.

Thus, the study generally suggest that job related personal variables and work environment factors have made a substantial impact on teachers' level of media use. Nonetheless, it is hard to claim that from this research alone that, demographic variables are unrelated with LMU. Thus, further research is desired to assess the possible relationship that might exist with teachers' LMU.

CHAPTER SIX

CONCLUSION

The objective of this study was to identify factors that predict the level of media use among primary school teachers in *Gedo Zone*. On the basis of this, relevant demographic, job related personal variables, and work environment factors that are assumed to relate with teacher's level of media use were identified. Thus, the degree to which each predictor variable related to the criterion variable was investigated.

In view of the above, this paper attempted to answer the following questions:

1. Do teacher's background demographic characteristics significantly related with their level of media use?
2. Do teacher's job related personal variables significantly predict their level of media use?
3. To what extent the work environment variables predict teacher's level of media use?
4. Which predictor variable (s) is/are the most significant determinant of teacher's level of media use?

In order to answer the questions, a total 150 teachers from 9 randomly selected primary schools in urban and rural schools of *Wenago Wereda*. Of the 150 teachers participated, however, data were obtained on 139 of them who completed and returned the questionnaire.

The participants who did not returned were 11. Of these, 9 were from urban and 2 were from rural schools respectively. The total response rate was 92.6%. Hence, an analysis of data was made on 139 teachers (i.e.27.3% female and 72.7 % male) who provided complete information. In general, the proportion of teachers who took part in the study was accounted for 21.5% of primary school teachers in the whole Wereda (*Gedeo Zone Education Statistics, 2001*).

As indicated in chapter III, the study employed a self-reported measures developed by the investigator based on extensive review of existing literature in the area. Accordingly, five instruments (the level of media use LMU, teachers' efficacy of media use (EMU) scale, teacher's efficacy of media choice (EMC) scale, measure of consequence of media use (CMU), and measure of openness to procure and use media (OPUM)) and a questionnaire were employed to collect data . All instruments were tried out in the initial study and refined before a use to be made for the final data collection.

The statistics involved in answering the above mentioned questions were: Means, Standard deviations, correlations, one-way ANOVA, Principal Components analysis, and the Multiple Regression Analysis. The minimum level of significance used to test all statistical hypotheses were at $\alpha = .05$.

According to the analyses, the level of use of instructional media was found to be generally low. In addition, the univariate ANOVA revealed that background demographic variables were not found to predict teachers' level of media use.

Which implies teacher's age, gender, place of residence, teaching experience, level of primary taught, rank, and participation in training regarding the NETP. subject area taught did not found to significantly influence teachers level of media use.

On the other hand, a zero-order correlation computed between teachers' level of media use and job related personal variables (teachers' sense of efficacy in media use and sense of efficacy choice in media choice, and consequence of media use) produced a statistically significant liner relationship. This finding implied that high level of media use were associated with high teacher's sense of efficacy in media use, high sense of teachers efficacy in media choice and a strong teachers' belief in positive consequences of media use that resulted from their previous engagement in the activity.

To find a bivariate relationship between work environment variables and level of media use a similar procedure was employed as in the case of job related personal variables. The finding indicated that among three three-work environment variables, availability of media resource (AMR), and administrative support (AS) were found to be strongly associated with level of media use. This shows that high level of media use was associated with availability of media resources in adequate mount and with availability of supportive school administration. On the contrary, low level of media use was related to with meagre media resources and unsupportive school leadership. The third work environment variable: manageability of classroom tasks (MCT) was not related to a statistically significant extent. However, the marginal inverse association of task manageability with level of media use depicts the expected relationship that when classroom tasks are beyond its natural limit, teachers tend to ignore the use of instructional media.

Furthermore, a multiple regression analysis that was run to reveal the most important predictors of level of media uses. The explanation for this is that, the significant bivariate relationships between the work environment and job related personal variables with the criterion have a limited meaning when there is a need to know about the multiple effect of these variables together on the criterion variable. This is what happens in real situations. That is, level of media use influenced by both job related environmental and personal variables. Thus, a multiple regression model was fitted to the data that involved both work environment and personal variables. Accordingly, the overall contribution of seven predictor variables accounted for 53.7% of the total variance. This much explained variance in social and behavioural science research is considered to be very high (Cohen, 1977).

In addition, the importance of each job-related personal and work environment variables were also assessed to determine their relative contribution to the prediction. The result indicated that, three job related personal variables and one work environment variable were stood out as significant as determinants of teachers' instructional media utilization. These were.: Namely consequence media of use (CMU); and teachers sense of efficacy of media use and availability of media resources.

From the findings therefore, one may arrive at the following conclusions:

Teachers' background demographic characteristics were not found to predict teachers' level of media use.

1. On the other hand, except openness to procure media and use, all job related personal variables significantly correlated with the level of media use. On top of that, the multiple regression result revealed those teachers' sense of efficacy to media choice (EMC) and consequence of media use (CMU) came out as important determinants of level of media use.
2. All work environment factors significantly correlated with the level of media use. Nonetheless, only availability of media resources (AMR) emerged as a significant determinant of teachers' pattern of instructional media use.

From the findings therefore, it can be argued that the proposed theoretical framework (see: Figure 2.1.) developed for this study based on the literature, did not fully agreed with the observed findings. However, it would be too early to dismiss the importance of demographic variables in the prediction of teacher's level of media use, as the present study is limited due to its scope and sampling. Thus, further studies that involved both qualitative and quantitative methodologies may be desired to assess their importance in wide range of situations.

Thus, this study cannot be considered final, the findings seem to have some practical implications to teacher trainers, staff developers, curriculum designers and educational administrators and future directions of research.

Briefly, teacher trainers and staff developers should consider the need to attend to job related personal factors. These include (a) designing mechanisms that foster teacher's efficacy in media choice and use. This can be done during pre-service and in-service training of teachers by exposing them to vicarious experiences, selected teacher role

models who succeeded in employing instructional media in the face of obstacles and unfavourable working conditions, (b) since consequence of media use results in developing beliefs and attitudes on teachers future intention to procure and use media, school administrators in as much as possible eliminate administrative obstacles that discourage teachers to procure media and allocate resources for preparation of instructional materials, and motivate those who demonstrate interest of media utilization. (c) In addition, educational administrators at Woreda and Zone levels should seriously consider the ways and means to strengthen SPCs as availability of media resources increase the likelihood of teacher's use of instructional materials.

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APPENDIX

አዲስ አበባ የ ኒሽርስቲ

የድህረ ምረቃ ትምህርት መርህ ጉብር
የካሪኩለም እና ኢንስትራክሽን ትምህርት ክፍል

ለድህረ ምረቃ ጥናታዊ ጽሑፍ ማሟያ
አንዲውል ታስቦ የተዘጋጀ መጠይቅ

ውድ መምህር/ት/ ትብብርዎ በጣም ያስፈልገኛል። የዚህ ጥናት ዋና ዓላማ በአንደኛ ደረጃ ትምህርት በማስተማር ላይ የሚገኙ መምህራንን የማስተማሪያ መሣሪያዎች አጠቃቀም ስርዓትን በመረዳት የመምህራንን የማስተማሪያ መሣሪያዎች አጠቃቀም ስርዓት አቅጣጫ የሚያስፈልጉ ወይም የሚወስኑ ዋና ዋና ምክንያቶችን ከራሳቸው ከመምህራን አንደበት በጥልቀት ለመረዳት ታስቦ ነው። የጥናቱ ውጤትም በመማር ማስተማር ሂደት ውስጥ መምህራንን በማስተማሪያ መሣሪያዎች አጠቃቀም ረገድ ሊያጋጥሟቸው የሚችሉ ችግሮችን ለመቀረፍ ይችላል። ዘንድ በጥናት የተደገፉ የመፍትሔ ሃሳቦችን ለመጠቀም ነው።

ጥናቱ የሚካሄደው በጊደላ ዞን ካሉት አራት ወረዳዎች መካከል በናሙና በተመረጡ ሁለት ወረዳዎች ላይ ብቻ ሲሆን እርስዎም በእነዚህ ወረዳዎች ካሉት አጠቃላይ መምህራን መካከል /በናሙና አመራረጥ ዘዴ መሠረት/ በጥናቱ እንዲካተቱ ተመርጠዋል። የጥናቱ ውጤት ትምህርታዊ ለሆነ አላማ ብቻ የሚውል ሲሆን የርስዎ ትኩረት፣ እውነተኛና ግልፅ ምላሽ ደግሞ ከላይ ለተጠቀሰው አላማ መሳካት ወሳኝነት አለው።

ያለዎትን ጥቂት ጊዜ ወስደው መጠይቁን በእውነተኛ ታማኝነት በመሙላት ለሚያደርጉልኝ ትብብር ሁሉ በቅድሚያ ከልብ የመነጨና ጥልቅ የሆነ ምስጋናዬን ሳቀርብ ያለኝንም አክብሮት እገልፅ ዘንድ እንደሚፈቀድልኝ በመተማመንም ጭምር ነው።

አመሰግናለሁ ።

መግቢያ

ይህ መጠይቅ በሁለት ዋና ዋና ክፍሎች የተከፈለ ሲሆን እያንዳንዱ 30-ስ ክፍል የራሱ መምሪያ አለው ። ጥያቄዎቹን በሚመልሱ ጊዜ እባክዎን መመሪያውን በአንክሮ ያንብቡ። በተጨማሪም መልስ በሚሰጡበት ወቅት ምንም ጥያቄ ሳይዘሉ ወደ ሌላ ገፅ መሄድዎን ያረጋግጡ።

ማሳሰቢያ

ይህ መጠይቅ በዩኒቨርሲቲ ለሚደረግ ጥናታዊ ፅሁፍ የሚውል በመሆኑ የኦርቲዎ አስተያየት ለማንኛውም ሰነድ ወገን በማንኛውም መንገድ አይተላለፍም። ባጠቃላይ መጠይቁን ለመሙላት የሚፈጅው ጊዜ 30 ደቂቃ ነው።

ክፍል አንድ

በዚህ ክፍል 26 ጥያቄዎች የቀረቡ ሲሆን አማራጮች /ኮዶች/ ስተሰጣቸው ጥያቄዎች ኮዱን በመክበብ አማራጭ ያልተሰጣቸውን ጥያቄዎች ደግሞ በተሰጡት ባዶ ቦታዎች በመሙላት ይመልሱ።

1

ወረዳ	ኮድ
ደርጋ ጨፌ	1
ወናጎ	2

2

የታ	ኮድ
ወንድ	1
ሴት	2

8 አዲሱ ሥርዓተ ትምህርት መተግበር ከጀመረበት ጊዜ አንቀጽ እስከሁን ድረስ የማስተማሪያ መሳሪያዎች አዘጋጃችንና አጠቃቀምን በተመለከተ የሙያ ማሻሻያ ስልጠና ወስደው የውቅና መልስዎን አልተሳተፍኩም ከሆነ ወደ ተፈ ቁጥር 10 ይሻገሩ/

አዎን	1
አልተሳተፍኩም	2

9 የወሰዱት ስልጠና የወሰደው የጊዜ ቆይታ በአጥባቢ ምን ያህል የሆነዋል?

1 - 4 ቀናት	1
ከአንድ ሳምንት እስከ 15 ቀናት	2
ከሁለት ሳምንት እስከ አንድ ወር	3
ከ1 - 2 ወራት	4
ከ3 ወር በላይ	5

10 በመምህራን ማሰልጠኛ ተቋም ወይም ከሌላ ተማሪ በነበሩበት ጊዜ የመማሪያና ማስተማሪያ መሳሪያዎችን አዘጋጃችንና አጠቃቀምን በተመለከተ የተሰጡት ትምህርት ነበር?

አዎን	1
አልነበረም	2

11 መልስዎ "አዎ" ከሆነ የቀሰሙትን ትምህርት ጥራትና ብቃት እንዴት ይገመገሙታል? ከደ

አጅግ በጣም ጥሩ አልነበረም	1
ጥሩ አይደለም	2
መወሰን አልቻልንም	3
በጣም ጥሩ ነበር	4
አጅግ በጣም ጥሩ ነበር	5

19 በርስዎና በትምህርት ማዕከል አስተባባሪ ያለው ቅርበትና መግባባት ምን ይመስላል ብለው ይገምታሉ?

እጅግ በጣም ጥሩ አይደለም	1
በጣም ጥሩ አይደለም	2
ጥሩም መጥፎም አይደለም	3
በጣም ጥሩ ነው	4
እጅግ በጣም ጥሩ ነው	5

20 ከትምህርት ቤት ሥራ ሙጪ በአካባቢዎ የሚሰጡት የማህበራዊ አገልግሎት ወይም ተጨማሪ ሥራ ለምሳሌ የቀበሌ ተመራጭ የተርፍ ስኬት ስራ ካለ ከድን በመክበብ ያሳዩ፡

አዎን አስራሳታ	1
አልሰራም	2

21 የወር ደምወዝዎ ምን ያህል ነው በቁጥር ይግለጹ

22 ጥቅም ላይ ከማይውሉና ባካባቢው ከሚገኙ ከወዳደቁ ቁሳቁሶች የማስተማሪያ መሳሪያዎችን መምህራን ማዘጋጀት አለባቸው ብለው ያምናሉ?

አዎን	1
አሳፍኝኝም	2

23 በማስተማር ሙያዎ ምን ያህል ደስተኛ ነኝ ብለው ያምናሉ?

እጅግ በጣም ደስተኛ አይደለሁም	1
በጣም ደስተኛ አይደለሁም	2
ለመውሰን አልችልም	3
በጣም ደስተኛ ነኝ	4
እጅግ በጣም ደስተኛ ነኝ	5

ክፍል ሁለት

በዚህ ክፍል ስድስት ሠንጠረዥ ከተራ ቁጥር A-E ድረስ በተናጠል የቀረቡ ሲሆን እያንዳንዱን ሠንጠረዥ ከምርጫዎቹ አንጻር የሰተጠብቱትን ቁጥሮች በመክበብ ስያንዳንዱ ሠንጠረዥ የተሠጡትን አማራጭ መመሪያዎች መሠረት በማድረግ ይመልሱ።

A- MEDIA CHOICE /USE SCALE

ቀጥሎ ከተዘረዘሩት የመማሪያ ወይም የማስተማሪያ ማሳሪያዎች መካከል ባለፉት አራት ሳምንታት ወይም ባለፈው አንድ ወር የትምህርት ጊዜያት ብቻ በአማካኝ በምን ያህል የድግግሞሽ መጠን እንደተገለገሉባቸው ከጉን የተሰጡትን ቁጥሮች በመክበብ ይግለጹ።

ተቁ	የማስተማሪያ የመማሪያ/ መሳሪያ አይነት	ሁለጊዜ በቀን በቀን	በሳምንት ከ 2-3 ቀን	የድግግሞሽ መጠን				ባለፈው ወር አልተቀጠሉም
				በ 2 ሳምንት አንድ ቀን	በ 3 ሳምንት አንድ ቀን	በ 4 ሳምንት አንድ ቀን	1	
1	በእጅ የተባሉ ልዩ ልዩ ሥዕሎች ግራፎች ፅሁፎች ወዘተ	7	6	5	4	3	2	1
2	ከመፅሐፍ፣ ከጋዜጣ ወይም የተወሰደ ሥዕሎች	7	6	5	4	3	2	1
3	ሞዴል እና ሱል	7	6	5	4	3	2	1
4	ካርታ	7	6	5	4	3	2	1
5	ሻሽ ዖርድ	7	6	5	4	3	2	1
6	የትምህርት በሬዲዮ ፕሮግራም	7	6	5	4	3	2	1
7	የትምህርት በቴሌቪዥን ፕሮግራም	7	6	5	4	3	2	1
8	ፍባሽ ካርድ	7	6	5	4	3	2	1
9	ጥቁር ስሌዳ	7	6	5	4	3	2	1

C. SELF EFFICACY SCALE FOR MEDIA CHOICE / USE

ዚህ ወቅት የማስተማሪያ መሳሪያዎችን ተጠቅመው ለማስተማር ሲያቀዱ በሚያስተምሩበት ትምህርት ቤት የአቅድሞችን ለኪታማ ክትን ሊያመለክቱ የሚችሉ ዓረፍተ ነገሮች ምን ያህል እንደተሰማሙ ወይም እንዳልተሰማሙ የተሰጡትን ቁጥሮች በመጠቀም ያሙልኩት።

በጣም አስማማላሁ	አስማማላሁት	ለመውሰን አልችላም	አልሰማማም	በጣም አልሰማማም
1. ለማስተማሪያ መሳሪያዎችን ተጠቅሞ ለማስተማር ሳቅድ በትምህርት ቤቱ ውስጥ ያሉትን ለማልጋታት በሚያስፈልገኝ ጊዜ ዙሪያ ማግኘት አቸላለሁ	5	4	3	2
2. የምፈልገውን የማስተማሪያ መሳሪያ ከትምህርት ቤቅ አንኳን ማግኘት ባልችል በግሉ ማዘጋጀት አቸላለሁ።	5	4	3	2
3. በስርዓተ ትምህርት ውስጥ በሌላባቢዬ ወይን ከማይጠይቁ ቋሳቋቶች አዘጋጅሮ እንደጠቀም የተጠቀሙትን የማስተማሪያ መሳሪያዎች ለማዘጋጀት ችሎታ ከሌለኝ በትምህርት ቤቅ አስፈላጊውን ደጋፊ ማግኘት አቸላለሁ	5	4	3	2
4. መምህራን የማስተማሪያ መሳሪያዎችን ለማዘጋጀት ሲያቀዱ ተማሪዎቻቸውን በዝግጅት እንዳሳተፍ ሲጋብዙ አቅድሞችን በቀላሉ ለኪታማ ማድረግ ይችላሉ።	5	4	3	2
5. የማስተማሪያ መሳሪያዎችን በግባቤ ለማዘጋጀትና ለመጠቀም ሳቅድ በትምህርት ቤቅ ይጋፍ የሚያደርግልኝ አካላት ላይ (የማስጠልካላት ፣ ርዕደ መምህራን ፣ ተማሪዎች ፣ መዘተ) ያሉ ጫና ይፈጥሩበቸዋል የሚል ስጋት አለኝ።	5	4	3	2
6. ከትምህርት ቤቱ ውጪ ለማስተማሪያ የሚያገለግሉኝን የማስተማሪያ መሳሪያዎች ለማስመዘት በቅድሚያ ዝርዕላት መምህር ቢሮ አስፈላጊውን ተቆጣጣሪ በወቅቱ ማግኘት ይቻለኝ።	5	4	3	2
7. የሥራ ጥበብ ገንዘብና ችሎታ አለሁ የሚባል መምህር አንኳን ቢሆን አሁን ባለገበኛ የማስተማር ሥራ ላይ እኔን በቀላሉ ሲዘጋጁ የሚችሉትን የማስተማሪያ መሳሪያዎች አንኳን ቢሆን ለማዘጋጀት ይቸገራል።	5	4	3	2
8. በስርዓተ ትምህርት ውስጥ የተካተቱት የማስተማሪያ መሳሪያዎች ባለዘመናዊ መምህራን በአንባቢዎቻቸው ሲያገኙ አቸው ወይም ሊያዘጋጁ አቸው አይችሉም።	5	4	3	2
9. በትምህርት ቤቅ ውስጥ የማስተማሪያ መሳሪያዎች ሪገድ የሚደረገው ችሎታ / የብድር ፣ የቋሳቋስ ፣ የሙያ / ከወቅቱ የተሻለ ከዬ ነ ለተዘጋጀውን ጊዜ መምህሩ ተጨማሪ ጥረት በማድረግ ነው።	5	4	3	2
10. ለማስተማሪያ ትምህርት የምፈልጋቸው የማስተማሪያ መሳሪያዎችን በትምህርት ቤቱ መኖር እና አሰጣጥ ፍቺውን ለማወቅ የኔ ሚና በጣም ውስጥ ነው።	5	4	3	2
11. በትምህርት ቤቱ የሚገኙትን ተገዢ የማስተማሪያ መሳሪያዎችን ማግኘት የሚቻለው መምህራን ተደጋጋሚ ጥረት ማድረግ ሲችሉ ነው።	5	4	3	2

E.WORKING CONDITIONS

የሥራ ስታዎንና የርስዎን የሥራ ሁኔታ አስመልክቶ 10 ዓረፍተ ነገሮች የተዘረዘረ ሲሆን በዓረፍተ ነገሮቹ ምን ያህል እንደሚሰማሙ ወይም እንደማይሰማሙ የተሰጡትን ቁጥሮች በመክበብ ያላዩ።

ተ.ቁ		በጣም አስማማለሁ	አስማማለሁ	ሰሙወሰን አልችልም	አልሰማማም	በጣም አልሰማማም
1	ሳምንታዊ የሥራ ጫና በዛታ ሚዛናዊ ነው።	5	4	3	2	1
2	የማስተማር ሥራ ውጪ በሌሎች አጋዥ (Co curricular) ሥራዎ ጫና ይበዛብኛል።	5	4	3	2	1
3	በአንድ ክፍል የማስተምራታዎ ተማሪዎች በዛታ/ቁጥር ሚዛናዊ ነው።	5	4	3	2	1
4	የማስተማሪያ መሳሪያዎችን ከትምህርት ቤቱ በጣም ማግኘት አቸላለሁ።	5	4	3	2	1
5	የትምህርት ቤቱ አስተዳደር ደጋፊ ያደርግልኛል	5	4	3	2	1
6	የማስተማሪያ መሳሪያዎችን ማስገኛትና ማከማቻት የሚያስችል ሥፍራ (ወይም ማሳኪያ ክፍ) አለኝ።	5	4	3	2	1
7	ክንባቤዎ ማስገደብ የምትችሉን የማስተማሪያ መሳሪያ ስማዘጋጀት የሚያስችል / Equipment) ይዩ ነው።	5	4	3	2	1
8	የማስተማሪያ መሳሪያዎን በቀላሉ ለማግኘት አመቺ ነው።	5	4	3	2	1
9	የክፍሉ ውስጥ ሁኔታ / መሳሪያ ፡ በር ፣ የተማሪዎች መተሳሰቢያ ወይን / አመቺ ነው።	5	4	3	2	1
10	የማስተማሪያ መሳሪያዎችን በተመሳሳይ የሁኔታ ደጋፊ በተሰጡ ማግኘት አቸላለሁ።	5	4	3	2	1

DECLARATION

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

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Place and Date of Submission: AAU, June, 2001