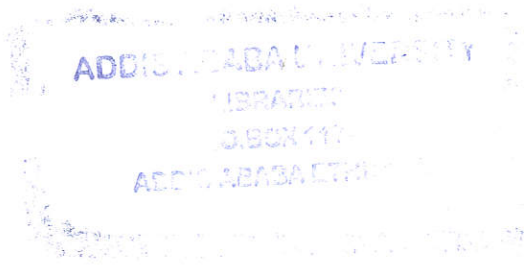


**ADDIS ABABA UNIVERSITY
SCHOOLS OF GRADUATE STUDIES**

**ATTITUDES OF STUDENTS AND TEACHERS
TOWARDS PLASMA INSTRUCTION IN BUTAJIRA
AND SILTI SECONDARY SCHOOLS**

By

REDWAN NURI



JUNE, 2006

**ADDIS ABABA UNIVERSITY
SCHOOLS OF GRADUATE STUDIES**

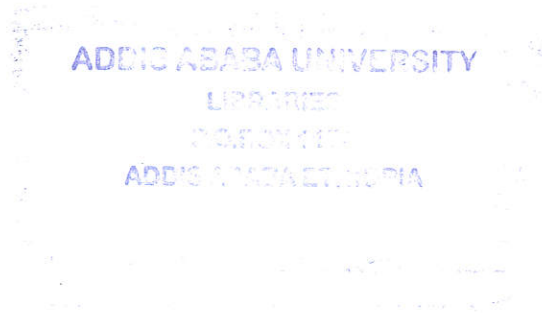
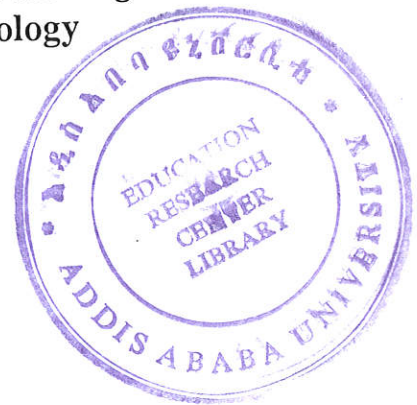
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AND SILTI SECONDARY SCHOOLS**

A Thesis Submitted to the School of Graduate Studies
Addis Ababa University

In Partial Fulfillment of the Requirements for the Degree of Master
of Arts in Educational Psychology

By

REDWAN NURI



JUNE , 2006

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Redwan Nuri

Approved by Board of Examiners.



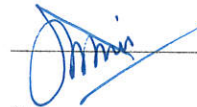
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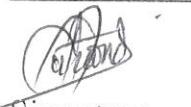
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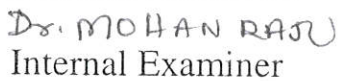
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Internal Examiner



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Abstract

The purposes of this research were aimed at investigating the attitude of students towards learning through Plasma TV as a function of gender, grade level, achievement level and residence, and to explore the attitude of teachers towards teaching through Plasma TV as a function of teaching experience at Butajira and Silti Secondary schools.

To achieve the objectives, 240 students participated through using convenient sampling and 35 teachers participated through using available sampling from these two secondary schools.

One sample t-test and MANOVA were employed to analyze the collected data. The result indicated that the low achiever students showed negative attitude where as the high achiever students found to have more favorable attitude towards learning through Plasma TV than average and low achiever students. The low experienced teachers also showed favorable attitude than the high experienced teachers. Moreover, the results revealed that significant attitudinal variations were not found except the achievement and the interaction of grade level with residence. Finally the study was summarized and concluded with some suggestions in light of the findings.

CHAPTER ONE

1. INTRODUCTION

1.1 Backgrounds

The importance of education for economic, social, and political development of a country is indispensable. Over all development can be achieved through education.

Through education individuals gain knowledge, and develop skill and attitude, which enable individuals to meet certain need of their society. Education emancipates human being from ignorance, superstition, and backwardness. It also made possible the preserving and transmitting cultural heritage, and collective experience of the past and present to new generation.

The noble laureate Amartya Sen (1999), as cited in development committed progress report that “education is human capabilities, which is the power to reflect, make choices and enjoy a better life. Education has powerful synergistic effects on other development objectives such as empowerment, better health, and good governance”.

Owing to these facts a country should give priority to education by increasing its accessibility and quality. Actually, quality is a relative term and difficult concept to define; education quality may rest mainly on the nature of the teaching - learning process in the classroom. Bridges (1998) contends that quality of education can be determined by training and qualification of teachers, nature of school curricula, instructional technologies and facilities used, the motivation and attitude of students to

learn, teachers level of commitment to this profession and many other related factors.

Our country Ethiopia has launched the New Educational and Training Policy (NETP) since 1994. Visible and promising results are emerging with regard to educational access and equity in spite of the fact that too much remained to be done regarding the educational quality.

The gross enrollment ratio was only 6.6 percent in secondary schools in the year 1994 but the ratio has been raised to about 27 percent within eleven years. The female gross enrollment ratio was 5.7 percent before implementation of NETP it is raised to 20.6 percent in 2005. By now the enrollment rate at primary level became 79.2 percent (Abiotawi democracy, Sep ,1998E.C.).

The Ethiopian education system has also given priority to Technical and Vocational Training. Hence, the Technical and Vocational Training Institutions are being established in view of improving accessibility and quality of secondary school education through using information and communication technologies (ICT) by using satellite education.

One of the ways to get quality of education is through the use of technology appropriately. Amartya Sen (1999) also mentioned "education quality is critical ingredient in boosting economic growth. The information and communicate technology accelerate progress toward good quality education".

The New Education and Training Policy(1994) of the country Ethiopia stated that in order to promote the quality, relevance and expansion of education, due attention would be given to the supply, distribution, utilization of educational materials, educational technology and facilities. UNESCO(2002) also states, "all governments aim to provide the most comprehensive education possible for their citizens within the constraints

of available finance because of the pivotal position of ICT in modern societies, its introduction into secondary school will be high on any political agenda.”

UNESCO (2002) further asserts that educational systems around the world are under increasing pressure to use the new Information and Communication Technologies to teach students the knowledge and skills they need in the 21st century.

Owing to this, the Educational Media Agency (EMA) has launched new technology by using satellite Plasma TV programs for Secondary Schools (Grade 9-12) throughout the country in 1997E.C /2005GC

The Satellite Plasma TV instructions aimed at transmitting standardized and quality education for all urban and rural schools in the same way all over the nation. In addition, it increases teachers' capability and reduces wastage of periods due to various problems.

There are three transmission phases which are expected to be performed by teachers and students: Pre-transmission, during transmission; and post-transmission. At pre-transmission the duty of teachers and students are preparations to the transmission.

- At pre- transmission the teachers are expected
 - to know the lesson before transmission started delivering.
 - to make appropriate preparation on the lessons, and
 - to prepare necessary teaching materials.

Moreover, students are expected to make

- ready them selves by reading according given information from teachers.
- themselves prepare necessary teaching materials that are ordered by their classroom teachers.

- During transmission the teachers are expected
 - to be in their classroom with having their textbooks
 - to present short explanation to students about the gist of specific lesson
 - to motivate students to follow the transmission attentively
 - to attend the lesson with students in the classroom
 - to follow and guide students whenever televised teacher give activities and
 - to overtake the teaching duty immediately if there is interruption on transmission with some problems

Moreover, the students are expected to

- pay attention to the transmission
 - write some points, which are ambiguous and not clear to them
 - to do activities that are given by televised teacher, and
 - taking important short notes during transmission.
- At post- transmission, the teachers are expected to
 - stabilize the delivered lesson
 - give further explanations that are thought to be explained
 - answer questions that are asked by students
 - giving further exercise as homework if necessary
 - tell the title of the next Plasma TV program to students, and
 - giving counseling service concerning the programs.

Moreover, the students are expected to

- ask ambiguous & unclear concepts.
- answer the questions that are forwarded by teachers.
- prepare for the next lesson by reading textbooks according to information offered by classroom teachers (EMA, Feb 2006).

The education transmissions were prepared for six subjects, which are English, Mathematic, Biology, Physics, Chemistry, Civics, and Ethical Education based on Ethiopian education curriculum in South Africa and Canada.. According to

the heads of the educational and technical departments of EMA, 2978 programs for each cost 33,000 birr were prepared. Hitherto (end of April, 2006) 8,863 Plasma TV sets were distributed which cost about 473 million birr. In addition, networks were stretched at a cost of about 33 million birr. Two hundred eighty generators at a total cost of about 58.6 million birr were distributed for those secondary schools, which have no hydroelectric power. The heads also explained that a lot of trainings were provided to technicians, teachers and education office workers inside the country and abroad. By now the programs are delivering successfully via Intelsat to secondary schools. According to information taken from telecommunication office, the annual cost paid to Intelsat (international satellite station) is about 17million birr.

However, since it is new innovation the area needs deep and wide investigation on its implementation and delivery in various ways.

This paper particularly focuses on the investigation of the students attitudes towards learning through Plasma TV and teachers attitudes towards teaching with Plasma TV in grades 9 and 10 in Silti and Butajira Secondary School.

1.2 Statements of the problem

Attitude influences an individual's behavior and affects one's life in different ways including learning and achievement.

So investigating one's attitude is very essential to attain expected goal and to form a policy or to adapt strategies for necessary attitudinal change. Knowledge about attitude is fundamental to the formation of a strategic policy as well as for success in its implementation.

Taking these assumptions into consideration, this investigation aimed at studying the attitudes of students towards learning through Plasma TV and the attitudes of teachers towards teaching with the same medium. To do that the following research questions were raised.

- What attitudes do students hold towards learning through Plasma TV as the function of gender, grade level, achievement level and residence?
- What attitudes do teachers hold towards teaching with electronic media?
- Is there any significant difference in the attitudes of students due to gender, grade level, achievement level and residence?
- Is there any significant difference in the attitudes of teachers between high experienced teachers and low experienced teachers in teaching with Plasma TV?

1.3. Objectives of the study

The major objectives of this study were

- to assess the attitudes of students towards learning through Plasma TV
- to see the attitudes of teachers towards teaching with Plasma TV

- to find out whether experience of teachers' has any influence on teachers attitudes towards teaching with TV.
- to find out whether grade level has any influence on students' attitude towards learning though Plasma TV.
- to examine whether achievement level has any influence on students' attitude towards learning through Plasma screen.
- to examine the interaction effect of grade level and gender on students' attitude towards leaning through Plasma TV.
- to examine the interaction effect of grade level and ability level on students' attitude towards learning through Plasma TV.
- to examine the interactive effect of gender and achievement level on students attitude towards learning through Plasma screen.

1.4 Significance of the study

This study was also carried out in hoping that: -

- it may provide the concerned bodies especially in the education sector with essential and empirical information concerning the attitudes of students and teachers towards learning and teaching through Plasma TV) so that they can take measures to enhance its efficacy and practical educational problems, if any.
- it may be valuable to serve as base for those who are to make further research on the topic in future.

1.5. Operational Definition of Important Terms

- Attitudes:- Are relatively enduring predisposition to respond in consistently favorable or unfavorable way to Plasma TV educational provision by on students and teachers.

- Teachers:- Refer to secondary school teacher who teach with Plasma TV.
- Students: - Refer to grades 9 and 10 students
- High achievers:- Refer to those students whose average scores is 75% and above
- Average achievers: - Refer to those students whose average scores were between 55% to 74%
- Low achievers:- Refer to those students whose average scorers are below 55%
- Plasma TV:-It is an educational medium used to deliver education to secondary school students using satellite via education media agency in government secondary schools. It is 42 inch television.
- Distance education: - used to cover various form of study at all levels where students are not in direct physical contact with their teachers for most period of the study time.
- High experienced teachers:-The teachers who have five years and above in teaching experience.
- Low experienced teachers:-The teachers who have less than five year in teaching.

1.6 Delimitation of the study

This study was delimited to the assessment of attitudes of grades 9 and 10 students towards learning through Plasma TV and teachers towards teaching with Plasma TV of Butajira Secondary School and Silti Secondary School. Hence, for greater generalization, the sample size be increased under-taking the sample population from across the country covering all sections of the groups.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

In this section it is tried to discuss empirical and/or reported evidences related to educational technology, communication, attitudes, and also with regard to the of use of educational television.

2.1 Relevance of ICT to developing countries

2.1.1 Meaning of education technology

Most educationalists generally consider educational technology as the use of microcomputer and audiovisual equipment. Yapi (1997) in UNESCO (1997) explains that to most educators the term educational technology refers to materials or equipment. But Thomas and Kobayashi (1989) in Yaps (1997) Maintain that educational technology is a complex integrated process whereby problems connected with all aspects of learning are conceptualized analyzed established and resolved through interaction between people, techniques, ideas and resources within an organizational framework. We can define its meaning by considering technology as a product and technology and as a process.

A. Technology as a product

According to Yap in UNESCO (1997), technology as a product can include teaching procedures, practices and materials consequently, the inputs from technological development comprise, non - physical products (programmed learning individual learning computer assisted education and the like). They can include physical products such as computers, videocassette recorders, radio and television sets, tape recorders, over head projectors, films, books, etc.

B. Technology as a process

Viewed from the angle of process dynamics, educational technology in an approach geared toward finding and improving solutions. So it should not be associated with products of such technology. It, therefore includes functions connected with the management of organizations and human resources, research, rational methods and practices related to the techniques of education and learning logistics, the use and establishment of systems. In other words educational technology is:

1. **Systematic:** in the sense that it uses a rationalized and structured techniques as opposed to activities organized haphazardly or with out proper management.
2. **Communicative:** due to the fact that any medium used in ordered towards the objectives of the educational design to guarantee the efficiency, economy and enhanced output of the selected modern.
3. **Scientific:** since it is based on the most proven results of the learning process and
4. **Systemic:** because it allows for the constant analysis of the problem of learning in its entirety (UNESCO, 1997)

Whit respect to methodology Yapi in UNESCO, (1997) consider the systemic approach as process connected with the planning and operation of a system as identified and analyzed. The main concepts of this approach are

- The phenomenon of self - regulation or feedback
- The control unit which takes account of information and

-The energy required operating the system and facilitating its adaptation to the surrounding environment.

Consequently, any inappropriate interaction between the control unit and the feedback mechanism or any inconvenient readjustment deregulates and disintegrates the system.

Moreover educational technology requires three operational phases to establish a given system: analysis, design and evaluation (UNESCO, 1997).

1. The analytic phase preceded the model design phase and comprises seven stages as follows
 - A. the preliminary analysis covers the phase during which the technologists determine the difference between the real needs of the target clientele in relation to the knowledge acquired and knowledge to be acquired.
 - B. studying the target audience phase, the technologist tries to acquaint himself herself with the learner through his/her aptitude and features that are most likes to interact with the other components of the model.
 - C. the contextual analysis stage, the technologist identifies not only the contextual and environmental conditions he/she also presents a better enlightenment through the data collected to examine the manner in which the model to be designed in harmonized correctly and naturally.
 - D. the job analysis stage enables the technologist to make an in-depth study of instructional information to be imparted to the learner.
 - E. the contextual analysis stage consists of examining the contents so as to identify the underlying concepts
 - F. the preparation of a summary programmed, plan of action and results of all the analyses conducted previously,
 - G. where it is intended for a course or training session, before preparing the appraised report, the technologist should systematically prepared in a

graphic form, a list of all the principal activities to be accomplished together with the duration, site and the agent involved

2. During the design phase, the technologist specifies the objectives of learning, prepares criteria tests, selects the media and system of presentation, prepares a draft design, and determines the set-up and production plan of the prototype.
3. The evaluation phase: The design phase precedes the design; evaluation, set-up and monitoring phase during which the possible anomalies are detected and necessary corrections are made before the system is put into operation. It is because, to prevent potential failures, the technologist should check his her prototype with the help of experts, learners and colleagues and make possible adjustments before the final products adopted , distributed and set-up (UNESCO, 1997). To ensure the smooth execution of this phase, all the preceding phases have to be implemented.

2.1.2 Use of information technology in teaching -learning process

In general, recent development in technology, especially in information communication technology, has set the pace of development at "fast forward" in all spheres. Particularly in teaching in the schools would serve a dual purpose; for the purpose of acculturation and for more efficient instruction (UNCESCO, 1997 in Ali, 2005). For acculturation purposes, a learner who is being prepared for technologically oriented world needs to be immersed in technology early. Technology is a new world culture and like all cultures it is best acquired in easily life. This would ensure that schools do not produce technologically maladjusted adults. By employing the information technologies the school would be facing up to new facts of life that the learners would be functioning in a technologically dependent society. The use of the new information technologies has become inevitable for survival.

Technology is about "machines". Machines make most works easier and achieve more work in less time. It can, therefore, be expected that employing technology in teaching would introduce better efficiency in the instructional system. This is achieved in many ways:

- expands the possibilities of learning /redundancy/
- adds some measure of reality to learning /concreteness/
- increase the perceptual scope of the learner /immediacy/
- motivates the teacher by making learning easier, more interesting and challenging
- provides the teacher with more reflective time for improving instruction, and
- makes record keeping and evaluation easier.

In general terms, the introduction of new technologies in education would provide education with more productive learning system, ensuring equal opportunities for learners. Technology itself has generated new information at an exponential rate and it is only through technology that the tremendous amount of available information can be harnessed and accessed in learning UNESCO (1997 in Ali, 2005).

Delivery technologies simply package information to give students access to educational experiences. The problem is the quality of the instructional messages rather than the inherent characteristics of the instructional medium used.

Clark (1983: 445) expound that educational technologies are "mere vehicles that deliver instruction but do not influence students achievement any more than the truck that delivers our groceries causes changes in our nutrition ". Taylor (1995) in Ali Yasin (2005) extends this view by taking the position that a teacher can be surrounded by a team of audiovisual technicians, graph artists and computing specialists to vary the style of the delivery of the

educational messages without producing a significant increase in pedagogical efficiency.

2.1.3 Instructional Design and technology

It is important to note that delivery technologies simply package information and instruction to give students access to educational experiences. What really matters is the quality of the instructional message rather than any inherent characteristics of the instructional media used. The need in education to differentiate clearly between the medium and the messages was highlighted by Clerk (1983), in James C. Taylor (1995), who made the point that educational technologies are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition. It is entirely feasible to surround a teacher with a team of audio -visual technicians, graphic artists and computing specialists to vary the style of the delivery of the educational without producing a significant increase in pedagogical efficacy.

The key process for improving the quality of teaching and learning according to Taylor (1995) is instructional design, which has received a significant boost from recent advances in instructional science, cognitive science and artificial intelligence, particularly expert systems (Anderson, J.R.1985; Glaser, 1991; Kidd, 1987; Landa 1976; Reigeluth, 1983; Winn, 1990).

In the first instance, the process of instructional design entails a systematic fine - grained analysis of the knowledge base and associated cognitive skills that provide the foundation of professional expertise in a particular discipline. This approach entails the application of such techniques as cognitive task analysis, no vex analysis Taylor (1994), concept-mapping Novak (1990), and knowledge engineering (Taylor and Thomas, 1994) in order to design a sequence of well- structured learning experience, thereby significantly enhancing the efficacy of the teaching - learning process.

In schools what appears to be required is a shift from the status quo, wherein a single teacher (often without formal professional qualifications in education) is more or less solely responsible for the design, development, delivery and evaluation of teaching programs, to a multi-disciplinary team approach, wherein a wide range of specialist expertise can be applied to the task of improving the quality of teaching and learning in schools (Taylor, 1995).

2.1.4 Technologies for formal education

The potential role of ICT in enhancing the educational process and more specifically in greatly facilitating distance education has been recognized.

Development of specific policies, strategies or plan to facilitate the transformation of traditional education in a country into ICT enhanced education system that could significantly contribute to the attainment of national educational goals and development on the context of the information age. As cited in Barbara laureate Elmer has noted as, education for all policies in many developing countries may be unrealistic. Only conventional educations are pursued. There is growing optimism surrounding the potential of information and communication technologies especially through distance learning for addressing educational access and quality issues in developing countries.

2.2 Relevant Theories related to communication

1. Two-way communication Theory

This theory asserts that both sender and receiver of information have got roles for communication to take place. This model was advocated by Friere

(1972). He believes that communication is naturally two-way, it should be a participatory, and democratic communication systems based on dialogue or negotiation between the two parties.

2. Audience –Determinism Theory

Studies by (Berelson, Lazarsfeld and McPhee, 1954; Klapper, 1960, in Amare, 1998), find that the audience of communications has resistance to the information they receive due their “Powers” in determining communication effects. Amare (1998) explains that such audience “powers” arise out of the active functioning of what are called “selective Processes”, selective perception and selective retention. He suggested that selective exposure refers to the tendency of people to expose themselves to communication in accordance with their existing interests, wants and needs, opinions and values and thereby avoiding unsympathetic issues. Amare further explains selective perception is the tendency to interpret communication messages on the criteria of interest communication messages on the criteria of interest, individual experiences, moods and purposes. Selective retention refers to the tendency for recall of information to be influenced by wants, needs, attitudes, and other psychological factors.

3. The Theory of media-determinism

McLuhan (1968) argues that “the media is the message” i.e. the way people think, their roles and associations have been always shaped more by the kind of medium they use than the content.

He is convinced that the mode of information reception provided by the electronic media such as television, video and computer is “all – at- once” or holistic whereas print provides what he calls a “linear” way of information reception; that is, word –by-word along a linear path, which finally created one-dimensional man.

Mander (1978), who is one of famous proponent of this theory, is also a media or technology determinist. Unlike Mcluhan, Mander advocates a complete elimination of the electronic media, particularly television. His reasons for the elimination of television include.

- Television destroys the neutrality of the environment
- Television is a mechanism for economic and political domination
- Television hinders the psychological development of the mind since it facilitated passivity and sleep learning and
- Television is undemocratic since it confines the content of information.

To Mander, print is serious and challenging including high amount of invested mental effort (AIME) during a learning process and thus the print is more important since learning is the amount of invested mental effort (Amare, 1998).

The audience has been discovered as having more “power” determining communication effectiveness (Amara, 1998). Friere (1972) also confirms the need for two-way communication system by coining the term “dialogue” in education and strongly argued against the dominant education system in which only the teacher played an active role and the learners kept in roles of passive receptions, “vessels to be filled in” with the “teaching package” of an educational planner or classroom teacher. He advocated a shift from pedagogy of the oppressive (which is one way and anti – dialogical) to the pedagogy of oppressed which is two way and participatory (Amare, 1998)

2.3 Research Evidences from Proponents of Media and Technology in the Teaching-Learning process.

(Reeves, 1998) expounds the reasons why so much attention is paid to media and technology. His reasons are:

- People are curious to know if new technologies are more effective for teaching and learning than traditional classroom approaches for students' cognitive and moral development.
- People want to know whether new technologies increase education accessibility or reduce educational costs.
- Commercial or corporate interests have started to influence the use of new technologies in schools and
- The existence of sharp disagreement about the value of media and technology in education.
- He believes that the seemingly contradictory findings often reported in educational research literature for the flames of the ongoing controversy about media and technology in education.

For example, Greefield (1984) in Reeves, (1998) asserts that media such as computer do not influence whether someone learns from instruction since learning results from factors such as task differences, instructional methods and learner traits including attitudes but not the choices of media for instruction.

Well known social critics (e.g. Postman, 1995; Winn, 1995 in Reeves, 1998) contend that television viewing is cognitively debilitating. Others blame such claims to be subjective and argue that there is no conclusive evidence that stultifies the mind and increase (Seels, et al, passivity in children 1996 in Reeves 1998). Moreover, most studies show that there no significant differences in the effectiveness between live teacher presentations and videos of teacher presentations (seels, *et. al.* 1996).

Reeves (1998), suggests that, historically, studies of the large- scale implementations of instructional television have shown mixed results. Three major forms of utilization have been investigated.

- Instances where the total instructional program is delivered via televised teacher
- Instances where there is an integration of teacher directed instruction with television programming and
- Instances where television is used to supplement teacher-centered instruction either for enrichment or remedial purpose.

Cuban (1986) explains that total international television programs in countries like El Salvador have met with initial enthusiasm, but decline in popularity after the novelty wore off and both student and teachers demanded less television and a return to regular classroom activities. Some studies indicate that students in rural schools, where quality teachers were less likely to be available, benefited the most from televised instruction (Seels *et. al.*, 1996 in Reeves, 1998).

Passey *et.al* (2004) investigates the effects of ICT on pupils' motivation. A sample of 17 schools from a cross England was surveyed. This study found that ICT positively impacted in motivation, enhanced learning and teaching, improved communication and access to information when it is used in the constructivist but not from instructive situations (Stark, *et. al*, 2000).

But Dale (1969) advocates in using of television. According to him television

- Concretizing human experiences
- Providing up to date information

- Distributing information to large masses of evidence to models of excellence
- Equalizing educational opportunities
- Bringing the world of reality to the class room
- Distributing all instructional media and school laboratories to every classroom
- Creation of sustained attention (Dale, 1969, in Amare, 1998).

Schramm (1977) contends that most experimental studies compare television instruction with classroom instruction. For him the more carefully such comparisons are designed and controlled, the more likely they are to show significant difference in learning from the two sources.

Chu and Schramm (1963) in Schramm (1977) tabulate 421 television versus classroom comparisons and find out that 308 of the studies shows no significant difference, 63 of the studies come out in favor of televisions, 53 of than come out in favor of classroom (conventional) teaching.

Similarly, Dubin and Hedloy (1969) in Schramm (1977) examine 381 such studies and find out 191 showing no difference, 102 in favor of television, and 89 in favor of class room instruction. Schramm (1977) concludes, "There is no bases in the research for saying that student learn more or less from television than from classroom teaching. It depends on the performance of the teacher, the content of the media, what is being taught and to whom."

Research data indicates that student' attitudes towards increases. Students new to a particular technology may initially exhibit some concern about the role of technology in the learning experience (Smith and McNelis, 1993). However a series of studies has shown that familiarity with technology over time erodes anxious feelings (Riddle, 1990; Jones 1992; Smith and NCNelis, 1993). Alternatively another source of difficulty

linked to technology has surfaced in some students comments about frustration resulting from equipment design or function problems, such as poor sound or an inability to see or speak with the instructor (Riddle, 1990).

On balance, several studies have revealed no significant negativity in student attitudes about the use of technology in teaching and learning (Barron, 1987).

Student teacher interaction also plays an important role in students' attitude about TV learning. Studies have shown that students attitude toward TV education can be significantly affected by facilitating some degree of interaction among students and teachers. (Ritchie and Newby.1989).

McLuhan is a pioneer as a "technology-determinist" and asserts that "The medium is the message" He argued that television as a medium is more concerned with pattern identification than fragmentation or recall thinking which is linear (McLuhan, 1964 in Amara 1998). McLuhan (1967) further says that television is "a cool medium" contrary to print, which is a "hot medium". The term "cool" refers to having the characteristics of more student involvement and participation in learning which yields to information flowing in multiple senses leading to create a more intelligent person who has the ability to deal with high-level abstractions such as configurations and patterns (McLuhan, 1967). The print media is after associated with a "hot medium". Prior to the print press, man received information all-at-one in "patterns" or "configurations". In contrast, print transmits information "lineally and sequentially" McLuhan argues in Amare (1998).

Mander (1978) expound that, on the basis of psychological evidences, television is a communication medium that effortlessly transmits huge

qualities of information not through about the time of exposure. Mander (1978) also contends that television information is not available for conscious analysis, understanding or learning as well as sleep teaching and very dangerous to the society and, therefore, must be eliminated.

Amara (1998) also posits that television method of learning is the antithesis of learning with hard work ethic due to theory of competition for attention, automation and reduced visual distance.

Salomon and Leigh's (1984) in Amare (1998) assume that any learning depends in the Amount of Invested Mental Effort (AIME) by the learner. The more mental effort the students invest in learning a material from a given medium, the more the students learn from the medium. It is therefore, true that students tend to invest less mental effort when learning from television and as a result learning less since they perceive it as a fun medium.

According to Amare, greater exposure to television creates the learning of a television method of learning. Students learn to learn materials that have simplicity, entertainment, fun, etc. Consequently, students find it difficult and unentertaining to read the serious books. Understanding their content and intent requires application of high AIME. Television has, however, eroded this habit, the habit of hard work in education (Amare, 1998).

2.4 The Literature Concerned on Attitudes

2.4.1 Definition and Concept of an Attitude

Different scholars have defined attitude in various ways. Atkinson, Berne, and Wood Worth (1982:41) defined as relativity stable and enduring predisposition to behave or react in a certain way toward persons, objects, instructions or issues.

The prominent psychologist Morgan (1966:594) defined attitude, as "it is tendency to respond positively, that in favorably or negatively that is unfavorably to certain object, persons or situation.

As to Caldwell (1996) (cited in Daniel, 2000) attitude is a state of readiness based on past experiences, which guide bias or other influences of our behavior. It is a disposition readiness to respond to certain situation, persons, objects or idea in a consistent manner what has been learned and has become one's typical mode of responses (Freeman, 1955) cited in Dandapani (2001).

These definitions imply that, attitudes are social and are formed in social groups. They are often other persons and objects, and can affect our relationships with others. They are learned. They are stable mental positions, which are held toward an idea, object or person. Attitude can express passions, hates, attractions, repulsion, likes and dislikes. Hence, every attitude is a combination of beliefs, feelings, evaluations, and some dispositions to act accordingly. Attitude is crystallized as a result of feeling such as favoring or disfavoring the attitude object

If an attitude is firmly fixed and not open to free discussion will lead to prejudice (Hilgard (1957). A cook who prefers cane sugar than beat sugar and become unwilling to try beat sugar, or some one who reflects a certain culture as inferior to the other, or state women as they are not think as wisely as men, etc. are good examples of prejudices.

On the other hand, when an attitude is accompanied by excessive emotions, according to the same author is "complex" that often leads to neurotic type of response result. For that interferes with other normal human relationships can result a "motor complex" attitude. Such an attitude of excessive self-determinate of the individual troubled by it is termed as "inferiority complex".

The attitudes we develop towards some body /thing may range from highly positive to extremely negative. Attitudes are also likely to vary in importance. For instance, our attitudes toward friends & family are generally important in our interaction on the social world, where as our attitude towards TV, news bulletin may be relatively not worth mentioning.

CHAPTER THREE

3. METHEDODOLOGY

In this chapter the methodology of the study is discussed briefly which has been employed for carrying out the present study.

3.1. Research Method

The research method is descriptive survey research method. This method is selected as appropriate to obtain the data and to achieve the objective of the study proposed.

3.2 Variables

The variables treated in the study are as follow:

1. Dependent variables: - The dependent variables in this study were the attitude of students and the attitude of teachers
2. Independent variables: - The independent variables were gender, grade level, achievement level and residence for student subjects. Gender, grade level, achievement level and residence were not treated for teachers rather experience in teaching profession was treated as independent variables.

Gender represents male and female subjects, the code were '0'for males and '1' for females as nominal to compute analysis of variance.

Achievement level represents students' performance in the first semester result of 20005. This was selected as independent variable for some reasons. The high achiever students have base on English language ability

and in understanding subject matters easily due to their language understanding or totally due to their background. Those of average achievers are intermediate in understanding subject matters very quickly, and also the low achievers are poor in understanding subject matters quickly. The one that hamper their understanding subjects could be the language problem (English language). They could not cope up even when learning in conventional system.

The three categories may have different results. '4', '5' and '6' were coded to low achievers, average achievers and high achievers respectively for MANOVA computation.

The researcher also considers grade level (9th and 10th). Grade 10 students have somewhat better experience in learning through Plasma TV than grade 9 students as the system or the innovation started its delivery system at the end of 2005. The grade 9 students were new to the innovation. This was selected as variable to compare their result. '2' is given to 9th grade and '3' is given to 10th grade for MANOVA computation.

The variable residence refers to the subjects who live in urban or in rural areas. This was selected as variable to see whether the subjects in urban area has influence positive or negative attitudes to technologies, such as television and getting information about use of new technology to education. This category was coded as "6" to rural subjects and "7" to urban subjects for MANOVA computation.

Regarding teachers, the variable treated was the experience in teaching profession. This was selected to see whether there is significant difference between highly experienced and less experienced teachers in their attitudes. The experience in teaching profession was categorized in to: highly experienced teachers (greater than or equals to 5 years experience in teaching profession) and low experienced teachers (less than 5 years).

3.3 Study Site

The study sites of this paper were in Butajira Secondary School and Silti Secondary School.

Butajira secondary school is found in SNNP of Guragie zone, which is about 130km south of Addis Ababa. The school was established in 1972 E.C as Secondary School.

By now the school has both cycles (the first and 2nd cycles of secondary levels). According to the New Education and Training Policy the first cycle secondary level is from grade 9 to grade 10 and second cycle secondary level is grade 11 and grade 12 (Preparatory to tertiary level). From both cycle 1305 male and 1120 female with a total of 2425 students were attending their schooling in two shifts (Morning and afternoon).

The average class size for grade 9 and grade 10 is 80 and for grade 11 and 12 is 75. The total number of teachers in the school was 53.

The Butajira Secondary School has thirty-four Plasma TV set with its accessories. The school has no stand-by generator. Standby generator was not planted on the school with unknown reason as the school director described.

The study focused on grade 9 and grade 10 students because the researcher wanted to compare the students' attitudes of Butajira Secondary School and Silti Secondary School towards learning through Plasma.

The Silti Secondary School is found in Siltie zoned in SNNP. It was established in 1987 E.C. From the beginning the school was primary school. From 1945-1966 E.C. it was primary school then from 1967 E.C it

was upgraded to Junior secondary school (grade 1- grade 8).By now it is a Secondary School.

The Silti Secondary School comprises 890 students (409 male and 128 female students at grade 9, and 267 male and 86 female at grade 10) in the academic year. The total teachers were 15 of these 5 were degree holders and 10 of them were diploma holders (under qualified teachers according to NETP). The school is furnished with 8 set of plasma TV which were on duty. There was also standby generator if in case electric power interrupted or fluctuated, but it failed to achieve intended objective/purpose due to lack of oil and gasoline. If the electric power is interrupted, in parallel the teaching-learning process totally will be interrupted.

Even though the problem under investigation appears to exist in the whole countries in Ethiopia, the researcher has chosen Butajira and Silti Secondary Schools as study sites for some reasons.

1. Both schools have access to transportation and they are near to Addis Ababa
2. The researcher worked as educational officer in the zones (Silite & Gurage zones) for more than four years. From these years the researcher has acquaintance with some of the Butajira Secondary School and Silti Secondary School teachers, and Wereda and zonal officers which may enable the researcher to obtain full cooperation during the research process.

3.4 Population

The target populations of this study were grade 9 and grade 10 students of Butajira secondary school and Silti Secondary Schools, and teachers inboth schools.

3.5 Sample

In this study students and teachers were involved. The selection of the schools was made in consideration of time, transportation, budget allocation, and distance of the study site.

3.5.1 Selection of Students

Convenient sampling was employed for the selection of students. Using on the purposeful sampling total 240 students out of a total of 2190 students from Butajira and Silti Secondary School were selected. Out of these 240: 50% were male and 50% were female, of these 1/3 of low achievers, 1/3 of moderate achievers and 1/3 of high achievers, and also of these 50% were grade 9th and 50% were grade 10th besides 50% were urban and 50% rural. To select the achievement level (higher achievers, lower achievers and moderate achievers) the results of r of first semester of academic year 2005-2006 were taken as criterion for achievement.

3.5.2 Selection of Teachers

Thirty-nine teachers were involved in teaching with TV in grade 10 and grade 9 only. From those 15 teachers were low experienced (below 5 years experience in teaching) and 24 high experienced teachers (≥ 5 years of experience in teaching).

All the teachers were involved in the study based on available sampling technique (Nachmias and Nachmias, 1987). Non-televised subject teachers and preparatory teachers were not involved in the study.

3.6 Instrument Used for Data Collection

The instruments that were employed in this study were attitude scales, observation, and document analysis.

The Attitude Scales were of two separated types; the Attitude Scale for students, and for teachers. The researcher could not find a standardized Attitude Scale for the assessment of attitude towards learning from and teaching with TV. Due to this, the researcher developed all the scales of the Attitudes.

Before starting the construction of items, the researcher made informal talks/discussions with some teachers and used some ideas from literature review and interviewed some members of relevant bodies to target population. This was intended to state items in the subjects' concepts, and experiences (Fowler, 1988).

After these all, the researcher constructed the items for all the Attitude Scales by following the guidelines/principles of designing attitude items and by examining the way other attitude items and scales are developed (Anastasi, 1976; Ebel, 1979; Brown, 1983; Nachmias and Nachmial, 1987; Anderson, 1990; Mehrens and Lehman, 1991; Best and Kahn 1993; Bouma and Atkinson, 1995; Crowl, 1996; Dandapani, 2001).

The Attitude Scales were rated on a 4-point Likert-Scale (strongly agrees, agree, disagree and strongly disagree). A high score indicates favorable attitudes, while low score represents unfavorable attitudes. The negative statements were scored in a reverse direction. In the students' attitude scale 13 items were positive and 12 items/statements were negative whereas in teachers attitude scale 11 statements were positively phrased and 11 statements were negatively phrased. The reason is to reduce the effect of response bias, the tendency to respond in one direction with some

neglect of the statement being rated (Anderson, 1994), and the statements were randomly placed in the scales so that it would help to minimize response bias (Coolican, 1995).

The total number of items prepared for pilot test was 36 for students, and 30 for teachers, after the scale had been commented by judges (three psychology teachers, two from Kotebe College and one from Civil Service College and five of my colleagues) regarding on its appropriateness the items were settled. The judges discarded 10 items from students Attitude Scale and 6 items from teachers Attitude Scale and some were revised. Then Scales were translated into Amharic. Backward and foreword translation had been taken place by one of my colleagues who was English teacher in a secondary a school. After this the pilot testing of the Attitude Scale was carried out on 30 individuals from student group and 10 individuals from teachers group.

After the pilot testing of the scale, item analysis was carried out in the way indicated in Coolican (1995). Items which best discriminated between the respondents were taken (Ebel, 1979).

Following item analysis, 25 item for students and 22 items for teachers were made ready for the final Attitude Scales.

The reliabilities estimates for the total items of each attitude scale were computed using SPSS. The reliability estimates for total items of students and teachers using Cronbach alpha were found to be 0.74 and 0.71, respectively.

3.7 Procedure of Data collection

The researcher contacted the principals in respective schools and gave them letter written by psychology department of Addis Ababa University.

After mutual understanding was set with principals, the principals introduced the researcher with other members of staff of the schools. In Butajira high school, mathematics department teachers cooperated highly as most of them had acquaintance with the researcher. In Silti secondary school, the principal was friend of the researcher and also the researcher had acquaintance with most of teachers in the school.

The subjects of student group were told the purpose of the study and, about the confidentiality of the data they would give and about their unaccountability for whatever issue concerning the study so that they may respond more honestly.

The Attitude Scale for students was administered in group in their respective schools so as to show how to fill the scale, in their schools hall, with assistants to help them when they face difficulty, and also to prevent copying from one another or to avoid discussions between them. The instruments were administered to the subjects with care by matching codes with their names. The coded instruments to the respective achievers were distributed to students. '1' was coded to low achievers, '2' was coded to moderate achievers and '3' was coded to high achievers.

The Attitude Scale for the teachers was distributed personally in their respective schools.

3.8 Methods of Data Analysis

In the data analyses, different statistics were employed. To find out the degree of each group's attitudes, one sample t-test was used. The expected mean (μ) to be compared with the observed mean was computed by t-test. The expected mean ($\mu = \text{maximum score of the scale of total number of items} + \text{minimum score of a scale of total number of items} \div 2$, Yalaw, 1997) was found. Accordingly for the students expected mean (μ) is 62.5 and for teachers' Attitude Scale expected mean is 55.

To see whether there was a significant difference between highly experienced teachers' and low experienced teachers attitude towards teaching with Plasma TV t-test was employed. MANOVA was employed for analyzing collected data to examine whether there were attitudinal variations towards learning through Plasma screen due to difference in grade level, achievement level, gender, and residence.

CHAPTER FOUR

4. Results

In this chapter, the collected data analyzed with respect to each variable for both students and teachers are presented.

4.1. Analysis of attitudes based on grade level

Table 1. One sample t-test to examine the magnitude of the attitude of grade 9 students

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
120	62.5	67.3	12.03	1.185	4.05*	1.97

* $P < 0.05$; μ =Expected mean; S.D=standard deviation;M=obtained mean, SEM=Standard error of mean; t_{ob} =t-observed; t_{cr} =t-critical

As depicted in Table 2, the calculated t-value, i.e. 4.05, is greater than the critical t-ratio, i.e. 1.97 at 0.05 level of significance. It shows that there is a significant difference between the sample mean and the expected mean scores of the students' attitude towards learning through Plasma TV. Again, it can be viewed from Table 2 that the sample mean 67.3 is greater than the expected mean (62.5) therefore, it can be interpreted that the grade 9 students have positive attitude towards learning through Plasma.

Table 2. One sample t-test to examine the magnitude the attitudes of grade 10 students

N	μ	M	SD	SEM	t_{ob}	t_{cr}
120	62.5	65.19	13.11	1.197	2.25*	1.97

* $P < 0.05$; μ =Expected mean; ; S.D=standard deviation,M=obtained mean,

SEM=Standard error of mean; t_{ob} =t-observed; t_{cr} =t-critical

As depicted in Table 2, the calculate t-ratio, i.e. 2.25, is greater than the critical t-ratio, i.e., 1.97 at 0.05 level of significance. It shows that there is a significant difference between the sample mean and the expected mean scores of the students' attitude towards learning through Plasma TV. Again, it can be viewed from Table 2 that the sample 65.19 is greater than the expected mean (62.5). Therefore, it can be interpreted that 10th grade students seems to have positive attitude towards learning through Plasma TV.

4.2 Analysis of attitude based on gender

Table 3. One sample t-test to examine the magnitude the attitude of male students

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
120	62.50	67.3	12.91	1.18	4.07*	1.97

* $P < 0.05$; μ =Expected mean; S.D=standard deviation

SEM=Standard error of mean; t_{ob} =t-observed; t_{cr} =t-critical

As shown in Table 3, the calculated t-ratio, i.e. 4.7 is greater than the critical t-ratio i.e. 1.97, at 0.05 level of significance. It shows that there is a significant difference between the sample mean and the expected mean scores of male students' attitude towards learning through Plasma TV. Again, it can be observed from Table 4 that the sample mean 67.3 is grater than the expected mean 62.5. Hence, it can be said that the male students seem to have positive attitude towards learning through Plasma screen.

Table 4. One sample t-test to examine the magnitude the attitude of female students

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
120	62.5	65.8	13.15	1.2	2.7*	1.97

* $P < 0.05$; μ =Expected mean; SD=; S.D=standard deviation
 SEM=Standard error of mean; t_{ob} =t-observed; t_{cr} =t-critical

As observed in Table 4, the calculated t-ratio i.e. 2.75 is greater than the critical t-ratio i.e. 1.97 at 0.05 level of significance. It shows that there is a significant difference between sample mean and the expected mean scores of female students' attitude towards learning through Plasma TV. Again, it can be seen from Table 4 that the sample mean 65.8 is greater than the expected mean 62.5. Hence, it can be said that the female students seem to have positive attitude towards learning through Plasma screen.

4.3 Analysis of Students Attitude based on Achievement Level.

Table 5. One sample t-test to examine the magnitude the attitude of low achievement students

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
80	62.5	59.22	12.50	1.402	2.34*	1.98

* $P < 0.05$

As shown in Table 5, the calculated t-ratio, i.e., 2.34 is greater than the critical t-ratio i.e. 1.97 at 0.05 level of significance. It shows that there is a significant difference between the sample mean and the expected mean scores of the students' attitude towards learning through plasma. It is also observed from Table 5 that the sample, mean 59.22 is less than the

expected mean 62.5. Hence, it can be said that the low achievers students seem to have negative attitude towards learning through Plasma.

Table 6. One sample t-test to examine the magnitude the attitude of average achiever students.

N	μ	Mean	S.D	SEM	t_{ob}	t_{cr}
80	62.5	63.39	12.91	1.44	0.62	1.98

$P > 0.05$

As shown in table 6, the calculated t-ratio i.e., 0.62 is less than the critical t-ratio i.e. 1.97 at 0.05 level of significance. It shows that there is no significant difference between the sample mean and the expected mean scores of the students' attitude towards learning through Plasma TV. But it can be observed from Table 6 that the sample mean 63.39 is greater than the expected mean 62.5. Therefore, it can't be interpreted that the average achiever students seem to have positive attitude towards learning through Plasma TV even though the sample mean is greater than expected mean.

Table 7. One sample t-test to examine the magnitude the attitude of higher achiever students

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
80	62.5	72.85	11.49	1.28	8.06*	1.98

* $P < 0.05$

As shown in Table 7, the calculated t-ratio, i.e. 8.06 is greater than the critical value (1.97) at 0.05 level of significance. It shows that there is a significant difference between the sample mean and the expected mean scores of the high achiever students' attitude towards learning through plasma. From the table 8 also, can be observed that the sample mean

72.85 is greater than the expected mean 62.5. Therefore, it can be interpreted that the high achiever students seem to have positive attitudes towards learning through Plasma TV.

4.4 Analysis of Attitude of Students Regarding to Residence

Table 8. One sample t-test to examine the magnitude of the attitude of rural students

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
120	62.5	66.65	11.94	1.6	3.81*	1.97

* $P < 0.05$

As shown in Table 8, the calculated t-ratio, i.e. 3.81 is greater than the critical value 1.97, at 0.05 level of significance. It shows that there is a significant difference between the sample mean and the expected mean scores of the attitude of the rural students towards learning through Plasma TV.

From the table 8 also, can be observed that the sample mean 66.65 is greater than the expected mean 62.5. Therefore, it can be interpreted that the rural students seem to have positive attitudes towards learning through Plasma TV.

Table 9. One sample t-test to examine the magnitude the attitude of Urban students

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
120	62.5	65.83	14.14	1.29	2.58*	1.97

From the Table 9, it is easily observed that the observed t-value is greater than the critical t value at 0.05 level of significance. This shows that there is significant different between sample mean and the expected mean (μ)

scores of attitudes of the urban students towards learning through Plasma TV. Hence, it can be interpreted that the urban students seem to have positive attitude towards learning through Plasma TV.

4.5. Analysis of MANOVA Results for Students Attitude Towards Learning through Plasma TV.

Table 10. MANOVA Summary Table for students' attitude

Source	df	SS	MS	F _{ob}	Sig
Grade Level (G)	1	266.704	266.704	1.795	.182
Sex (S)	1	387.604	387.604	2.609	.108
Achievement Level (A)	2	5265.308	2632.654	17.720	.000*
Residence (R)	1	40.838	40.838	.275	.601
G*S	1	1.504	1.502	.010	.920
G*A	2	240.508	120.254	.809	.446
S*A	2	90.008	45.004	.303	.739
G*S*A	2	181.808	90.904	.612	.543
G*R	1	1054.204	1054.204	7.096	.008*
S*R	1	75.937	75.937	.511	.475
G*S*R	1	53.204	53.204	.358	.550
A*R	2	286.975	143.488	.966	.382
G*A*R	2	132.008	66.004	.444	.642
G*S*A*R	2	351.908	175.954	1.184	.308
Residual	216	32090.500	148.567		
Total	240	1094040.0			

$P > 0.05$; * $P < 0.05$; df =degree of freedom

SS =Sum of squares; MS =Mean Square; F_{ob} =F-Observed : Sig =significance level.

The result in Table 10 shows that students grade level, sex, and residence were not statistically significant in influencing the attitudes of students

towards learning through plasma TV. However, the students' achievement level was statistically significant in influencing the attitude of the students towards learning through plasma. Comparison of high achievers students' mean (72.83), average achievers (63.39) and low achievers (59.22) shows that high achievers tend to have highly favorable attitude, whereas the average achievers show less favorable attitude than higher achievers and the low achievers have negative attitude towards learning through Plasma TV. Table 10 again indicates that except the interaction effect of grade level with residence others were not are statistically not significant in influencing their attitudes towards learning through Plasma TV.

Figure 1 summarizes the interaction of grade level by residence as follows.

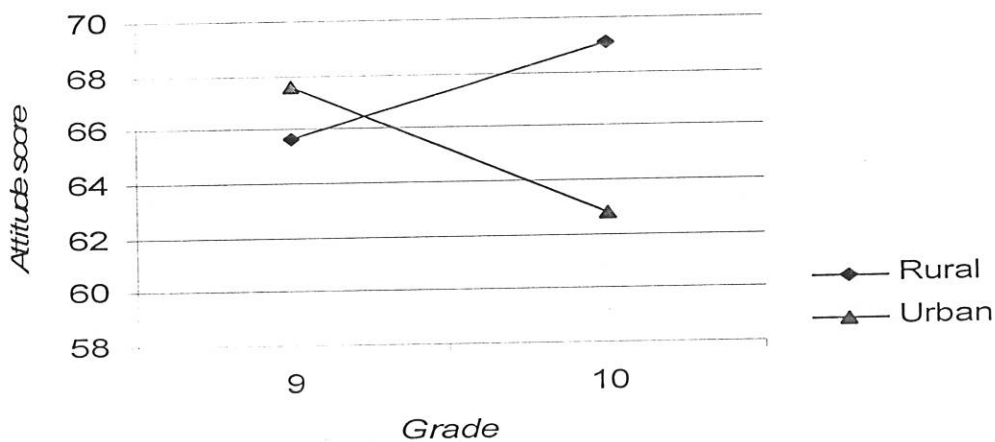


Figure 1. Grade level by Residence interaction

As depicted in the figure 1 above, it clearly indicates that the urban grade 9 students had higher attitude scores than grade 10 urban students whereas grade 10 rural students scored higher than grade 9 rural students.

4.6 Attitude of teachers towards teaching with Plasma TV.

Table 11. The magnitude of attitudes of experienced teachers

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
21	55	53.67	7.11	1.19	0.86	2.03

$P > 0.05$; μ =Expected mean; SD=standard error of mean

SEM=Standard error of mean; t_{ob} =t-observed; t_{cr} =t-critical

From the Table 12, it is observed that the calculated t-value is less than the critical value of t at 0.05 significance level. This shows that there is no significance difference between sample mean of attitudes of the highly experienced teachers and the expected mean (μ) scores. However; from the Table 11, it is observed that the sample mean 53.67 is less than expected mean 55. Therefore, it is not possible to say that experienced teachers have negative attitude towards teaching with Plasma TV.

Table 12. One sample t-test to examine the magnitude of the attitude of less experienced teachers

N	μ	M	S.D	SEM	t_{ob}	t_{cr}
14	55	63.5	10.44	2.78	3.058*	2.03

* $P < 0.05$

As shown from Table 12, the calculated t-value is greater than the critical t-value at 0.05 level of significance. This shows that there is a statistically significant difference between sample mean and the expected mean (μ) scores of attitudes of the less experienced teachers towards teaching with electronic media.

From the Table 12, also can be observed that the sample mean (63.5) is greater than the expected mean. Therefore it is possible to interoperate the

result that the teachers who have less experience in teaching profession; show positive attitude towards teaching with Plasma TV.

Table 13. Independent t-test Analysis of the attitude of experienced and less experienced teachers.

N ₁	N ₂	X ₁	X ₂	Sp ²	t _{ob}	t _{cr}
21	14	53.67	63.50	73.62	3.34*	2.03

$P < 0.05$; N₁=Number of samples of high experienced teachers; N₂=Number of samples of low experienced teachers; X₁=Mean of the samples of high experienced teachers; X₂=Mean of the sample of less experienced teachers; Sp²=pooled variance; t_{ob}=Observed t-value; & t_{cr}=t-critical value

As revealed from the Table13 the calculated t-value is greater than the critical value at 0.05 level of significance. This result shows that there is significant difference between the mean of experienced teachers and the mean of less experienced teachers. Also from the Table 13 it is observed that the mean of high experienced teachers (53.67) was much less than the mean score of the teachers that has low experience in teaching profession. Hence, it could be interpreted that low experienced teachers hold more favorable attitude than high experienced teachers do.

CHAPTER FIVE

5. DISCUSSION

The findings of this research depicted in the preceding sections (Tables from 1- 13) that the students with high achievement reported positive attitudes towards learning through Plasma TV. On the contrary, the students who were low achievers held negative attitudes towards learning through Plasma TV. Teachers showed mixed results on the attitude of teaching with the TV. The experienced teachers reported a lower than the expected mean whereas the low experienced teachers showed positive attitude towards teaching with Plasma TV.

It has already been mentioned in the related review of literature that studies conducted by different educators on attitudes of students towards learning through plasma/TV screen and attitude of teachers towards teaching with Plasma TV have been quite contradictory (McNeils,1993; Riddle,1990; Dubin and Hedley cited in Schramm, 1977).

5.1 Discussion on the attitude of students towards learning through Plasma TV.

As mentioned at the outset of this empirical work, the investigations of the attitudes of students toward learning through Plasma TV were carried out by considering four variables (grade level, gender, achievement level and

residence). Several conditions that are supposed to explain their attitudes were briefly discussed in the following sections.

5.1.1 Sex

Regarding sex, the analysis for gender difference revealed that male and female students tend to have held positive attitudes towards learning through Plasma TV. The pattern of sex similarity to favor learning through Plasma TV is consistent with the generally reported findings of sex difference in attitude towards learning by television (Simmons, 1991; Jones, 1992).

For their positive attitude the reasons might be:

1. The technology is new, hence, they feel proud to have learning through the latest technology
2. due to its attractive multi-colors
3. due to its attractive voice and sound with attractive lesson presenting style.
4. that presenting different music' of different cultural diversities at recess.

5.1.2 Grade Level

In general, both grades 9 and 10 students held positive attitude towards learning through Plasma. However, 9th grade students, showed a little more favorable attitude than of 10th grade students. The grade 9 students were delayed to experience the new innovation by one year than the grade 10 students; therefore, they are still enthusiastic to the new technology.

On the other hand for grade 10th students, it was not new, the novelty is wearing off (Cuban, 1986).

5.1.3 Achievement Level

To make the study comprehensive, the attitudes of student towards learning through Plasma TV was investigated as a function of achievement levels (high achievers, average achievers and low achievers).

As it has been mentioned at the outset of this chapter, high achiever students held positive attitudes toward learning through plasma, but the low achiever students held negative attitude. However it is not possible to say whether average students have positive attitude or negative attitude because the t-test indicated that the difference is not statistically significant. The reasons to this difference could be:

1. The subjects delivered by satellite were using only English language. However, most of students have weak background on English language even though they started learning from grade 1. Let alone the low achievers, the high achievers have great difficulty in understanding the subject matter of contents due to their weakness on English language.
2. In television learning, the time management was not flexible rather was too rigid. It didn't open room to ask questions on topics, which were not clear to them. The time was fixed in a way that 30 minutes given to televised teacher and 10 minutes to classroom teacher to stabilize what the televised teacher taught.

3. As students witnessed the pace of delivering lesson was very fast. Most students couldn't cope up with the pace. Due to these case most of lower achievers and average achievers were busy by engaging with irrelevant tasks, such as talking with colleagues about the dressing style shape, voice, etc of televised teacher. They considered the deliver of lessons as fun media, like action film or some other movies. Such situations reminded the Amharic Proverbs “አንኳንም ዘንቦብሽ ድሮውንም ጤዛ ነሽ” which means let alone rained upon you, you were wet before” and “ በሰው ቁስል አንጨት መስደድ” which means piercing sticks on other's wound” to indicate that the program was not treating them rather harming the lower achievers and average achievers.

The researcher had opportunities to attend 9th grade mathematics classes and 10th grade mathematics classes. It seemed that it was prepared to teach selected fast learner students. The time given to take note was not faire and the time given to do given exercise was also not sufficient (Ali, 2005). The teachers had no spare time to check student's exercise books for the activities given by the televised teacher. How wonder without checking exercise books be possible to have good cognitive development on subject matters especially in mathematics subject and language?

The program was more appropriate to content coverage than inculcating the learning outcomes. The content would be covered exactly on planned time. The televised teacher couldn't consider students attention, whether the time given is enough or not, whether the weather is hot or cold,

whether the students are motivated or not, etc. In condensed term the system of delivery didn't consider the time, place, and condition of students. It is extremely inflexible (Mender 1976; Amare, 1998), and considered all students as having similar background, intellectual levels, psychological states, etc.

The program was one-way communication. It also seemed very much suitable to convey centralized message to targeted audience, like that of tertiary level students meeting which was taken place in August 2005 for about 20 days in each region of the country, Ethiopia, and also the meeting of teachers held on February, 2006 which was taken place through Plasma TV in each secondary school that had Plasma TV (Frier, 1972; Mender 1976; and Amare, 1998).

The other factor may be due to student teacher interaction. The results indicated that experienced teachers did not hold positive attitude, so that the students could reflect their teachers feeling (Ritchie and Newby, 1989).

5.1.4 Residence

As displayed earlier in Table 8 and 9, overall attitudes of students whether whose residence was urban or rural held positive attitude. The reasons might not be different that were suggested to gender effect.

5.2. The interaction effect

In figure 1, the grade level by residence interaction was statistically significant at 0.05. Grade 9 students of urban showed more favorable attitudes than grade 10 students of urban. The reason might be from the beginning the students were enthusiastic to the new technology due to its attractive presentation. They may have taken it as fun media and after a year they might be dissatisfied with their result.

The grade 9 students of rural showed fewer attitudes than grade 10 students. The reason might be they were new to the technology. Hence, they did not watch movies or films unlike the urban students. Therefore, from the beginning they might fear the media but through time they might adapt the situation. Hence, they showed better attitude than beginners to the new technology.

5.3 Attitudes of teachers towards teaching with plasma TV

As presented in table 13 those experienced teachers held lesser favorable attitude towards teaching with Plasma TV than less experienced teachers. So far no study on the attitudes of teachers with Plasma /TV was done available, the reason might be:

1. The more time was given to televised teachers and for classroom teacher shared only 10 minute in a period of 40 minute duration. Classroom teachers' role diminished. Their (teachers) main role becomes closing and opening of the Plasma TV. Even most teachers gave the responsibility to the classroom monitors. The classroom

monitors were most responsible persons to the controlling students and operating the Plasma TV by remote control. In both schools most teachers lost their role.

1. Some teachers were not prepared psychologically to teach students. Even most of them did not prepare unit lesson plan. While the researcher was collecting data on Butajira secondary school, students were learning 2nd period in morning session. Unfortunately, the electric power was interrupted for the whole day. Eventually the teaching learning process had been interrupted; none of televised subjects were taking place at that specific day. The problem was not over on that specific day. On the next day the content being delivered were different from previous day. The EMA did not consider Butajira secondary school's problem or else there were no means to repeat that missed lessons which were delivered by satellite. In this case, great interruption in teaching learning process would happen.
2. Because of such the program greater attention were not paid to in-an information era. The researcher held informal discussion with teachers about the technology. They said "even though the new system has some problems on the implementation, it will improve soon". As they said the problem before were worse than at present. It became improved. Previously there was no spare time even to go from class to class to give introduction about lessons. The time was

continuous but now we have 2 minutes gap to walk from a class to class. Now- a- days things are improving. There is also plasma delivery brake at the time of exams, and also tutorial program is arranged from which some portion of delivered lessons through Plasma TV is presented on every Saturday. Students are participating on these programmes. We shouldn't expect perfection at a time. As you know there are shortage of qualified teachers and laboratory equipment, such problems are more or less solved by new technology. Our students become recognizing the value of time.”

CHAPTER SIX

6. Summary, Conclusion and Recommendations

6.1 Summary

The major objectives of this study were to assess the attitudes of students toward learning through Plasma TV and the attitude of teachers toward teaching with Plasma TV, and to find out whether there were variation in attitudes of students due to gender, grade level, achievement level and residence. In the light of these major objectives, the following basic research questions were formulated.

- ❖ What attitudes do students hold toward learning through Plasma TV as the function of gender, grade level, achievement level and residence?
- ❖ What attitudes do teachers hold towards teaching with this electronic media?
- ❖ Is there any significant difference in the attitudes of students due to gender, grade level, achievement level and residence?
- ❖ Is there any significant difference in the attitudes of teachers between high experienced teachers and low experienced teachers in teaching with Plasma screen?

In order to achieve the objectives, two different types of Attitude Scale were developed and used. The pilot study was carried out and their reliability estimates were calculated, and then administered to 240

students and 35 teachers that were selected using convenient sampling technique and available sampling technique respectively. All the questionnaires were administered to the selected sample and the researcher obtained data. The attitude of students towards learning through Plasma TV as function of gender, grade level, achievement level and residence, and the attitude of teachers toward teaching with Plasma TV as function of experience in teaching profession were found out by using one sample t-test and independent sample mean t-test, while the existence of attitudinal variation of students in gender, grade level, achievement level and residence were checked by using MANOVA. The results of t-test and MANOVA revealed the following findings.

- In general the grade 9, 10, rural, and urban students held positive attitude toward learning through Plasma TV
- Low achiever students held negative attitude toward learning through Plasma TV.
- High achiever students held positive attitude towards learning through Plasma TV.
- The less experienced teachers in teaching profession held favourable attitude toward teaching with Plasma TV than experienced teachers.
- All interacted effects of the variables of students except the interacted effect of students' grade level and residence were

found not statistically significant in influencing their attitude towards learning through Plasma TV.

- There is statistically significant attitudinal difference between experienced teachers and low experienced teachers towards teaching with Plasma TV in favour of less experienced teachers.

6.2 Conclusion

One of the important issues in using technologies in teaching-learning process is to evaluate students' reaction to learning through Plasma TV and how teachers do react to teaching with Satellite delivery instruction. Favorable attitude toward learning & teaching using modern technologies is an important factor in eventual academic success.

This study examined important issues that were explained in secondary schools of Butajira & Silti. From the study, it was found that high achiever students & low experienced teachers showed favorable attitudes for the new system of teaching learning process.

Plasma TV can present laboratory experiments in very clear way. This can help students in learning by understanding chemical reaction in subjects like Chemistry, Biology, and Physics.

Students have affection to the Plasma in its attractive nature of presentation associated with its colors, pictures, ground music, closely related sound to visuals, and also attractive and variety of programs during recess.

Some students confirmed the new system make them to give great attention for managing their time.

The satellite Plasma instruction was very much suitable to those students who have good background in English language and to those schools who have shortage of qualified & competent teachers.

As depicted from the result that low achievers students & highly experienced teachers did not show favorable attitude towards the new system of teaching-learning system.

Low achiever students might have difficult of did not understand the language and accent of televised teacher, unless the classroom teacher rephrases the concept or translate the words into Amharic which is impossible in such situation.

The program was almost one- way communication or transmission. This type of communication neglects the needs, beliefs, feelings, values, dispositions, and interest of students (Amare, 1998).

The pace of the delivery does not consider the ability of most students.

Unlike conventional teaching –learning system, the written materials on Plasma TV did not wait until all students completely copying on the Plasma TV.

Unlike conventional teaching-learning system the students were liable to lose their attention by the noise, motion, picture and pace of the transmission. Students have no right to stop the televised teacher to slow

down the pace of presentation. It does not pave way to participatory or democratic way of teaching-learning process (Frier, 1972; Amare, 1998). The main role of teaching-learning process was given to televised teacher. Even though, the transmissions were designed in such a way that both classroom teacher and students play prominent roles that were engaging during the three phase of transmission some teachers and some students did not practice in desired and expected way(EMA,2006). Some teachers consider the situation as neglecting their role and develop feeling of insecurity and dissatisfaction.

6.3 Recommendations

- ◆ There should be continuous awareness programs for teachers and students to change their wrong believe that resulted in negative attitude using new technologies in schools. Thorough discussions in using satellite education are required.
- ◆ The stand-by generator should be arranged to all secondary schools to deliver the Satellite instructional programs effectively.
- ◆ The satellite education programs should be arranged in the way of enhancing students' participation through proper techniques using interactive media. Great attention should be paid to in-depth teaching and quality of education rather than content coverage.

- ◆ There should be effective function of liaison officers to establish rapport from school to high level of educational organizations to follow up the effectiveness of the program.
- ◆ The multimedia system should be facilitated in schools, and all delivering programs should be down loaded in compact digitized system in which teachers can pre-prepared before hand of the transmission started, and students can be prepared for various lessons and also can revise what they miss during transmission.
- ◆ There should be tutorial program arrangements by Secondary Schools for students by their classroom teachers.
- ◆ By recognizing the importance to English language as the medium of instruction, the concerned government bodies should focus on English language subjects. Special attention should be given to lower level grade students to prepare students with good English background. English lessons should be prepared and presented in interactive ways so that the students may develop communicative skill in English language.
- ◆ The time allotment for each period should be revised. The lion's share should be given to the classroom teacher rather than to the televised teacher.

References

- Abiyotawe Democraci(2005).Weekly megazine. Meskerem 25,1998E.C.
Mega Enterprise.[Http://eprdorgans.org.com](http://eprdorgans.org.com)
- Ali Yassin (2005). *Teaching with and learning from media: A case study on satellite TV instruction in Debre Brhan School*. Unpublished master's thesis, Addis Ababa University, Addis Ababa.
- Amare Asgedom (1998). Television method of learning. A habit of learning with the least effort. Communication theories and instructional practice: A limited effect perspective. *IER Flambeau* ,5,39 – 49. AAU Addis Ababa.
- Amartya Sen, (1999). Education for All in the Information Age: The potential of Information Technology for Improving Education Access and Quality in Developing Countries. URL: <http://www.idcr.ca/pan/wrkshp 2>.
- Anastasi A. (1976). *Psychological testing (4th ed.)*. New York: Macmillan Publishing Co., Inc.
- Anderson, G. (1990). *Fundamentals of educational research..* Landon: The Falmer Press.
- Anderson, J. R. (1985). *Cognitive psychology and its implications.(2nd ed.)* New York. Freeman and Co.
- Barbara, F.(2000). *Distance education in Africa new technological and new opportunities: JICA Report, Feb. 23rd, 2000.*

- Barron, D.D. (1987). Faculty and student perceptions of education using television. *Journal of Education for Library and Information Science*, 27 :257 – 271.
- Best, J.W & Kahn, J.V.(1993).*Research in education*.(7thed.).Massachusetts: Allyn and Bacon.
- Bouma, G.D., Atkinson, G. B. J. (1995). *A handbook of social science research: A comprehensive and practical guide for students* (2nd ed). Oxford: University Press.
- Clarky K. (1983). *Education and educational media*. London: Sage Publication.
- Coolican, H. (1995). *Introduction to research methods and statistics in psychology*. London: Hodder and Stoughton.
- ✓ Corsini, R. J. and Auerbach, A.J. (1996). *Concise encyclopedia of psychology*. New York: John Wiloy and Sons, Inc.
- Cuban, L. (1985). *Teachers and machines*. New York: Teachers College Press.
- ✓ Dale, E. (1969). *Audio-Visual methods in teaching* (3rd ed.). New York: The Dryden press.
- Dandapani S. (2001). *Advanced educational psychology*. Anmol publications Pvt. Ltd. New Delhi.
- Daniel Desta (2002). *Attitude toward disability and the roles of community based rehabilitation in Ethiopia*. A Thesis in University of Joensuu. Finland.

- Ebel, J. L. (1979). *Essentials of educational measurement (3rd ed)*. Englewood Clifts, N. J. : Prentic- Hall.
- Edwards, A. L. (1957). *Techniques of attitude scale construction..* New York:Appleton- Century- Corfts.
- Ettinger, R. H. (1994). *Psychology, science, behavior, and life*. Harcourt Brace: College Publishing.
- Feldman, R. S. (1994). *Essentials of understanding psychology*. New York: McGraw – Hill, Inc
- Fowler, F.J(1988). *Survey research methods*. Newbury Park California: SAGE Publications.
- Friere, P. (2003). *Pedagogy of hope*. London: Flamers Press.
- Gilbert, D. T, Fiske, S.T., and Lindzey, G. (1998). *The handbook of social psychology*. Boston: The Mc Graw- Hill Campanies, Inc.
- Glaser, R. (1991). The maturing of the relationship between the science of learning and cognition and educational practice. *Journal of ceasing and Instruction*.
- Hilgard, E. R. (1957). *Introduction to psychology (3rd ed.)*. Harrcourt, Braco and word, Inc. New York.
- √ Hilgard, E. (1996). *Introduction to psychology*. Forwarth: Harcourt Brace College Publisher.
- Keeves, J. (1989). *Educational research, methodology, and measurement and international handbook*. Oxford. New York Beijing. Frankfurt.

- Kidd, A.L. (1987). *Knowledge acquisition for expert systems*. New York:Plenum Press.
- Landa, L. N. (1976). *Instructional regulation and control cybernetics, Igorithmization and heuristics in education..* Englewood cliffs, NJ: Educational Technology Publications.
- Likert, R. (1967). *The method of constructing an attitude scale: Reading in Attitude theory and measurement*. New York John Willoy and Sons.
- Mander, J. (1978). *Four arguments for the elimination of television..* The Co-Evolution Quarterly, 38 – 52
- McLuhan, M. (1967). *The medium is the message*. New York: Santam Books.
- Mehrens, W.A. and Letmann, I. J. (1984). *Measurement and evaluation in education and psychology (3rd ed.)*. New York. HOH, Rinehart, and Winston.
- Morgan, C.T. (1986). *Introduction to psychology (7th ed.)*. New York: John Willey and Sons, Inc.
- Nachmias, D., Nachmias, C. (1987). *Research methods in social sciences (3rd ed.)*. New York: St Martin's Press.
- Nipper,S. (1989). *Third generation distance learning and computer conferencing*. In R. Mason and A. Kaye (Eds.), *Mind wave; communication, computers and distance education*. Oxford pergamon.

- Passey, D., et.,al. (2004). *Emerging findings: The motivational effect of ICT on pupils*. London: DFFS. [Http://www.dfes.gov.uk](http://www.dfes.gov.uk).
- Reigeluth, C.M. (1983). *Instructional design theories and models: An overview of their current status*. Hillsdale, NJ: Erlbaum.
- Riddle, J. F. (1990). *Measuring affective change: Students in a distance education class*. ERIC document reproductive service ED 325 514
- Ryder, J. M and Redding, R.E. (1993). Integrating cognitive task analysis into instructional system development. *Journal Educational Technology Research and Development*, 41 (2),74 – 96.
- J Schramm,W. (1977). *Big media, little media. tools and technologies for instruction..* Bevelly Hills Sage.
- Seels, S., et.,al .(1996). *Educational technologies*. [Http://www.se.com](http://www.se.com).
- Simoson, M.R., Johnsan J. and Neveberger J. (1989). *Satellite communications and high school education: perceptions of students, teachers and administrators*. ERIC document reproduction service ED 08841.
- Smith D.L. and Mc Nelis M. J. (1993). *Distance education graduate student attitudes and academic performance*. ERIC document reproduction service ED 360 948.
- Stark, R. et.,al .(2000). *The impact of information and communication technology initiatives*. Interchange series. Edinburgh: The Scottish Executive Education Department. [Http://www.scotland.gov.Uk](http://www.scotland.gov.Uk)

- Taylor, J.C. (1992). *Distance education and technology in Australia:: A conceptual framework*. Internal council for Distance Education Bulletin, 28, 22 – 30
- Taylor, J.C. (1995). Distance education technologies: The forth generation. *Australia Journal of Educational Technology*. The university of southern Queens land. [Http://www. Ascilite. org. au /ajet/taylor.htm](http://www.ascilite.org.au/ajet/taylor.htm).
- Transitional Government of Ethiopia (TGE, 1994). *Education and Training Policy*. Addis Ababa. EMPDA.
- Tsigie Genet (2004). *Attitude toward persons with mental retardation behavior*. Unpublished Master's Thesis, Addis Ababa University, Addis Ababa.
- UNESCO, (2002). Information and Communication Technologies in Teachers Education: A Planning guide. [Http://www//google. Com](http://www/google.com)
- Weisberg, H.F., Krosnick, J. A. And Bowen, B. d. (1996). *An introduction to survey research, polling, and data analysis (3rd Ed)*. Newbury Park, California: SAGE Publication, Inc.
- Winn, W. (1990). Some implication of cognitive theory for instructional design. *Journal of Instructional science* 1(19),53 – 69.
- Yalew Endawoke (1997). *Sex-role stereotypical attitudes of the society towards female as leaders*. Unpublished Master's Thesis, Addis Ababa University, Addis Ababa.

APPEDICES

APENDIX 1

ADDIS ABABA UNEIVERSITY SCHOOL OF GRADUATE SETUDIES DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

Dear Respected students,

In this booklet some questions have been asked. You are kindly requested to provide the necessary information which is very important to the quality of the research as well as bring about possible solutions to the problems in question.

Your cooperative in this regard will be highly solicited. All your responses will be kept confidential.

Thanks

Redwan Nuri

Part one. Personal information

1. Name of school _____
2. Grade _____
3. Sex _____
4. Level of achievement _____

Part two: Instruction to the Respondents

Below are given some of the items which you have to respond on a four point scale ranging from strongly agree to strongly disagree. You are sincerely requested to go through each item and to rate how you feel about the statements by showing tick mark “✓” in the appropriate scale options based on your own opinion.

No	Items	Scale options			
		Strongly agree	Agree	Disagree	Strongly Disagree
1	I feel comfortable when lesson is given through plasma/TV screen.				
2	I couldn't overcome the pace of teaching method through Plasma/TV.				
3	Learning by using plasma enhanced my academic performance.				
4	I always gaze at plasma screen without taking note because of fast teaching delivery on Plasma/TV.				
5	I used to copy from my friends after teaching has taken place through plasma screen because I fail to write.				
6	Learning through Plasma/TV screen weakens pupils' academic achievement.				
7	If the media delivering through Plasma/TV were in Amharic I would have easily taken note.				
8	Plasma /TV education made students active in English language.				

9	Learning through plasma/TV is tedious.				
10	I find learning through plasma/TV screen interesting and effective.				
11	I don't comprehend easily when I am learning through Plasma/TV.				
12	I am proud of learning through Plasma/TV.				
13	Learning through Plasma/TV is nothing but wasting time.				
14	Learning through Plasma/TV is not boring.				
15	I don't support learning by using Plasma/TV.				
16	I don't feel inhibited while learning through Plasma/TV.				
17	It troubles me when I learn through Plasma/TV.				
18	I like conventional teaching method.				
19	I like Plasma /TV education from the beginning.				
20	I start admiring Plasma/TV education.				
21	From the beginning I did hate Plasma/TV but now it is favorite to me.				
22	Conventional learning is not better than learning through Plasma/TV.				
23	My academic achievement is decreased due to education through Plasma/TV.				
24	I am delighted to attend televised subjects.				
25	I prefer Non-Televised subjects to Televised subjects.				

Appendix 2

አዲስ አበባ ዩኒቨርሲቲ
ድህረ ምረቃ ትምህርት ፕሮግራም
ሳይኮሎጂ ዲፖርትመንት

ውድ ተማሪዎች፡-

በዚህ መጠይቅ ውስጥ የተወሰኑ ጥያቄዎች ቀርበዋል። የቀረቡትን ጥያቄዎች በአንክሮ አንብባችሁ ትክክለኛውን ምላሽ እንዲትሰጡ በእኩብሮት ትጠይቃላችሁ። ጥናታዊ ዕሁድ የሚወሰነው እናንተ በምትሰጡት መልስ ነው።

የምትሰጡት መልስ በእናንተ የትምህርት ውጤት ላይ የሚያመጣው ምንም አይነት ለውጥ ወይንም ተፅእኖ አይኖርም።

ይህ መጠየቅ ሲሞላ ስም አይጻፍም። ለምትሰጡት ትክክለኛ ምላሽ ለትብብራችሁ ክልብ አመሰግናለሁ።

ሬድዋን ኑሪ

ክፍል 1. ግላዊ መረጃ

- 1.1 የትምህርት ቤቱ ስም _____
- 1.2 ክፍል _____
- 1.3 ያታ _____
- 1.4 የውጤት ምድብ _____

ክፍል 2. የዝንባሌ መለኪያ

ትዕዛዝ፡- ከዚህ በታች ዝንባሌን የሚጠይቁ አረፍተ ነገሮች የቀረቡ ሲሆን ከፊት ለፊቱ እናንተ ምን ያህል እንደምትስማሙባቸውና እንደማትስማሙባቸው ትገልፁ ዘንድ አማራጮች ተዘጋጅተዋል። በመሆኑም እናንተ በይበልጥ የምትስማሙበትን ምርጫ በአረፍተ ነገሩ ፊትለፊት በተሰጠው ክፍት ቦታ ይህን «✓» ምልክት በመጠቀም አመልክቱ።

ቁ ጥ ር	አረፍተ ነገር	የተሰጡ አማራጮች			
		በጣም እስማማለሁ	እስማማለሁ	አልስማማም	በጣም አልስማማም
1	ትምህርቶች በፕላዝማ በሚሰጡበት ወቅቶች ምቹት ይለማኛል።				
2	በፕላዝማ የሚሰጠውን ትምህርት ፍጥነት መቋቋም አልቻልኩም።				
3	ትምህርትን በፕላዝማ መማር የትምህርት ውጤቴን አሻሽሎልኩ።				
4	በፕላዝማ ትምህርቱ ሲሰጥ ማስታወሻ መፃፍ እችላለሁ።				
5	ትምህርቱ በፕላዝማ ሲሰጥ ትኩር ብሎ ማየት እንጂ በፍጥነቱ ምክንያት ማስታወሻ መውሰድ አልችልም።				
6	ትምህርት በፕላዝማ ከተሰጠ በኋላ ከጓደኞቼ ስለ ትምህርቱ ማስታወሻ እገለብጣለሁ። ምክንያቱም በወቅቱ መያዣ ስለማልችል ነው።				
7	ትምህርት በፕላዝማ መማር የተማሪዎችን ውጤት ይቀንሳል።				
8	የፕላዝማ ትምህርት ተማሪዎችን በእንግሊዝኛ ቋንቋ ጎበዝ እንዲሆኑ አድርጓል።				
9	በፕላዝማ ትምህርት መማር አሰልጥኜ ነው።				
10	ትምህርትን በፕላዝማ መማር አስደሳችና ውጤታማ ሆኖ				

	አግኝቱዋለሁ።				
11	ከፕላዝማ ትምህርት በኋላ አስተማሪዬን ያልገባኝን ጥያቄ መጠየቅ ለእኔ አስቸጋሪ ነው።				
12	ትምህርትን በፕላዝማ ስማር አይገባኝም።				
13	ትምህርትን በፕላዝማ በመማሬ ውስጤን ደስታ ይሰማዋል።				
14	ትምህርትን በፕላዝማ ስማር ፍርሃት ፍርሃት ይሰማኛል/ይለኛል።				
15	ትምህርትን በፕላዝማ መማር አሰልፎ አይደለም።				
16	ትምህርት በፕላዝማ መስጠቱን አልደግፈውም።				
17	ትምህርት በፕላዝማ በሚሰጥበት ወቅት ግር ይለኛል።				
18	ትምህርት በፕላዝማ መስጠቱን እያደነቅኩ ነው።				
19	የፕላዝማን ትምህርት ከመጀመሪያውም ወደጀዋለሁ።				
20	አሁን አሁን ትምህርት በፕላዝማ መስጠቱን እያደነቅኩ ነው።				
21	ትምህርት በፕላዝማ መስጠቱ መጀመሪያ ጠልፎው ነበር አሁን ግን ተስማምቶኛል።				
22	የቀድሞው ትምህርት አሰጣጥ ዘዴ ከአሁኑ የፕላዝማ ትምህርት አሰጣጥ ዘዴ አይሻልም።				
23	ትምህርት በፕላዝማ መስጠቱ የትምህርት-ውጤቱን አሸቆልቁሎታል።				
24	በፕላዝማ የሚሰጡ ትምህርቶችን መከታተል ያስደስተኛል።				
25	በፕላዝማ ከሚሰጡት የትምህርት ዓይነቶች ይልቅ ለእኔ የሚሻሉኝ በፕላዝማ የማይሰጡ የትምህርት አይነቶች ናቸው።				

Appendix 3

**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY**

Dear Respected Teachers,

In this booklet some questions have been asked. You are kindly requested to provide the necessary information which is very important to the quality of the research as well as bring about possible solutions to the problems in question.

Your cooperative in this regard will be highly solicited. All your responses will be kept confidential.

Thanks

Redwan Nuri

Part 1. Personal information

1. Education level _____
2. Total teaching experience _____

Part 2. Instruction to the Respondents

Below are given some of the items which you have to respond on a four point scale ranging from strongly agree to strongly disagree. You are sincerely requested to go

through each item and to rate how you feel about the statements by showing tick mark “✓” in the appropriate scale options based on your own opinion.

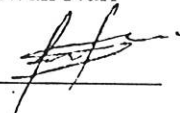
No	Items	Scale Options			
		Strongly agree	Agree	Disagree	Strongly disagree
1	Teaching with plasma screen is appropriate method of teaching.				
2	The academic performance of students increased after the lessons started on delivering through Plasma/TV screen				
3	I prefer the conventional teaching method to teaching with electronic media				
4	I sense that students prefer non-televised subject, due to this I wish that my subject became non-televised subject.				
5	Thanks to the new technology, the students can easily communicate in English language, so I like it.				
6	I feel proud of the method of teaching by using plasma/TV screen				
7	The teaching method of using Plasma /TV screen does not consider students academic competence, so the conventional method is preferable to me.				
8	Student class participation is less during teaching by using Plasma/TV than conventional teaching.				
9	I am not satisfied on the pace of lessons				

	delivering through Plasma /TV.				
10	I am happy in the new technology of using teaching on plasma/TV.				
11	I hate teaching with plasma /TV				
12	Teaching with plasma/TV screen is inconvenient to medium learners and slow learners.				
13	The mere advantage of teaching with plasma is only to cover contents of subjects but not to bring quality of education, so I am not interested.				
14	I never checked and did the class work and home work in class room due to shortage of time, so I do not accept the program.				
15	I like teaching with plasma screen because it covers the whole contents that are expected to be covered.				
16	The method of teaching by using plasma/TV screen is not good on treating students academic problems				
17	I am delighted to give introductions and conclusions during teaching with plasma/TV.				
18	I support teaching by using plasma /TV screen.				
19	Teaching with plasma/ TV screen is very interesting and effective				
20	Teaching with plasma/TV screen is boredom				
21	The method of teaching by using Plasma /TV fascinates me.				
22	The method of teaching by using plasma/TV is not tedious.				

Declarative

I, the undersigned, declare that this thesis is my original work and that all source used for the thesis have been duly acknowledged.

Name: Redwan Nuri

Signature: 

Place: Department of Psychology, College of Education, Addis Ababa University

Date of Submission: June 16, 2006

This thesis has been Submitted for examination with my approval.

Name: Pro. ~~Shamim~~ Ahmad Ansari

Signature: 