

**TEACHERS' ROLES AND PERCEPTIONS IN THE CONTEXT OF PLASMA
DELIVERED ENGLISH LESSONS: GRADE 10 IN FOCUS**

By

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DEPARTMENT OF ENGLISH**

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Dedication

This dissertation is dedicated to my son Kaleb Getachew, whom I love very much , and my wife W/ro Saba Haftay ,who has showed me what a true wife is.

ABSTRACT

The cause for this study was observation of EFL teachers' complaints on the impact of plasma technology for instructional purposes in Ethiopian government owned secondary schools. The overall aim of the study was, firstly to describe the current and emerging EFL teachers' roles in classrooms using technology and make an enquiry in to the extent to which knowledge is enhanced by these roles, and secondly, examine the overall perceptions of EFL teachers about the use of the plasma technology.

In order to attain these research objectives, both qualitative and quantitative data collecting methods were employed, namely: observation, conversation, document analysis and questionnaires.

The research was mainly conducted in four secondary schools and involved twenty five English teachers, and the Directors of the four schools.

The study for EFL teachers in classrooms using plasma identified three major roles, namely: designing the learning environment, managing people and resources and mediating student learning. A fourth role improving practice, captures the work place learning that is recognized but not implemented by all teachers in this study. The findings showed that teachers were not able to perform all roles effectively due to factors such as lack of sufficient time, lack of conducive working environment, teachers' lack of competence in the language itself. A fundamental finding is that in improving their practice, teachers are attempting to cover all the three roles, and constantly felt that time was against them. Moreover, cultural reluctance to criticize others is said to be another challenge. The study has also indicated EFL teachers' roles that developed and those declined or disappeared due to plasma.

The conclusion is that that in improving their practice and accomplishing their roles, teachers are moving toward a decoupling of the three roles so that different people could design learning environments, manage people and resources, or mediate learning. Further research would test the generalizability to other subjects.

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CHAPTER ONE: INTRODUCTION

1.1 Background

It is often thought that a culture of early adoption to change and a capacity to take risks has led to valuable experimental projects in Ethiopia. National policies promoting a knowledge society imply and expect wide ranging use of technology to support life long learning. The paradigm shift from transmission to construction of knowledge in which language learning is viewed as requiring self regulation and building of conceptual structures through reflection and construction has triggered the Ministry of Education to make transformational changes in its own mode of subject delivery (FDRE,2004). Among the transformations that the Ministry of Education has effected, the introduction of plasma based educational transmission, which is a televised lesson given across the country from a center in the secondary schools through out the country is the most prominent.

In fact, the use of technology for educational purpose is not a new practice in Ethiopia. For instance, there were various experiences of educational broadcasts through radio and television in the country during the Dergue regime. However, there was not as such a very strong attraction toward technology based education in the last governments.

According to the document of FDRE (2004), there are different reasons as to why the government resorted to introducing plasma supported language instruction. One of the reasons why technology is used in language and other classrooms is that technologies create virtual engaging and multi sensory (eg Visual and Auditory), and the actual milieus of learning and thinking for teachers as well as learners. It is the conviction of the Ministry that teachers and instructional designers need to liberate learners from restricting walls and pages. Freeing especially the language learner from rigid and restrictive rules of grammar is even more important. Thus, to this end, employing technologies such as the plasma, virtual learning environments, hypermedia designs etc would provide learners with the opportunity to interact with sensory data and construct their own world. Such environments, according to writers such as Driscoll (2000), Duff, and Jonason (1992) , Lebow, (1993), Can (2006) naturally call for the

application of a constructivist view of learning. The Ethiopian government, in this regard, has a strong belief that technologies increase the quality of education in schools and classrooms. This is not only because they supplement traditional instructional practices of classroom teachers, but also because they provide learners with innovative and inspiring educational experiences enriched with a wealth of resources and data sets and varied modes of educational presentations that can prepare them to cope up with the challenges of the globalized world, FDRE(2004).

The other and perhaps the most prominent reason for the Ministry of Education to introduce plasma based education is the ever increasing number of students in Ethiopian secondary schools which cannot be matched by qualified teachers that can absorb this number. For example, according to Demissew Bekele, Head of the ICT Department of the Ministry of Education, in a period of ten years, the number of secondary school students increased from 450,000 to 620,000. Nevertheless, the impact of such expansion was that few teachers teaching at the secondary schools are qualified to teach the subject(Interview with Demissew Bekele, March, 2009). Fully cognizant of this precarious situation, the government resolved to introduce televised teaching as a solution with the objectives of providing standardized education to all high school students despite their location in the capital or in the remote villages at the periphery of the country displaying evidence of additional teaching and learning outcomes in a technology rich environment and providing a professional development resource for Ethiopian teachers and principals.

Hence, since the beginning of October 2004, Ethiopian secondary school students have been following their lessons via satellite dish. The programme commonly known as education by plasma is beamed from South Africa. According to Demissew, the 491 secondary schools in the country are equipped with satellite dishes. Television (plasma) screens are installed in most classes and subjects like English, Chemistry, Physics, Mathematics, and Biology are taught from grade 9 to 12 using plasma.

With this view in mind, a large investment of government funds is flowing into Computer-based and Telecommunication Technologies. The government is investing a huge sum of money to purchase and install satellite and the transmission device commonly known as Plasma Display

Panels (PDPS) in most classrooms at secondary level. It has also established a computer network system to enable educational transmission from the Educational Media Agency (EMA) based in the capital. In addition, generators have been installed in schools that have no main line electricity service (FDRE, 2004).

Plasma based education is a new mode of educational delivery and context within which teachers of English in the country's secondary schools are working ; thus, to be able to fit in to the new system of teaching, there emerged a demand for teacher professional development and a need to understand more about teacher's roles. At the same time there are calls for a more constructivist approach to teacher development and for more emphasis to be placed on sharing knowledge, and experience among EFL teachers as members of a learning community. In line with this, the Ministry of Education's report on the use of Satellite TV, ICT Department Ministry of Education(2007) claimed that teaching and learning in technology based classrooms underwent a change towards cooperative learning and student decision making, among other things. The increasing use of technology extended what was possible in classroom practice, resulting in greater teacher's role and attitude from being a source of knowledge to being a coach and mentor, and a greater willingness on the part of students to take responsibility for their own learning (Ministry of Education, 2004).

With regard to the use of technology for educational purposes, however, Ethiopians in general, tend to embrace technology innovations to a very low degree in various aspects of daily life (Ethiopian Broadcasting Authority, 2007). The main barriers to Ethiopian teachers in developing improved classroom practice with information technology have been identified as lack of time to experiment with technologies and plan lessons using technology; lack of knowledge or understanding of how to effectively perform their role, and how to integrate the technology into the curriculum; and lack of knowledge and support for resolving technical and logistical problems in the classroom (Ministerial Advisory Council on the Quality of Teaching ,2007).

This research is, therefore, concerned with the roles of EFL teachers as teachers and learners following the introduction of plasma supported language instruction in Ethiopia in 2004. I was drawn to this research after four years of critical observation on the ways teachers and learners

respond to plasma supported EFL lessons. While I could see that many teachers were interested in the potential plasma offers to language teaching and learning, they felt overwhelmed by the technology.

However, through closer observation of what teachers do and say on plasma supported English instruction, the following could be explored: how teachers take plasma- as a resource or as a substitute? Influences of plasma on professional development-what teachers take from the plasma teacher?

1.2 Statement of the problem

Plasma based education is a new educational reality and context within which teachers of English in the country's secondary schools are working. There are, however, different complaints presented by students and teachers regarding the effectiveness of the language teaching and learning process. The complaints emanate from the very limited roles language teachers are playing in their classroom. Since the most part of teaching is done by the plasma teacher, it is assumed that classroom teachers may be obliged to assume only peripheral roles like switching on and off the plasma, and watching and listening to what the plasma teacher says. It seems because of this reason that many high school teachers nowadays have been tagged with a nickname known as "DJ" (disk jockey). This reality of language classroom could be in mismatch with the strong assumptions of the Ethiopian Ministry of Education that the technology-backed education helps the government to offer quality and equitable education for all children in the schools.

In this respect too the Ethiopian government's claim on the positive contribution of plasma display panels (PDPS) in Ethiopian schools, particularly its role to ensure quality learning, is strongly challenged by some researchers and education theorists such as. Jeylan Wolyie (2006:15). Jeylan observes:

In its present form plasma based education has got several weaknesses. Its major problem is that it confiscated teachers' ownership of their classes. Teachers are no more important than facilitating plasma lessons following the instructions offered to them by the plasma teacher.

From this one can say that the new technology has dissociated teachers from their traditional practices and that there is a tendency that the technology is eroding the professional acceptance and respect of classroom teachers in the face of their learners. The emphasis given to plasma gives the students the impression that their teachers' roles were reduced because their teachers are unable to discharge their responsibilities. The following excerpt from Bereiter (1999) elaborates this idea fully on board. According to him, though technology is believed to play a magnificent role in promoting effective language learning, unless due care is given to the roles of teachers and students, there could be a sense of dispossession of their roles, which can lead to frustrations and downright hostility over ICT based instruction. Substantiating this idea Lam (2000), Morton (1996) Dusick (1998) observe that one major factor that prevents teachers from integrating ICT in to their class rooms is lack of knowledge of how it can promote learning. Therefore, their awareness about their roles and the usefulness of ICT in language pedagogies is a key factor for integration.

Though a vast array of literature on language teaching and learning Means and Olson (1997) Kozma, (1991, 1994), Brown and Compione (1994) documents a positive contribution of technology based practices to language teaching and learning, numerous other scholars in the area of language pedagogy Gibson (2002) White stone and Carr-chellman (2001), Hughes (2003) hold the view that the role of the individual teacher in the knowledge building endeavor is enormously important in helping students develop positive attitudes to learning. In this respect, teacher's quality is more important than curriculum standards, class sizes or state wide testing programmes in influencing differential learning outcomes achieved by students (Darling

Hammond, 2000, Rowe,2002, Shulman 1997). As a result, professional development programmes have set out to increase teachers' skills and knowledge after their initial training. Even though this is believed to be important in helping students develop positive attitude to learning, it can not bring about the desirable outcome on its own right. If at all this has to be effective, due prominence should be laid on how students and teachers perform their classroom roles (Gibson 2000,Means &Olson 1997) .

This is because, the use of technology in language classrooms, according to them, may affect many aspects of the classroom arrangements. One of these changes could be change in the traditional human relationship in the classroom. It may bring profound changes mainly on roles of teachers and learners as it has the potential to promote learner centeredness. As an example, Means and Olson (1997) have argued that the application of plasma technology in the language classroom causes shift in roles of both students and teachers. Writers such as Kozma (1991, 1994), Kozma and Schank, (1998) argue that the use of educational technology is part of an instructional shift toward project based, constructivist approaches to teaching and learning with in the context of school improvement or reform. These scholars stress, however, that success depends mainly on the actual practice that teachers do in the school and outside the school in general and their classroom in particular, which in turn is affected largely by their perception. Substantiating this idea, writers such as Ellis (2001), Crook (1999) say that it is people not the technology who create a change. These arguments clearly indicate how studying roles of teachers is important in plasma supported EFL lessons on which the study is delimited.

With respect to studies conducted on the roles of teachers in technology supported EFL classrooms, Ellis (2001), Crook (1999) are of the view that researches that look into the very classroom behaviors of teachers and students mainly with regard to their roles are lacking. As far as the researcher's knowledge is concerned also, no study has so far been conducted that looks into the impact of Plasma transmission on the classroom roles of teachers and students. Therefore, in order to understand the effect of the plasma technology in EFL class rooms, a study needs to be made. It is believed that such a study would reveal the impact of the technology on the very role performance of teachers in their English language lessons because of various reasons which call for closer scrutiny.

1.3 Objectives of the study and the research questions

1.3.1 General objective

In this study, the researcher aims at identifying the characteristics of teachers' practice (roles) that enhance learning in EFL classrooms while examining their perceptions of the plasma based language teaching on their classroom roles.

1.3.2 Specific objectives :

Based on the main objective of the study , the specific objectives of this study are to:

- 1 identify the current and emerging roles of teachers as facilitators of learning in EFL classrooms using plasma.
- 2 investigate the characteristics of EFL teachers' roles in improving their practice in their work place.
- 3 identify how EFL teachers perceive the use of plasma for instructional purposes and their position in a classroom that is largely dominated by plasma transmission and why do they perceive so?

Based on these objectives , the three key specific questions that this study intends to find answers to in the context of Grade 10 plasma supported EFL classrooms are:

- 1 What current and emerging teacher roles are found in classrooms using Plasma ?
- 2 What are EFL teachers' perceptions and attitudes toward the use of plasma in the teaching of English?
 - 2.1 What do EFL teachers think about the technology and the plasma instructor?
 - 2.2 What do they think of the technology with regards to enhancing language learning?
 - 2.3 What do they think with regards to how the technology helps or distracts their roles as teachers of English?

- 2.4 What do they think as to whether their students like or dislike the technology?
- 2.5 What do they think the overall advantages as well as the disadvantages of the technology?
- 2.6 What do teachers think of ways in which the way the plasma lessons are presented could be improved?

3 How does the plasma based English language instruction affect the classroom roles of English language teachers?

- 3.1 Which roles are replaced by the plasma and which ones are retained?
- 3.2 Are there any emerging roles that do not appear in the usual classes where plasma is not used? If so what are they?

1.4 Delimitations of the Study

This study mainly focused on teachers' classroom roles which draws issues and themes from different disciplines such as psychology, sociology, language, education and IT.

This study was also delimited to four Senior Secondary and Preparatory Schools, namely AyerTena, Balcha AbaNefso ,KelemeWork and Kolfe which are all found in different sub cities of Addis Ababa. Accordingly, while Ayer Tena and Kolfe are found in Kolfe Keranio subcity, Balcha Aba Nefso and Kelemework are found in Lideta and Arada subcities respectively .These schools were selected on the basis of convenient sampling technique due to the willingness of the schools' community -the directors, the teachers and the students to cooperate with the researcher. This, in turn, helped the researcher to make longer and frequent participant observation. This approach is also supported by (Miles and Hubermun 1994).

1.5 Limitations of the research

Teachers who participated in this study were always pressed for time. As the conversations clearly required time and space additional to teachers' daily work, they were often difficult to arrange, although teachers appeared to value them when they took place. Somewhat ironically for a study championing flexibility, changes in school organizational arrangements often interfered with appointments that had been made to observe classes or conduct conversations.

Accordingly in spite of a large body of data, there were inevitable gaps, and video for reflection was used less frequently than originally intended. Notwithstanding this, the mode of conversation provided opportunities for teachers to openly raise issues rather than simply responding to a set of research questions, and enhanced the possibility of a partnership between the participating teachers and the researcher.

1.6 Significance of the study

The study is significant in that it:

(a) provides a rich description of the contemporary EFL teaching by documenting and clarifying the roles played by EFL teachers who teach English using plasma with their classes.

(b) provides a comprehensive feedback to policy makers on teachers' perceptions of the impact of plasma on their English language classroom roles and the researcher's own critical observations of what the actual practice of language teaching and learning looks like in the plasma dominated English classrooms. Making policy makers well informed on the impact of plasma transmission on the roles of teachers would enable them to be in a position to take informed decisions or actions regarding what schools should do to ensure an effective use and or to make integration of technology into classrooms.

(c) contributes to teacher educators' and practitioners' knowledge of how in the present EFL classrooms of Ethiopia Information communication Technology (Plasma display panels) could be exploited effectively.

(d) helps all stakeholders of teacher education, chiefly teacher education researchers, educators and policy makers understand how teachers and students in EFL classrooms in the present-day Ethiopia experience the impact of plasma channeled lessons on their actual role performance in language teaching and learning.

(f) becomes a base line for further investigation for other researches that focus on the use of Information Communication Technology on EFL classrooms.

1.7 Over view of the study

This chapter has established the context of technological innovation with major focus on plasma supported language pedagogy indicating that teachers in Ethiopia, relatively speaking, are working in a context that is supportive of new approaches to teaching and learning using plasma, with yet much to be done on the roles of EFL teacher in plasma supported EFL classrooms. Chapter 2 below reviews literature, particularly social constructivism, and the ways technology can be used in learning activities, how teachers function in the context of technological innovations in light of their potential for knowledge building and skills development in language pedagogy. The chapter also considers literature relating to current and emerging teacher roles in EFL classrooms and to teacher learning and professional development in a socio cultural context, leading to a conceptual framework for this study. Chapter 3 discusses methodology and argues the case for the chosen design (See 3.2 of chapter 3) for this more of a qualitative study, which is intended to model reflective practice with, and for, teachers. The research findings are presented in chapters 4, 5, 6, 7, 8 following the conceptual framework of the four roles of teachers discussed in chapter 2. Finally chapter 9 brings together these findings into an integrated set of characteristics of EFL teachers' roles.

1.8 Definition of key Terms

The following definitions, of the key terms used in the paper are given below based on different scholars in the area of language pedagogy.

Belief: - What students and teachers think to be correct and appropriate knowledge or practice in the teaching learning process Wenden (1991), Meighan & Meighan (1990).

Instructions: - Lessons presented by the plasma TV assisted by the regular classroom teacher FDRE, (2004).

Perception: -	Is a general term referring to the awareness of objects, qualities or events stimulating the sense organs. Perception is a way of seeing, understanding or interpreting something. It is also referred to conceptions' as experts in the field most often interchangeably use the two words. Lam (2000), Morton (1994) as cited in Mortan (1996).
Plasma TV: -	Is a television used to broadcast lessons across the nation from a center. It can be an electronic means of transforming image and sound from one place to another FDRE, (2004)
Role: -	The term 'role' is used in this study to refer to the part that learners and teachers are expected to play in carrying out learning tasks as well as the social and interpersonal relationships between participants Nunan (1991) and Wright (1987).
Computer technology resources: -	In the context of this study computer technology resource is used as a general term referring to the satellite TV that is used in language instruction.
Technology Assisted Language learning	is the language instruction offered through the use of satellite TV (Plasma).
Reflection	is the process of assessing information and thinking and analyzing them and then using the results to change or enhance future events Baird(1991),Schon (1983).

Professional Learning

is an in service teacher learning in schools in which teachers learn by doing, reading ,and reflecting(just as students do);by collaborating with other teachers; by looking closely at students and their work; and by sharing what they see in contrast with pre service teacher training from prescribed workshops or new curricula (Darling – Hammond & McLaughin, 1995;Sato, 2000;2002; Smyile, 1996).

Communities of Practice

are groups of people who share a concern or a passion for some thing they do or learn how to do it better as they interact regularly Wenger, (1998).

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter, presented in three parts, reviews literature that illuminates the concept of knowledge building, technology based instructions and the roles of EFL teachers in it. Learning is the process by which knowledge is created, for which language learning is not an exception Bereiter & Scardamalia (1998). Knowledge building is activity directed outward towards the creation of knowledge itself , while learning is a personal consequence of this process, the aspect that is directed to enhancing one's own abilities and dispositions .

In this study, knowledge building broadly encompasses the activities of both teachers and students in creating, sharing and evaluating knowledge, i.e their roles. The first part of this chapter considers Technology Assisted Language Learning and the way teachers' classroom roles are perceived in different theories of learning.. It specifically explores the socio-cultural perspective and outlines a social theory of learning communities of practice. The influence of technology on teaching and learning, the links and tensions between technology and constructivism, and their capacity for supporting knowledge building are also reviewed. The second part discusses the many and varied classroom roles of teachers identified in the literature, teachers as teachers and teachers as learners. The third part of the chapter briefly reviews literature on teachers' perceptions to the use of technology for instructional purposes.

2.2. Social theory of learning

Wenger's (1998) social theory of learning, and in particular, the concept of the community of practice is fundamental to this study, and will be described here in some detail. His theory is useful because it addresses learning in the context of social practice or mutual engagement in action, and considers learning as fundamental to the creation of the social order. Practice is the social production of meaning, involving negotiation, participation and reification (projection of meanings giving them weight) and is the source of coherence of a community. Practice is itself a learning process so that the community is an emergent structure with complex boundaries and

peripheries. Wenger does not see theory and practice as antonyms, but existing in a complex interactive relationship, so that even when it produces theory, practice is practice, as described above. While practice is always located in time and space, the relations that constitute practice are primarily defined by learning.

Wenger suggests that indicators of such a community include sustained mutual relationships, shared ways of engaging in doing things together, rapid flow of information and propagation of innovation, and knowing what others can do. However, they should not be considered in isolation but in relation to the rest of the world. He argues that while communities create boundaries through formal and informal means - certification, language, and style- the process of reification and participation can also create continuities across boundaries. To apply his theory to a school, the building as an artifact is appropriated and reified in different ways by the communities of practice within it, acting as a nexus of perspectives and at times a form of coordination among perspectives. On the other hand, people participate in multiple communities of practice within that building, as teachers belong to several curriculum or welfare teams, for example, teachers can meet with several classes between which they can span boundaries. Through two types of connections: boundary objects (artifacts, documents, terms, and concepts) and brokering (connections made by people) practices can influence each other. Boundary objects essential to this study, include curriculum and standards framework documents, school policy documents etc. Brokers are those people-teachers, principals, researchers, and students-able to make connections across communities of practice and open new possibilities for meaning. Because they operate at the periphery rather than at the core of a practice, they need to balance a role between membership of one community, which brings legitimacy and credibility, and keeping a distance, which allows for different perspectives.

In terms of education, Wenger argues that identities and modes of belonging are more important than skills and information. Education is not limited to schooling, but is a mutual development process between communities and individuals forming new identities. Designing education then, is not just planning a curriculum, but creating architecture that allows the formation of identities. For this reason, Wenger suggests three infrastructures: the first, places of engagement for people; the second, materials and experiences with which to build an image of the world and themselves

(imagination) and the third, ways of having an effect on the world and making their actions matter (alignment). Within each infrastructure, he suggests, there are specific areas to develop, although the list is not exhaustive. Opportunities for engagement, for example, arise through mutual and shared activities among students and others, through challenges and responsibilities that call upon learners' knowledgeability and encourage them to explore new territories, and through continuity to develop shared practice and a long-term commitment.

It appears that facilities of engagement can assist knowledge building particularly by bringing people together, encouraging shared discourse and recording information. The three aspects of imagination, Wenger suggests, are orientation: locating self and learning about a wider world, reflection: looking at our situations with new eyes and exploration: reinventing the self and in the process reinventing the world. He argues that imagination is the way a learning community can expand the definition of its enterprise. This is where knowledge building can be enhanced by time off for reflection and conversation, exploration and play. The third aspect of Wenger's learning architecture is alignment, which encompasses larger-scale understanding of power relations and how to have an effect on the world. Therefore, he suggests that the learning community must push its boundaries and interact with other communities of practice in a purposeful way, it must link participation inside with that outside the community (eg. through multi-membership of its members in other communities), it must use the styles and discourses of the areas it wants to affect, and it must become involved in the organizational arrangements of its own institution. It is therefore deep and wide, able to know what it knows and to use this in a range of arenas.

Table 2.1 Wenger’s Architecture for learning

Facilities of Engagement	Facilities of Imagination	Facilities of Alignment
<p><i>Mutuality</i></p> <p>Interactional facilities (Physical and virtual spaces)</p> <p>Joint tasks</p> <p>Peripherality: including boundary encounters, open houses</p>	<p><i>Orientation</i></p> <p>Location in space</p> <p>Location in time</p> <p>Location in meaning</p> <p>Location in power</p>	<p><i>Convergence</i></p> <p>common focus, vision, values</p> <p>Allegiance</p> <p>Leadership</p> <p>Inspiration</p>
<p><i>Competence</i></p> <p>Initiative and Knowledge ability including prior experience</p> <p>Accountability: occasions for evaluation</p> <p>Tools: including discourses, Concepts</p>	<p><i>Reflection</i></p> <p>Models and patterns</p> <p>Time off</p> <p>Conversations</p>	<p><i>Coordination</i></p> <p>Standards and methods</p> <p>Plans and schedules</p> <p>Communication</p> <p>Boundary facilities, brokers</p> <p>Boundary objects</p> <p>Support for multimember ship</p> <p>Feedback facilities</p> <p>Data collection</p>
<p><i>Continuity</i></p> <p>Reificative memory: inc. documentation</p> <p>Participative memory: inc. generational encounters</p>	<p><i>Exploration</i></p> <p>Trying things out</p> <p>Play</p>	<p><i>Jurisdiction</i></p> <p>Policies</p> <p>Processes</p> <p>Distribution of authority</p>

Wenger also suggests four dimensions in designing for learning: not as alternatives, but to be combined productively. The first is participation and reification: design becomes a question of what to reify and when, while participation asks who to involve and when. The second dimension is the designed and the emergent, which sees practice as response to design adapting it to include the emergent and make it an opportunity. This leads Wenger to argue that a robust design for learning is a minimalist design allowing for opportunity. Third, design must create

relations between the local and the global. Therefore communities of practice have to be involved in designing their own learning. He argues that no community can fully design the learning of another, but equally no community can fully design its own learning. The final dimension is identification and negotiability: where design represents a perspective and a proposal of identity. As such it creates a focus for identification and a bid for ownership of meaning that is then negotiated by members of the community.

The importance of communities of practice to knowledge building is also understood in the recent literature on communities and social capital (for example, Centre for Research and Learning in Regional Australia, 2002), which holds the social capital contains sets of knowledge and identify resources which reside in individuals and communities, and these resources are activated and shared through social interaction (Falk & Kilpatrick, 2000). Knowledge resources are accessed not only internally with local communities of interaction, but also externally from those communities to which individuals have weak ties. Identifying resources builds a sense of belonging and encourages participation, as well as providing the framework for people to reorient their views of self and others in order to be willing to act in new ways. In the following pages technology is considered as a resource in this enterprise.

2.3 Roles and Relationships in Technology supported EFL Classrooms

2.3.1 Teachers as facilitators-Teachers' roles as teachers

An over-arching term often used to refer to teachers in the constructivist classroom is facilitator, which Rogers (1969) describing as setting the mood or climate of the class, clarifying purpose for individuals and the group, and making the widest range of resources available. A facilitator relies on students to be motivated by a desire to implement the purposes that have meaning for them, and acts as a flexible resource for their use. A facilitator, according to Rogers, accepts intellectual content and emotionalised attitudes in the classroom and takes initiative in sharing personal thoughts and feelings. He or She remains alert to expressions indicative of deep or strong feelings while endeavoring to recognize and accept his or her own limitations.

Others have added to this role description, although all appear to be based on the model of one teacher to many students, reinforcing the individualism of teaching. In discussing education reform, Means and Olson (1994) suggest that teachers no longer have total control of the direction of instruction, since a focus on authentic, challenging task lends itself to collaborative work, and the teacher becomes a facilitator and coach. Driver, Asoko, Leach and Mortimer and Scott (1994) suggest that the teacher's role is to provide the physical experiences where by students can engage with others in attempting to understand and interpret phenomena and to encourage reflection. Jones, Valdez, Nowakowski, and Rasmusson (1995) describe the teacher as a facilitator engaging in negotiation, stimulating and monitoring project work, but not controlling. They suggest that as facilitators, teachers provide rich learning environments, experiences, and activities, create opportunities for students to work collaboratively, to solve problems, do authentic tasks, and share knowledge and responsibility facilitators.

Echoing Roger's awareness of personal characteristics, Lang, Mc Beath and Hebert (1995) suggest that to be a successful facilitator of learning, a teacher must be empathetic, warm, caring, open and genuine, positive and respectful of others and interested in learning for self and others. Recent awareness of emotional intelligence Goleman, (1999) also indicates that this is an important area in professional relationships. In addition to these characteristics, a facilitator must be a capable communicator to provide specific feed back. The teacher then is concerned with the physical environment and resources, the class climate, learning activities and content as well as feelings and emotions. The teacher models learning and coaches, mediates and gives feedback to other learners. Given the extent of these definitions, it's rather surprising that some observers believe that the introduction of educational technology into classrooms has the effect of making all teachers facilitators Fisher et al (1996). If teachers are facilitators, in the ideal constructivist classroom they facilitate the learning of students who are autonomous, self regulated, or self directed, learners. This includes actively acquiring and transforming information, using meta cognitive processes such as discriminating relevant from irrelevant information, connecting new information with prior knowledge or skills and planning particular performance routines Mandinach & Cline (1994). Goodman (1990) and Freire (1993) describe teachers as liberators freeing learners to take risks, while many teachers are developing strategies that they believe will result in students being less dependent on them than in previous teacher student relationships.

However, Ball & Cohen (1999) suggest that teachers need to know more about learning and about pedagogy, about how the curriculum is constructed and how to develop a classroom culture that supports learning.

Teachers are still required where students are autonomous learners although their roles are different to those in transmissive learning, and according to Boud,(1982) they must not deny their competence and authority. He argues that developing autonomy does not simply involve removing structured teaching, and may in fact require a greater degree of structure. Explicit teaching also has a place in the knowledge-building classroom because in schools, as in every organization, there is information to be learned and skills to be acquired for productive work. Sometimes these can be learned informally as one goes along, but often it is expedient to teach them in a direct manner so as to ensure that everyone learns them and can focus on the main task Scardamalia & Bereiter, (1999).

Diaz et al. (1990) suggest two teaching behaviors that encourage student self-regulation or autonomy: the verbalization of plans, rationales and goals, and gradual and sensitive withdrawal from the regulatory role. Knowledge-building teachers need to take account of the differential needs for structure among the learners, and adapt accordingly. In light of current concern about boy's education Hill & Russell (1999), Rowe (2002) claim that boys need highly structured lessons with an emphasis on short-term challenging targets and frequent changes of activity. He also suggests more teacher-directed classroom activities rather than group work, and clear objectives, detailed, simple instructions and clear assessment criteria.

Since the literature clearly suggests teachers will be required rather than dispensed with, the specific areas of their work in the classroom context are described further in the following pages.

2.3.2 Roles of EFL Teacher in Participating in the design of the learning environment

In discussing leadership roles in building learning organizations, Senge (1990) argues that the most important role is that of designer. While the functions of design are often invisible, he suggests that they must include clear purpose and vision, policies, strategies and structures, and

effective learning processes. Teachers are leaders in a school and are therefore critically involved in this important role.

Wenger (1998: 228) defines design as a “systematic, planned and reflexive colonisation of time and space in the service of an undertaking”. He includes the production of artifacts and the design of social processes, so that one can design systems of accountability, roles and work processes, but suggests that practice itself cannot be designed. Therefore in the classroom as a community of practice people can design a curriculum, but not learning. Learning can be designed for, but it cannot be designed. Wenger argues that the relation of design to practice is always indirect: practice is not a result of design, but a response to it, which means that unexpected outcomes may occur. Design needs to include emergent practice, and to be opportunistic rather than rigid, so that a minimalist design is likely to be robust. Further he argues that designing for learning cannot be based on a division of labour between learners and non- learners, nor vested in a management community. Rather, communities of practice must be involved in the design of their own learning- while at the same time accessing other practices – in three dimensions: engagement, imagination and alignment.

In terms of design for education, Wenger suggests that communities need to be concerned with the four dimensions previously outlined under Table 2.1. The first, balancing participation (learners negotiating meaning for themselves) and reification (codification of knowledge through language or curriculum frameworks) requires teachers to consider when one or the other is most appropriate and even to question how much learning itself should be reified as a process. Secondly, they need to consider both the designed (or planned) and the emergent, and to be opportunistic, since teaching does not necessarily result in learning but is one of the contributing resources. They need to look outward, connecting the depth of the local with the breadth of the global, and connecting education with other practices. Finally, they need to consider the competing sources of meaningful identity for students and staff, and offer new possibilities for participation in the face of possible alienation.

2.3.3 EFL Teachers' Roles in Designing curriculum

At present, although new technologies allow students more control over their learning, teachers are still mainly responsible for designing the environment of learning (Needham, 1986). One of the challenges of the constructivist approach is that real constructivist contexts are those which seem empty, but are in fact the result of a great deal of analysis, organization and planning of possible educational interactions Zuccheromaglio (1992). Elements of design include the macro-scale curriculum and standards frameworks and global testing mandated in several education systems, which, some believe, allow teachers little control over curriculum content although they can directly influence micro-scale grouping and spatial arrangements within the classroom Cuban (1984), De Marrais & LeCompte (1999). Others see frameworks as providing a basis, which can be filled with a wide range of learning activities devised by teachers and students.

Scardamalia and Bereiter (1999) have experimented with including students in curriculum planning in the United States. Using a database similar to the Victorian Curriculum and Standards Frameworks Board of Studies, (2000), students linked their work to appropriate objectives and commented on the relationships, and identified what they saw as additional objectives worth specifying. The project demonstrated that students could make useful contributions to curriculum planning. However in another study, Bober, Sullivan, Lowther and Harrison (1998) found that teachers did not value highly the process of involving students in making decisions about what they will learn and how they will learn it, and suggest that teachers need to be more explicit with students about the intent of their classroom practices, discussing with them why various practices have been selected.

In terms of planning for technology use, Loveless, De Voogd and Bolin (2001) suggest that teachers need to be aware of the range of resources and ways of working with technology to support the curriculum at the planning stage. This includes the learning objectives, technology capability which can support or be developed through the learning experience, technology skills or techniques required to realize the activity, the range of teaching strategies, and assessment of both domain knowledge and technology skills and capabilities. Teachers' knowledge and choice of resources can be limited by practical factors such as budget or domain knowledge, while with

the plethora of resources available via the Internet; they are often overwhelmed by the amount of information on classroom topics and hard-pressed to find time to assess its quality. When choosing software and multimedia products, teachers implementing a constructivist approach can use the same criteria they would apply to any resources, some of which are implied in Table 2.2. These might include the extent to which the material is presented in the context of a real world problem, whether it attempts to activate prior knowledge or experience, and to demonstrate exemplars rather than merely tell information about what is to be learned. Teachers would also ask if the product allows learners the opportunity to practice or apply their newly learned knowledge or skill and if it provides techniques that encourage learners to integrate the new knowledge or skill into their everyday life. In judging whether authentic knowledge building is going on, the question to ask is not whether students are using multimedia products or the Internet as opposed to reading books but whether they are trying to solve knowledge problems Scardamalia & Bereiter (1999).

As well as electronic resources, situated learning demands that contributions of adults other than the designated teachers must be incorporated, and while these can be expedited through the use of communication technologies, the process creates new demands on teachers. There is also the possibility of creating high-quality resources to suit the specific context, and in a study in one school, several teachers thought that in the future teaching would be more dynamic because technology would enhance teachers' ability to be creative and make teaching resources themselves Reid (2002).

2.3.3.1 Physical space: EFL Teachers' Roles as Teachers.

In spite of the influence of social-constructivist views, the physical context in which teaching and learning takes place is frequently ignored in much of the literature, which appears to describe a relationship unrelated to the physical location of teachers and students, unless to focus on areas such as classroom climate(Jamieson, Fisher, Gilding, Taylor, & Trevitt, 2000). An awareness of the interaction between people and place is a consideration when designing the learning environment at the macro and micro scales, because:-

Space is neither innocent nor neutral: it is an instrument of the political; it has a performative aspect whoever inhabits it; works on its occupants. At the micro level, space prohibits, decides what may occur, lays down the law, implies a certain order, commands and locates bodies Poulter (2007:175).

Even Castells (1999), who argues that the space of places is being replaced in the network society by the space of flows (of information), believes that schools will remain as physical communities. Research evidence indicates that the care and maintenance of the built environment is an important factor in learning, and capital investment in school infrastructure appears to have a positive effect on attitudes and behaviour and relationships among staff and students Fisher (2001); PricewaterhouseCoopers (2001). School and classroom layout can affect the interactions of teachers and students and opportunities for collaboration between teachers, an important part of the knowledge building process Nias (1987)

The relatively unchanged design of school buildings in Ethiopia in the last century shows an allocation of space more influenced by architectural and financial considerations than by teaching and learning principles or collaborative management practices. For some teachers, anxieties about information technology are compounded when they are required to work with outdated equipment and poorly designed facilities Office of Technology Assessment (1995). Secondary schools typically experience the separation of teachers' offices and staff rooms from student learning areas or classrooms, while many designs limit flexible use of indoor and outdoor space. Now the inclusion of information and communication technologies allows for the creation of virtual learning spaces interacting with the physical spaces and raises new issues. Paradoxically, social interaction in working and learning is changing to become at once more collaborative and more individualistic: increasingly the workplace demands team structures and processes while individualised and self-paced learning methods using ICT are being promoted, and performance management systems focus on individuals.

The concepts of openness and flexibility are emerging as key considerations, including the concept of a loose-fit building where a teaching and learning workshop allows for experimentation with a range of teaching and learning approaches Jamieson et al. (2000), Herman (2002) suggests two future building scenarios: one in which schools resemble open-plan offices for flexible work groups and self-paced study, and the other using high bandwidth, networks and quality projection equipment to allow for social learning in flexible spaces. Salisbury's (1996) future schools consist of spaces designed for discipline-oriented learning (which he rather surprisingly calls labs). Some of these will be mobile units, similar to those that already visit schools, shopping centers and other public places. In addition, technology support areas servicing the physical and the virtual environments are now essential, according to Fisher (1994) and space must be allocated to take account of this need.

The concept of flexibility extends to capturing the *pedagogical moment* Van Manen, (1991) where the teacher must act on the spur of the moment to do something pedagogically appropriate for the learner(s). Similarly, *just-in-time* learning Ausubel, (1968) and learner autonomy and self-management are characteristics that are logically supported by facilities available on a *just-in-time* basis Jamieson et al. (2000). Purpose-built secondary schools incorporating these characteristics have recently opened in Australia (Lake, 2003) and the Netherlands (VanDieten, 2003).

The relationship between learner and context is dialogic in that while the context impacts upon the activities of teachers and students, their activities also act upon that context. Hence the rhetoric claims that experience and knowledge of teachers and students can be called upon to inform and drive the process of change to enhance learning across the school Directorate of School Education, (1994), to inform the design of virtual environments and as Fisher claims, to redesign existing schools through incorporating design tasks within the curriculum Rennick (2002).

2.3.4. The Organizational and managerial roles of EFL teachers.

Within the designed spaces, EFL teachers play a role in taking care of, or managing, the people and the available resources, although the school sets many of the parameters for this activity. In outward looking learning communities this includes managing links with numerous outside organisations and individuals who can support the work of the school and provide role models. Constructivist principles of flexibility and openness, collaborative practices, and student participation in decision-making can be employed in teachers' management roles.

Research in the middle years of schooling has suggested that school organization practices which allow students short periods of time on particular activities and with specialized teachers are not conducive to optimum learning Hill & Russell, (1999). While Elmore, Peterson and McCarthy(1996) found some support in their research for the claim that standard ways of organizing schools may limit teaching practice and undermine good teaching, they were unable to find evidence that changes in organisation lead directly to changes in teaching, and ultimately to improved student learning. They concluded that changing school structures may not lead to desired changes in teaching practice and that the transformation of teaching practice is fundamentally a problem of enhancing individual knowledge and skill, a focus which is reflected in the recent research of Rowe (2002). In support of their argument they report that some teachers were enthusiastic about new ways of teaching but lacked understanding of how to make the work with students, while others thought they were teaching in new ways, but seemed to be using only slight modifications of their usual practice.

Although the culture of the school appears rather predictable, at the micro-scale of the classroom teachers are known to be flexible in adapting to daily changes, leading Jackson,(1990) to call teaching an opportunistic process. Teachers learn to tolerate a high degree of uncertainty and ambiguity by establishing various frameworks, including the types of arrangements for students to learn individually and in groups, and expectations of the level of freedom allowed. Some research evidence shows a shift in the management and control of an activity from the teacher to the students and the technology Loveless et al (2001). However according to Wenger (1998) there is a tension in this managing role as they frequently have to act as representatives of the

school- as teachers – rather than as adults in a community of practice, and are thus unable to act as themselves and provide openings to the adult world.

The introduction of educational technologies has drawn attention to both structure and opportunism. Research suggests that how the school organizes the allocation of information technology resources and the culture in the classroom including teacher attitudes and student interactions, is important in student learning DETYA (1999), while general classroom management has also been found to have a strong impact ,Wang, Haertel, & Walberg (1993). In most classrooms there will be fewer books than students, so teachers manage student access in different ways, ranging from highly controlled to laissez-faire. Although many teachers strive for fair distribution of resources, the ways in which they organize classroom use can lead to inequities. The effects of gender, for example, are often overlooked, or subject to stereotypes. Teachers need to be aware that the way they manage the classroom environment and structure computer activities affects access, and therefore potential learning opportunities. Sanders and Stone (1986) suggested that teachers should actively manage to ensure that girls have good role models and access to computers. Dickson and Vereen (1984) reported that pairs of students on computers learn as much or more than individuals, and recommend that teachers manage pairing in school in ways that address the differential access student have to computers outside school. More recent research also indicates that girls use technological facilities less often at home than boys Carey (2002) DETYA (1999), with the accompanying suggestion that teachers need to redress this imbalance at school. These arguments are often conducted with the intent of encouraging more women into computer science courses and employment.

Teachers are frequently expected to motivate student learning, and in transmission-based classrooms they attempt to do so using a variety of methods, including competition, positive feedback and rewards including marks, free time, choice of activities or a prize and even tasks such as collecting books Jackson (1990). However self-motivated learning requires no bribes from teachers but depends on links to the world, Illich (1971). The basis of intrinsic motivation for a student would therefore be having a purpose for engaging in an activity, and the role of teachers is to recognize how the students' experience can be further built upon and located in broader frameworks of knowledge Selinger (2001). The self-esteem generated by a sense of

achievement should thus reduce dependence on extrinsic rewards in the knowledge-building classroom. Although teachers have sometimes used access to computers as a reward in the extrinsic sense, particularly where they have not integrated their use into daily classroom activities, real motivation is more likely to be linked to the ways in which they are used: for consumption, (re) production or creation. Papert (1991) in discussing the motivational and knowledge-building possibilities of *constructionism* – students making, rather than merely using, software, in doing so they are able to concentrate their attention for surprisingly long periods.

The introduction of educational technologies has created a new area of management in the classroom, as numerous issues of functionality arise with both hardware and software. Teachers using educational technologies (such as plasma display panels), in the classroom frequently lack technical support, and are often less skilled in using the technology than the students they teach. Even where teachers have a positive attitude to innovation, the frequent technical difficulties encountered when using technology are very frustrating, Cittance & Innovation and Best Practice Consortium (2001). Drenoyianni and Selwood (1998) found that over eighty percent of the problems primary teachers faced when using computers and related educational technologies in their classrooms were of a technical nature. Because of these difficulties Preston (1998) found that teachers using computers in the United Kingdom saw themselves as *lion-tamers* pretending control in classrooms with unpredictable computers, and coming to terms with constantly asking their pupils for assistance with these *lions*. This lack of skill is exacerbated where teachers have little opportunity to use or practice their own computer skills while in the classroom, because they focus on facilitating technological experiences for students ,Evans Andris (1996).

2.3.5 Teaching and learning roles of EFL teachers.

When they are in a teaching role, as opposed to any other role in their life, teachers' primary expertise is in the area of learning, so that it is not surprising that the core of their work is teaching students how to learn (Laurillard, 2002). For this reason Pachler (2001) suggests that the potential and value of pedagogic mediation of teachers in the learning process makes school-based education vital. Selinger (2001) argues too, that the teacher less classroom is a myth. There

have been suggestions that computers can perform a mediation role and the term *computer-mediated learning* is frequently used, although it often describes a transmission model. Without the input of a teacher, links between existing and new knowledge might not be made (Selinger, 2001). In collaborative computing environments, the communication patterns do not follow roles and status, but have been found to focus on joint goals and shared problem solving with spontaneous expertise from the teacher (Jarvela, Bonk, Lehtinen, & Lehti, 1999). Similarly in the constructivist classroom, Goodman and Goodman (1990) suggest that relationships between teachers and learners become characterized by trust and collaboration rather than conflict and domination.

The Vygotskian view places teachers in an important role in classroom interactions, whether using technology or not, although it may appear to be much more indirect than in the transmission model of teaching (Crook, 1994). The functions of mediation and scaffolding, including coaching and providing feedback, are fundamental to teachers' work. The mediator function, suggest Goble and Porter (1977), helps people to develop their ability to use new knowledge to change the pattern of their previously acquired knowledge, and respect for the work of others. They forecast the current shift in emphasis from the input of teaching to the outcomes of learning, suggesting that in order to mediate student learning teachers need to know about developmental stages, individuals' thinking processes and accessing resources, and using as a basis for further learning. To be good mediators, teachers must make every effort to know and understand the learners. When mediating student learning, teachers constantly adjust the level of information and support according to students' needs, help them link new information to prior knowledge, refine their problem-solving strategies, and learn how to learn (Jones et al., 1995).

The tools developed by Jungian psychologists have gained acceptance by educators as a framework for understanding individual differences. While teachers may not administer the tools themselves, the theory underpinning them is often referred to in planning learning activities and assessments. As teachers have become more aware of learning styles (Kolb, 1984b) of the multiple intelligences (Gardner, 1984) both of their students and themselves, they are also more able to identify the means to stimulate intellectual curiosity, which Dewey (1910) believed was

a teacher's role. However the time required to know individual students is a concern. To address this, Jalongo (1991) suggests that meeting students' individual needs is as simple as providing a range of options for activities undertaken by students (the project approach). But she adds that coaching means that teachers become students of their students, knowing how their purposes and techniques evolve and thinking about what would enable each child to move on to other levels or in other directions.

2.3.6 Scaffolding learning

Within the zone of proximal development, scaffolding is the term often used to describe the process of interaction whereby a teacher (or a peer) assists a student by controlling the elements of a task, which are beyond the capacity of the learner, until the learner is capable of doing it alone. This is not to say that isolated aspects of a task should be separated from the whole in a drill and practice manner, but it is the gradual removal of teacher control and support as the student gains control of the task. It can include teacher demonstration and modeling which can be imitated, so that as Vygotsky(1962) argues, instruction marches ahead of development, oriented toward the future, not the past. Mckenzie(1999) describes scaffolding as providing structure – without which many students are unproductive – while maintaining initiative, motivation and resourcefulness. From an efficiency perspective, he suggests that scaffolding clarifies purpose and provides clear directions to the student, including assessment expectations, creates a pathway through material, reduces surprise and points students to worthwhile sources rather than unproductive ones. From Mckenzie's (1999) description, it seems that the act of scaffolding is generally in the hands of the teacher, and is likely to be interpreted in a range of ways.

Mercer and Fisher (1998) wonder if scaffolding is a particular type of teacher behaviour or a label that can be applied to any teacher intervention that leads to learning success for students. In other words, they ask whether scaffolding is a description of the intent or the outcome. They go on to suggest that without evidence of a learning outcome in terms of a specific skill, concept knowledge or understanding, the behaviour is merely help. From a teacher's point of view, it

seems that various behaviours can be employed with the intention of scaffolding learning, even if in fact the learning outcome is not immediately evident.

If Vygotsky's zone of proximal development relates only to the individual, the theory places teachers in the important and somewhat difficult role of identifying the ZPD for individual students, and taking action to guide the student and provide opportunities for learning. Perhaps in order to make it easier for teachers, later authors have preferred to suggest that the ZPD should be seen as relating to a learning activity or event, rather than to an individual student (Lieberman, 2001; Mercer & Fisher, 1998). Supportive teacher interventions, the style of classroom interaction, school culture and the mix of actors involved influence the potential for the learning activity. The limits of the ZPD on any task are therefore established in the course of the activity, by reference to past or current events, language or experiences, and through interactions between teachers and students or between peers. However, Lerman et al (2001) believe that this is not to say that a ZPD can be created in every situation.

Sylva (1997) suggests that scaffolding is not a useful concept in classroom teaching, citing the research of Bliss, Askew and McRae (1996) who found almost no scaffolding in science classes in their sample of thirteen teachers. She argues that it is in one-to-one settings that scaffolding is more likely to be effective. However, the concept of normal teaching in the twenty-first century is likely to be broader than she had in mind, and one-to-one interactions are frequent. But teachers are concerned that they lack sufficient time to scaffold learning for individual students in the zone of proximal development. For this reason, Mercer and Fisher suggest that the ZPD is limited in its application to research on the quality of teaching and learning in classrooms. They suggest instead that the *community of enquiry* might be a more productive focus, whereby cooperative-learning groups can enhance opportunities for generative learning among individuals. Similarly, Tharp and Gallimore (1998) argue for both individual and cultural zones of proximal development, presumably a question of scale, so there can be a zone for any domain of skill in relation to an individual or a society.

Talk is a common form of scaffolding. Vygotsky (1962) held the view that people learn in dialogue with each other, and specified a form of dialogue between teacher and learner in which

the learner constructs meaning in interaction with a teacher who supports and challenges, creating new perspectives leading to reflection on the process by the learner. This takes place in the zone of proximal development. For Palincsar (1986) dialogue is the means by which support is provided and adjusted facilitating the collaboration necessary for the learner to acquire the desired cognitive strategies. She uses four strategies: summarizing, question generating, clarifying, and predicting. Each strategy is a means of aiding students to construct meaning from text as well as a means of monitoring their reading for understanding, while the longer-term goal is to help students become autonomous learners. The teacher and students take turns in leading the dialogue, with reciprocal interactions, while the teacher provides encouragement and prompts to create a system of temporary support that is adjustable for each student. This scaffolding is gradually dismantled as learners become more independent and create personal systems. Socratic questioning is another process of teaching through dialogue that uses questions to guide and take learners to the next step, through discussing facts and concepts, a rule or theory to account for these concepts and a method for deriving rules or theories in general (Brown & Palincsar, 1989).

Teachers have a hierarchy of goals and processes to develop students' thinking skills and to robe for understanding, seen by some as a critical means of providing support (Burbules, 1993). Conversation is sometimes seen as a separate form of talk. Baker, Jensen and Kolb (2002) make a distinction between dialogue and conversation, suggesting that dialogue is the term used by epistemologically oriented theorists who see talk as an intellectual process of refining knowledge. In contrast, conversation is the term used by those who focus more on human understanding and experience rather than abstract knowledge about ideas. They prefer conversation as a mode, because it values all participants' contributions equally. Likewise, Cherednichenko et al. (2001) prefer to use the term conversation, arguing that students engage in learning when they initiate conversations with teachers and peers, and subsequently produce and publish artifacts.

Within the learning space(s), whether face-to-face or electronic, teachers have a role to play in establishing a climate that is responsive and expressive and encourages thinking (McIntyre & O'Hair, 1996; Thompson & Zeuli, 1999). In recent years, educators have been encouraged to teach thinking skills explicitly to prepare learners for lifelong learning. A focus on problem-

solving and critical-thinking skills means that teachers must provide students with opportunities to analyse, apply and evaluate information and must themselves be critical thinkers. This entails defining and clarifying issues, asking appropriate questions, judging the credibility of a source, solving problems and drawing conclusions. On the other hand, encouraging creative or divergent thinking can be more of a challenge to teachers, as the results can be unpredictable. In a thoughtful classroom (Russell, 2000), students have time to think, reflect and engage in sustained discussion, deliberation and inquiry, and use technology in ways that add to their thinking and learning approaches, making them more powerful. Teachers identify in advance the thinking and learning strategies, the dispositions, values, expectations, feelings, self-regulation and control they want the students to develop, then model them and how that they are themselves learners.

2.4 The Roles of EFL Teachers in Professional Learning: The roles of teachers as learners

2.4.1 Teachers' learning and Professional Development, the current situation

As noted above, this study is intended to influence teachers' professional development, particularly through identifying the extent and means of EFL teacher learning through practice. Professional development as a concept is not new. For many years education systems have recognized that teachers, once trained, need to continue learning on the job, and that in order to be successful, curriculum innovations should be accompanied by teacher development (Stenhouse, 1975). The strong effect of the teacher on student learning also demands that teachers do the best they possibly can, through continually reflecting on their classroom practice and applying their new knowledge to their work.

Like many before them, Darling-Hammond (2002), Beare (2001) & Rowe (2002) argue that improved teacher quality can and must be achieved through an on going professional development. However, in some cases authorities have interpreted this as meaning that training must be added on to any large scale change, and implementation is patchy, or at worse, unsuccessful. Teachers have been required to attend workshops offered by experts in teaching and learning, or in some cases, workshops provided by the Ministry of Education staff via a

train- the train models while their own knowledge is some times undervalued or ignored. Some suggest this encourages a view of teaching as technical, learning as packaged, and teachers as passive learners (Lieberman, 1996) and is linked with a tendency to record and measure professional development by the amount of time spent on formal programmes.

The need for the teacher to be a learner is rarely disputed in the current educational climate by teachers themselves. However, the term professional development and its abbreviation PD has been so often used in recent years that many teachers refer to be being pee-deed, high lighting the transmissive nature of much of the delivery at system level.

Fullan (1993) argues that an appropriate combination of pressure and support is required for professional development to be successful. A top down approach of applying pressure without support can simply generate alienation and withdrawal, leading at best to superficial change. On the other hand, he says, support such as funding with out pressure can result in change projects that do not focus on the important issues. This, of course, assumes that funding bodies have the correct answers. It is ironic that models of professional development which treat teachers as empty vessels ready to receive current innovations, simultaneously promote a constructivist view of the students as self motivated, self directed learners (Beattie, 1995). Consequently, Day (1999) argues that for school reform to be effective, learning opportunities for teachers must model constructivism, taking into account the individual learning styles and career history of teachers, as well as contextual factors such as school culture, support of colleagues and leaders and the influence of governments.

In the constructivist view, the teacher is at all times a potential learner, able to make meaning out of experience individually and collaboratively). In light of this belief, school based professional development has gained in importance in recent decades as teachers realize the value of learning situated in their normal work setting. Many researches have been conducted in Ethiopian context on the issue of teacher development. As an instance, a national survey of more than five thousand teachers in government schools in Ethiopia found that nearly 80% of them participated in professional development activities organized by their own school (MOE ICT Department, 2007). However, the survey had limitations. It measured inputs rather than outcomes, for both teachers and students .This means that the report measured only the participants' involvement

quantitatively rather than the outcome qualitatively. Furthermore, the emphasis on the term activity used throughout the survey confirms a view of formal structured professional development, ignoring the contribution of reflective practice and informal, unstructured opportunities for teacher learning. This study is based on a broader view of professional development than that described above, and currently experienced by many EFL teachers in Ethiopia. Day offers a more comprehensive definition when he includes:

All natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment, as change agents to the moral purposes of teaching, and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with lives (Day, 1999:4).

Day's definition demands that teachers consider their learning within a purposeful framework, asking why they are pursuing an activity and having learnt something new, seeking to apply it to their work to benefit the community. Seen this way, professional development has the dual purpose of moving forward or reforming schools while enhancing teacher skills, knowledge and professionalism. It can occur alone or with others in a social context, and it is not always planned. Teachers' learning can take many forms, both formal and informal, in or out of school, but all learning should be acknowledged and valued. Reflection is a means by which learning is recognized and knowledge is evaluated. Nevertheless, as noted above, in many cases education systems and school communities focus on the formal structured types of professional development and fail to record or value the on going informal learning of teachers, so that teachers themselves do not articulate or reflect on their learning a great deal.

While Liberman (1996) identified only three settings in which teacher learning occurs- conferences and workshops, in school activities such as coaching and action research, and net works or groups outside the school, Day adds the classroom as an additional setting where

learning occurs through interaction with students. My study argues that since this is where teachers spend a great deal of time- it is after all their work place – it is likely that much learning occurs in classrooms. Hoban (1997) describes three types of professional development models, which he names outside in, inside-in, inside-out side. The out side –in models are those where by information and theories in education are disseminated through training workshops, with the intention that teachers will take up new ideas and practices. The success of those models, suggests Hoban, depends on the extent to which teachers accept the knowledge being presented as meaningful and valuable to them. Clark (2001) also argues that where teachers are not involved in framing the goals and means of professional development, it is bound to fail. One reason, according to Marris (1974, Cited in Beattie, 1995:29) is that the decision makers have themselves already gone through awareness raising and thinking at the system level with out allowing for individual and school level response; thus, failing to acknowledge the state of readiness of the target group. Hobans’ second type, the inside in model, draws up on the knowledge and experience of the participating teacher encouraging them to reflect on and explore their ideas in their own context. This is a more constructivist approach, and teachers, therefore, take more responsibility for their own learning, but unless they collaborate with others, may be limited in their growth. Hoban’s third types, the inside-outside models, aim to develop a community of discourse drawing up on the experience-based knowledge of teachers and the knowledge of researchers and others. This particular research mainly adopts the ‘‘inside in’’ model which emphasizes on the knowledge and experience of the classroom teacher which according to Liberman 1996; Clark 2001 has mostly been overlooked.

The traditional dialectic between practice and theory, represented by teachers on the one hand and researchers on the other is being challenged as inappropriate for the 21st century. Hargreaves (1999) suggests that new modes of educational research should be explored, including training and supporting more teachers in research skills, searching for links between existing bodies of knowledge and supporting collaboration between all parts of the education system. Technology provides us with tools for communicating ideas and recording new knowledge, and openness and trust are required to develop learning communities in new spaces. If learning is a process involving activity and reflection and both scientific and spontaneous concepts (Vygotsky, 1962), there can be no limits to where it takes place. However, a recent report suggests that the greatest

barrier to success is the lack of coordination between pre-service teacher education, continuing professional development and school reform efforts (MOE,ICT Department, 2007).Similarly, Seife(1999) argues for a holistic approach looking at the relationship between technology, language, and society from a range of theoretical perspectives, both in teacher education programs and in the profession. Otherwise, Seife believes, we are in danger of drastically misinterpreting how technology and education relate to one another within our existing educational systems.

2.4.2 New roles for teachers

In Deschooling society, Illich (1971) argued for opening up the market to *skill teachers*, people who form part of an opportunity web of resources including basic technologies, available to all who want to learn. This model could well be attractive in the twenty-first century, albeit for different reasons. In light of the growing complexity of teachers' roles, a projected worldwide shortage of teachers and the possibilities afforded by technology, some suggest that the roles described above will have to be distributed among many teachers rather than found in all individual teachers (Beare, 2001; Cohen, 1969; Cornu, 2001). A team of experts will undertake the work of teaching and the organization of students into classes will be abandoned, suggest Beare (2002). As technologies spread throughout schools and systems, teachers will have opportunities for greater role differentiation and specialization, some becoming instructional designers while others develop specializations in assessment, small group facilitation or distance learning crossing traditional boundaries, and exchanges that help develop collective competencies are therefore required (Amherdt, Dupuich- Rabasse, Emery, & Giauque, 2001)..

In this new society, both teachers and students will need new attitudes and behaviors. Renshaw (2002) links the current economic imperative for workers to be team players, self-regulating, flexible and predisposed to sharing expertise, with the emphasis on student collaboration in classrooms. He suggests that this emphasis creates challenges for both teachers and students, such as learning to listen and negotiate, engaging in exploratory talk and expressing tentativeness, courage to express idea, persistence in problem-solving and generosity to acknowledge the good ideas of others. He also suggests that while teachers need to learn how to

share power with students and trust them to be responsible, students need to learn a more active and collaborative role as authors as well as consumers of knowledge.

While teachers are said to be flexible in their daily responses to students, they are also at times reluctant to change, particularly in response to externally driven innovation. Nias (1987) believes that their apparent reluctance to alter classroom practice is due to a desire to preserve their sense of self. She assumes that teachers have an ethical right to determine the nature and the extent of the personal changes that they adopt, while also suggesting how they might be encouraged to do so. However, she argues that many schemata are formed non-verbally and at a very early age, and can be very difficult to raise to the level of consciousness for reflection and discussion. She also suggests that since most of our perceptual habits are formed in childhood, learning is associated with dependency. Therefore situations that encourage adult learners to be authority-dependent make it difficult for them to accommodate new ways of thinking and behaving.

Teacher individualism and the need for identity also make it difficult to discuss disagreement and to develop a tradition of dialectic, thus denying a good opportunity for learning. Even where a team culture exist, when teachers focus on encouraging and supporting each other they sometimes avoid critique and challenge, which would assist in clarifying and improving their understandings. Hence Fullan (1993) calls for a reculturing of school, to develop a school culture in which ongoing intellectual curiosity is encouraged for everyone. For the development of the profession as well as the individual, the traditional isolation of teachers will need to be replaced by teachers working together. A recent Ethiopian report suggested that significant structural changes in education systems and in schools are required because the nature of the teaching profession as being practice *behind closed doors* militates against school-based collaborative teacher development (Ministry of Education, 2007). As a first step, Boyle and Skoop (1998) argues that a teacher as a colleague should be willing to open the classroom door in order to mentor others or to invite a mentor in. This is a challenge to the cultural norms of many schools, for neither their structure, the discourse of practice, nor the individualism of performance management procedures naturally encourages collaboration in daily work. Many Studies conducted using collaborative practitioner research in conjunction with university researchers identified a discursive environment, where teachers were able to talk about their actions and give

reasons for unexpected occurrences (Cherednichenko et al., 2001). This environment also encouraged argument and critique. However, the research also discovered an apparent lack of explicit and agreed language or discourse of learning for teachers to value and present their work, apart from the system-generated language of standards and outcomes.

2.4.3 Interdependence

A new approach to the culture of teaching includes moves towards interdependence rather than either dependence or independence. Perhaps the most challenging new role for teachers in working in real collaboration with other teachers, and taking responsibility for their learning (Venezky & Davis, 2001; Wade, 1987). Professional collaboration is a term increasingly used without being clearly defined, but generally appears to include teachers and administrators working together, sharing their knowledge, contributing ideas and developing plans for achieving educational and organisational goals. The notion of learning circles or professional learning teams has been promoted to facilitate planning and coordination of teaching programs and ongoing improvement of teaching and learning within the classroom (Hoban, 1997; Johnson & Scull, 1999). Where teachers reflect on and evaluate their practice together, as in these teams, they are likely to be building knowledge in the organization as well as developing individual skill (Hargreaves, 1999; Retallick, Cocklin, & Coombe, 2005; Senge, 1993).

In ideal communities people work together with common goals, take risks to explore areas outside their expertise and share their learning with other professional, assisting each other to grow and develop (Jeones et al., 1995). Teachers are as concerned with the progress of other teachers and the school as a whole as they are with their own success. However, while they might plan, assess and reflect in teams, teachers who do not teach in teams ultimately determine their own classroom practices, allowing the structural isolation to continue. While the rhetoric of performance management encourages collegial interaction, team cohesion and modelling excellent teaching and learning skills Ministry of Education 2005, performance management systems tend to entrench individualism. Experienced teachers are expected to provide high-level professional assistance to other teachers in classroom related areas, but McGuinness (2003) notes that even for school leaders, the requirement to develop other teachers (in contrast to improving

the whole school) is not a high priority among many teachers. Yet others would argue that transformational leadership demands this behaviour (Leithwood, Jantzi, & Steinbach, 1999).

2.4.4 Teaching as a profession of Knowledge builders

In this section, the focus is on EFL teachers collaborating as learners with other teachers, rather than building knowledge with students in their classrooms. The concept of teachers as learners allows and encourages teachers to be active agents in their own learning processes, which lead to professional development and the creation of practical knowledge. Boyle & Skopp (1998) suggest that the dialectic between teaching as practice and as a profession can be usefully seen as instance of Vygotsky's Zone of Proximal development (ZPD), in that it is the interaction between scientific, academic, or disciplined knowledge and the spontaneous knowledge of everyday experience (Vygotsky, 1962). Thus, each type of knowledge develops towards the other and, when they intertwine constructively, they create a rich base of knowledge that is both structured and grounded. Kolb (1984a) agrees that learning takes place in the zone of proximal development and argues for experiential learning, incorporating both active experimentation and reflective observation. Honey and Mumford (1986) simplified Kolb's theory into a simple learning cycle incorporating four models: experiencing, reflecting, theorizing and implementing, and like Kolb, have devised tools for individuals to assess their dominant styles. This theory has been articulated in many individuals and organisational development programs in Ethiopia in recent years, although it is not clear whether it also underpins their design.

While teachers focus on action (experiencing and implementing) in their practice, they have been less frequently involved in researching (reflecting on and theorizing) this practice. Piaget (1969) expressed surprise that the large number of teachers did not produce a group of researchers among their ranks who focused on pedagogy as a discipline from the practitioner's point of view. Similarly the discourses of researchers and practitioners have often been separated. A constructivist approach to professional development values the experience and knowledge of practicing teachers as a starting point and as a content base, and creates links between theory and practice. In acknowledging that professional development is becoming more constructivist, some argue for a closer look at the assumptions underlying new initiatives (Cochran- Smith & Lytle,

2001; Greene, 2001). Cochran-Smith and Lytle discuss three views of the relationship between knowledge and practice, which can influence professional development policy and programs. In the first, knowledge-for-practice, knowledge is generated by outside researchers and passed on to teachers to improve practice, while in the second, knowledge-in practice, the focus is on practical knowledge generated by expert teachers for reflection by others. The third approach they call knowledge of practice within the context of inquiry communities and connect it to larger social, cultural and political issues. They make a distinction between action research as a time-bounded project- focused approach, and their inquiry stance, which is a more fundamental way in which teachers, both experienced and inexperienced, work together to generate local knowledge, envision and theorise their practice, and interpret the theories and research of others.

Stance as a metaphor implies position, orientation and perspectives over time. The expert-novice distinction is irrelevant. Local knowledge, they say, is that which is integrated with daily life in schools and classrooms, and emphasizes the link of knower to that which is known and the context in which it is known. Reflective practice serves to make connections between the daily work, its underlying assumptions and the agenda for school and social change. This approach has much to offer EFL teachers integrating technology into their work, as it blurs the expert-novice boundaries, and links local knowledge and the broader social context. Where inquiry is a stance, say Cochran-Smith and Lytle, teachers and student teachers engage in joint construction of knowledge through conversation and other forms of collaborative analysis and interpretation, and professional development is linked to larger social and political goals.

2.4.4.1 Time

In a society where speedy, rather than thoughtful, responses are valued and outcomes are time-related, time is the resource which teachers crave. Teachers need opportunities for classroom experimentation and tinkering (Hargreaves, 1999) and time to share and discuss classroom events with other people, including researchers and other teachers, on an individual or group basis (Joyce & Showers, 1988). However lack of time, and the limited extent of teacher control of their time, have been suggested as barriers to collaboration and reflection, leading McLaughlin and Oberman (1996) to argue strongly for more discretionary time to allow for

teacher research, team teaching and group meetings. Data from a survey of teachers in eighty-eight schools indicated that while teachers believed that collaboration was desirable, their actual circumstances, particularly lack of time, reduced collaboration, although teachers in Middle-sized schools were likely to be more collaborative than those in small or large schools (Leonard, 2002). Culturally, the attitude that teachers are working only when in scheduled classes needs to be challenged, and time allocated for planning, reflecting, working with individual students and visiting other classes (Hord, 1997).

2.4.4.2 Reflective practice in teacher learning

The concept of the reflective practitioner is based in integrating theory and practice, in that the investigation of practice, and the considered reflection on practice are the driving force for the generation of theory. It is therefore, an authentic practice for teachers to engage in. Dewey (1933) drew attention to the need to link the theory of reflection to the practices of teacher education, and the movement has gathered momentum in recent times. In most of the literature surveyed, reflection is closely linked with action. Dewey observed that reflective thinking involves a state of doubt in which thinking originated and an act of searching to resolve the doubt; it, therefore, looks both back and forward. He made a distinction between routine action and reflective action, suggesting that routine action is guided by factors such as tradition, habit and authority and by institutional definitions and expectations, and is, therefore, relatively static and unresponsive to changing priorities and circumstances. Reflective action, on the other hand, implies flexibility, rigorous analysis and social awareness. It involves a willingness to engage in constant self-appraisal and development. However, in many western technological societies, in particular, the action mode appears to dominate the reflection mode (Kolb, 1984b) and in Ethiopia, the demand to innovate often appears to be interpreted as a further call to action rather than reflection.

Schon (1983) describes two forms of reflection: reflection-in action and reflection-on action. Teachers often engage in the former as they act flexibly or think on their feet, but it is the latter—the systematic and deliberate thinking back over one’s actions—which has been taken up by many designers of professional development programs for teachers. Baird (1991) advocates reflection

as a means of progressing towards more purposeful teaching and meaningful learning, but he suggests that the term reflection is sometimes used in place of thinking. He asserts that reflection can be both introspective and outward looking, depending on the purpose and focus. A teacher might focus on specific personal performance or on his or her own learning abilities, or might explore the underlying meaning of a personal experience. Nias (1987) suggests that this type of activity is successful when teachers join in on the understanding that the discussion of their own experience is valuable. However, teachers who have often been passive receptors, rather than active creators, of professional knowledge are often unsure that they can learn from their peers, much less themselves.

Reflection can be anticipatory (occurring before the experience) contemporaneous, with the experience or retrospective, according to Baird (1991). Similarly, Lukinsky (1990) suggests reflective writing is useful before learning something new, while learning and after learning is completed. Reflective journals are used as a tool for connecting thought feeling and action: the writing generates momentum and is the meaning, while the journal itself becomes an objectification of the inner search, and an anchor form which to make further explorations. Other forms of recording what is learned, such as audio and videotape, can be used, especially if they can be shared with other practitioners (Hogarty, Lang, & Kromerey, 2002). With regard to the online environment, Sorensen suggests that, contrary to the physical world in which action is seen to primary to reflection, the virtual universe provides a context in which reflection may precede involvement (Sorensen, 1999). It is possible that for collaborative interaction and dialogue in online learning, the task of scaffolding learning processes that aim at supporting both interaction and (self) reflection must occur at a meta-level, in terms of creating awareness of the function of contributed comments in a dialogue (Sorensen & Take, 2001).

In discussing reflective practice, Argyris and Schon (1974) also distinguish between two types of theories of personal action which teachers bring to their work: espoused theories and theories-in-use. Espoused theories exist at a conscious level, which can be articulated and changed with relative ease in response to new information and ideas. Teacher's responses to questions will indicate their conscious ideas, intentions and beliefs, perhaps influenced by policies from education systems, but, according to Osterman and Kottkamp (1993), these do not always guide

teachers' behaviour. Argyris and Schon (1974) argue that theories-in-use are difficult to identify but more influential. Deeply ingrained, they are not easily articulated or changed. The concept of reflective practice maintains that teachers' theories-in-use are not changed by simply providing new information, but through engaging observation and reflection to raise awareness of assumptions, behaviours and the impact of their actions.

In recent years studies have found that effective professional development includes aspects of reflective practice (Dexter et al., 1999; Dwyer, 1994), situated learning (Brown & Palincsar, 1989) and long-term collegial interaction (Joyce & Showers, 1988; Lieberman & Miller, 2001; Sandholtz, Ringstaff, & Dwyer, 1996). Other emerging themes include the importance of connecting teacher and student learning, encouraging the development of a common language and using structure tools and protocols to guide discussion (Lieberman & Miller, 2001). Darling-Hammond and McLaughlin (1996) suggest that effective professional development involves teachers both as teachers and learners, and allows them to struggle with the uncertainties that accompany each role. They also believe it must be experiential, grounded in inquiry, reflection and experimentation, collaborative, sustained and ongoing, and connected to their work, and other aspects of school change. The roles of learner and researcher are seen to be empowering as teachers reflect on experience, gather data and try new ways of working (Lang et al., 1995). This type of capacity-building professional development reflects the constructivist view of knowledge as constructed by and with practitioners, rather than conveyed by policy-makers in a top-down manner. Nias (1987) suggests that this type of activity is successful when teachers join on the understanding that the discussion of their own experience is valuable, but where they have been passive receptors rather than active creators of professional knowledge they are often unsure that they can learn from their peers. This is particularly likely to be so where purpose is lacking or unclear. For Lebow (1993) reflection is part of problem solving, being the deliberate and purposeful act of thinking to gain a better understanding of a situation or a problem, which leads to action. He suggests that the steps in the reflective cycle are suggestions, problem, hypothesis, reasoning and testing. Australian projects which encourage reflection among groups of teachers, such as the Project to Enhance Effective Learning (PEEL) Baird & Northfield, (1992); and the Innovation and Best Practice Project (IBPP) (Cuttance & Innovation and Best Practice Consortium, 2001) suggest that teachers' professional roles are developing to include systematic

research practices which enhance their own learning. Reflection can take many forms and has many purposes, both individual and social. Zeichner and Liston (1996) consider five traditions of reflective teaching practice, the academic, social efficiency, development, social reconstructionist and generic. In the academic tradition, perhaps not surprisingly often found in the secondary school, teachers reflect about the content of the subject they teach. The social efficiency tradition, which emphasizes external research as a basis for teaching expertise, encourages teachers to measure their own teaching against the knowledge base generated by research. In the third tradition, the developmentalist, the focus is on gaining greater knowledge of students' diverse backgrounds, understandings and development readiness for tasks through observation and reflection.

In contrast, reflection in the social reconstructionist tradition is a political act that either helps or hinders progress towards a more just and humane society (Freire, 1993; Kemmis, 1985). The emphasis is on thinking about issues of equity and social justice that arise in and out of the classroom and on connecting teachers' practice to social justice. He proposes that reflective practice includes a process of problem-solving, reconstruction of meaning and subsequent reflective judgments while persons are engaged in a significant new activity. He acknowledges that a current challenge is the identification of relevant theory and the creation and testing of interventions that can guide the development of reflection. Ball and Cohen (1999) suggest strategic documentation of practice, through artifacts, videos and teachers' notes that are then analyzed, preferably with others. Using artifacts, they claim, helps avoid the exchange of buzzwords and slogans often found in professional conversation. However, while these practices represent teacher's classroom activity, they can still allow teacher-student interaction to remain private and protected from the gaze of other teachers.

2.4.5 Conceptual frame work of teacher's roles

The literature reviewed above has considered current influences on roles and relationships in schools, particularly the social constructivist approach and the potential of technology to support knowledge creation and skills development. Viewed in conjunction with this pilot study undertaken in classrooms and described in this paper, the literature points to three broad

elements of teachers' roles, which are broadly categorized for this study as designing learning environments, managing people and resources, and mediating student learning. The design of learning environments encompasses establishing the physical setting and the learning space as well as planning curriculum and resource use. This activity, which was both observed and discussed during the pilot study, creates a context and climate for building knowledge. Within this context, managing people and resources includes the new and extensive requirement of ensuring that the technology and peripherals are functioning, as well as organizing students in groups and motivating and disciplining them. Classroom observation revealed many aspects of managing by teachers. Mediating learning includes the activities of instructing, demonstrating, coaching and scaffolding learning, as well as monitoring and assessing performance, as detailed in Appendix A. A model was developed to show the interrelationships of these three roles with the intervening role, improving practice, as shown in Figure 2.1.

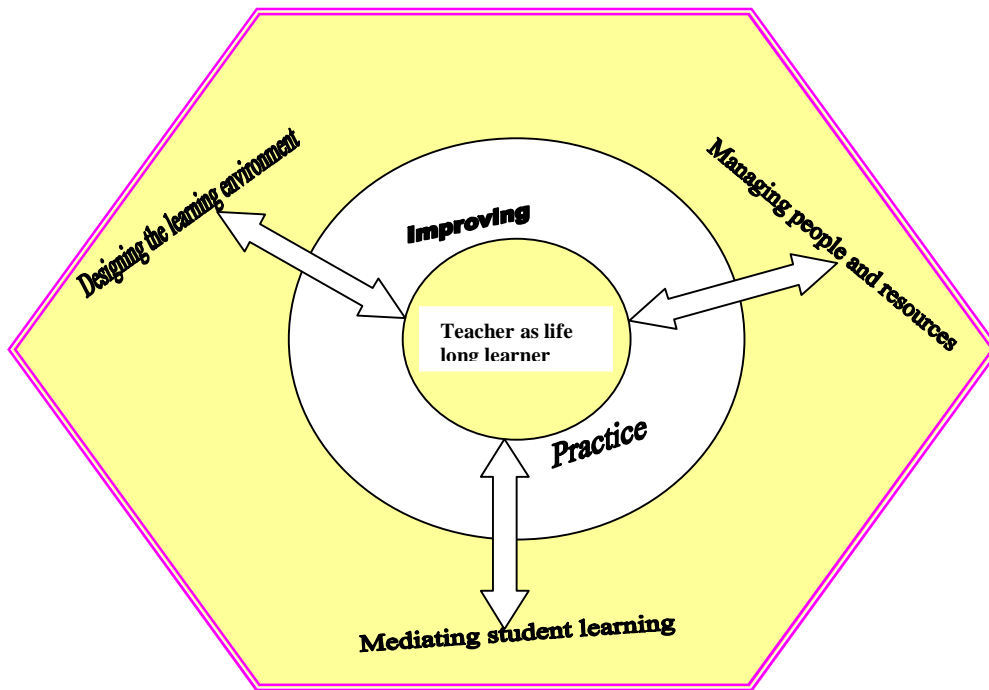


Figure 2.1 Model of teachers' class room roles

As a model about teachers and teaching, Figure 2.1 places the teacher at the center acknowledging the expertise teachers bring to the classroom communities, while taking into

account the need for lifelong learning on their part. The ring labeled *improving practice* links the teacher as learner with the substance of their classroom work.

Some authors such as (Wenger1998; Hannafin&Saveyne1993) suggest that the future lies in separating the three substantive roles, so that individual teachers specialise in one, or aspects of one of designing, managing or mediating learning for the sake of facilitating learning. Whatever the case, a socio-cultural approach to professional development encourages EFL teachers to reflect on their practice and co-construct future scenarios.

2.5 Teachers' perceptions to technology

Fear of technology *per se* is sometimes raised as an impediment to teachers using technological facility, but this fear is often grounded in practical concerns. Given time apart from their students, or computers on line at home (Perston, 2001) some teachers can build up their experience and confidence, thus addressing their fears of using computers and related technologies with classes (Cambre & Cook, 1985). A study of nearly six hundred elementary and secondary teachers in fifty-four schools in Austria showed that lack of experience with technology was one factor that led to resistance to technology (Rosen & Weil, 1995). Hannafin & Savenye (1993) identified several factors influencing teacher resistance to computers and related technology including the belief that computers do not improve learning outcomes, fear of losing control of the classroom, and fear of displaying a lack of knowledge or skill with the technology in use. Rosen & Maguire (1999) suggest that although all people who use computers experience some anxiety or *computer phobia*, for teachers this anxiety interferes with their ability to integrate technology into the curriculum, thus affecting their students. However, greater familiarity with computers and related technology and linking them with personal and professional purposes, coupled with encouraging teachers to learn together have been shown to be successful in addressing their fears (Hunt & Bohlin, 1985). The research of Cox, Preston and Cox (1999) highlighted the importance of perceived ease of use and pedagogical usefulness in the classroom on teachers' attitudes, rather than purely increasing their technical skills.

Differences in attitudes (of teachers and students) and pedagogy are sometimes attributed to gender (Ravitz et al., 2000), and in Liao's meta-analysis of 106 studies have concluded that

males had more positive attitudes to technology based instructions, although he was not able to ascertain what factors might contribute to this (Liao, 1999). On the other hand, Tekeste Negash (2006) found in his study of seven high-schools that in Satellite Television (Plasma) supported EFL lessons, the main core of anxiety is not dependent on gender, and concluded that good teaching is gender-neutral. While this neutrality is unlikely, it may be that other variables such as years since initial training, access to learning opportunities and access to a personal computer, could be important. Women tend to look for purpose in their use of the technological facilities rather than tinkering as men are said to do (Delaney & Dyson, 1998). In Finland a study found that middle aged female teachers had lower technology skills than males, but they emphasized constructivist principles and were keen to learn more about technology to develop new pedagogical practices (Hakkarainen et al., 1999). Although the picture is not clear, both the ageing and feminization of the teaching profession in Ethiopia will need to be taken into account when planning professional development.

2.5.1 Teachers' perceptions towards Technology use in Language Classrooms

Although there are computer and related technology resources available in many schools, and they are believed to improve the quality of teaching and learning, not all teachers are willing to adopt them as much as expected by researchers and school administrators (Marcinkiewicz, 2005; Dusick, 2008). That is to say, despite the rapid development in computer technology, teachers' adoption and integration has been slow . The underutilization of computer related technologies such as plasma has discouraged researchers in the field and led them to question the true effectiveness of educational technology and to start investigating what motivates some teachers to use these in their instruction and causes others to avoid them.

Although teachers today recognize the importance of integrating technology into their instruction and course syllabi (Dupagne & Krendl, 2007), successful implementation is often impeded by both external barriers(lack of access to technological facilities, insufficient time to plan, and inadequate technical and administrative support and training), and internal barriers(teachers' beliefs about teaching and technology based practices, teachers' established classroom practices and unwillingness to change, lack of relevance of computer and related technology resources in

teaching, and lack of self-confidence) Ertmer, Addison, Lane, Ross, and Woods (2009). In the literature, external barriers to computer technology integration are also referred to as environmental factors or first order barriers. Examples include no support from the administration, lack of resources, unavailability of supportive staff, and a lack of effective training. Internal barriers are also called social cognitive factors, or second order barriers. Examples include personal and behavioral factors of attitude and anxiety, self-efficacy, willingness to make a time commitment and take personal risk, and beliefs and knowledge about and perceived relevance of technology supported ESL/EFL learning (Dusick, 2008).

2.5.2 External Barriers to Technology Use in ESL/EFL Classes

Prior to in-depth examination of teachers' non-use of technology resources, some researchers believed that providing more resources, and time and training would solve the problem and encourage teachers to integrate technology more (Hoffman, 2007). Hoffman points out that teacher learn computer technology skills in numerous ways: self-study, workshops and conferences, in-service training courses, or coaching, guidance and help from colleagues. However, teachers need to commit a certain amount of time to learn technology skills. Not all teachers can find time to spare, and much research has identified lack of time as one of the major factors preventing teachers using technology resources, especially for those teachers who are already overburdened with large classes, overloaded syllabi, and little assistance.

In their review of the literature on teachers' attitudes toward the use of technology based practices to language teaching, Dupagne and Krendl (2007) observed that the literature they reviewed generally demonstrates positive teacher attitudes toward the same. However, several studies in Dupagne & Krendl's review reported that teachers share a number of concerns about integrating technology and related technologies in their instruction: although teachers may believe in the instructional effectiveness of computers, they remain unable to make use of the technology because they have their own limitations, such as time or lack of knowledge. The primary recommendation emerging from Dupagne & Krendel's review of the literature was teacher training, referring to the need for schools to invest time and resources in in-service and workshop training for teachers.

Similarly, in another study in North America, Indonesia, Chile, and Peru, Ely (2005) concluded that the barriers to teachers' use of educational technology were lack of time and lack of teachers' experience and skills in the technology under utilization. The conditions that must be met to overcome these barriers were additional time to practice with hands-on experience, in-service teacher training and curriculum integration. Ely(2005) argued that the people who would ultimately implement educational technology had to possess relevant knowledge and skills.

Later research findings began to realize that removing external barriers and providing more resources may not guarantee teachers' use of technology (Marcinkiewicz, 2008). There may be internal barriers causing teachers to avoid technology. In the following section, research into internal factors affecting teachers' attitudes towards and use of technology in the classroom will be presented.

2.5.3 Internal Barriers to Teachers' use of Technology in ESL/EFL Classrooms

A necessary condition for teachers to use instructional technology (IT) is that they first must learn how to use it. Learning may be individual and independent or with the help of a trainer (Dusick, 1998). Some teachers are willing to attend training while others avoid it. Below, particular internal barriers preventing teachers' use of technology will be presented. These barriers are self-efficacy and innovativeness, attitude and anxiety, and beliefs about the relevance of computers and related technology (in our case Plasma) in improving instruction and learning.

2.5.3.1 Self efficacy and innovativeness

Accomplishments that contribute to personal efficacy and self-competence related to using computer technology are using computers and related technologies successfully, observing others using them successfully, and encouragement through mentoring and tutorials. As recommended by research in the field, teachers with anxiety and low self-efficacy must be provided with opportunities to develop and successfully use computer and related technology resources.

Marcinkiewicz(2008) argues that teachers are not volunteering to using technology as a tool to support language learning as much as expected. Marcinkiewicz refers to some researchers who argue that the way to encourage teachers to use more technology resources is to supply them with more technology. These researchers, Marcinkiewicz points out, also argue that teachers need to spend extra time and effort to learn ways of integrating technology into their instruction. According to a survey by Sheingold and Hadley (1990; as cited in Marcinkiewicz 2008), teachers who did use computers and related facilities spent extra time and effort to integrate them into their teaching. Nonetheless, simply having technology resources, Marcinkiewicz argues, may not be enough to persuade teachers to use them. In a study with 170 elementary school teachers in the United States, Marcinkiewicz investigated two related questions: what stimulates some teachers to integrate technology into their teaching and what causes others not to use them at all? The study found that a number of personal variables, self-competence (belief in ability to use a given technological facility for performing the desired role) and innovativeness (willingness to change) were most closely related to technology use among the teachers. The findings of his research, Marcinkiewicz argues, showed that teachers were largely underutilizing computers and related facilities despite their availability in their schools.

Openness to change was investigated by Baylor and Ritchie (2002). They were interested in investigating teachers' willingness to try new instructional innovations, teachers' beliefs about the relevant importance of computer technology in terms of learners' content acquisition, and the belief that risks can be taken in teaching using computer technology. The study found a strong positive relationship between teachers who had a higher degree of openness to change and the effect of computer technology on learners' higher-order thinking skills and content acquisition. Baylor & Ritchie (2002) argue that this may be because innovative teachers are more able to apply new teaching strategies that foster these skills. Baylor & Ritchie emphasize the way teachers use technology in class is a critical measure of its success. The technology itself will not directly change teaching and learning, but the way it is incorporated into instruction will certainly be a critical element in its integration (Office of Technology Assessment (OTA) (1995); as cited in Baylor & Ritchie, 2002). Baylor & Ritchie predict that successful technology

integration depends on two variables: teacher openness to change and the extent to which teachers experience and practice using technology.

Albion (2007) refers to other studies which indicate that innovativeness also contributes to teachers' level of use of technology related facilities for instructional purposes because teachers will have to master a variety of powerful tools and redesign their lesson plans around technology-enhanced resources. For individuals who have a low sense of efficacy, innovativeness is not an option. Albion argues, on the other hand, that the research suggests that teachers' beliefs about their self-efficacy in using technology for teaching are directly related to their actual experience and practice with technology.

2.5.3.2 Perceptions and anxiety

Perceptions towards technology related pedagogical practices influence teachers' acceptance of the usefulness of technology, and also influence whether teachers approach these resources and integrate them into their classroom (Clark, 2008; Akbaba & Kurubacak, 2007). The most common terms used to describe anxiety are techno anxiety and technophobia (Dusick, 2008; Lam, 2001). Technology anxiety may result from several factors such as low self-efficacy, low expectations of outcome, or lack of encouragement. Degrees of techno anxiety or phobia vary but the user is usually uncomfortable and anxious because of lack of knowledge and experience. Training and raising self-efficacy by providing opportunities to use computers and related technology were reported as effective treatment. For example, in a study by Herman (2002) it was found that a professional development program for secondary teachers at an American suburban school positively affected the teachers' attitudes toward technology supported pedagogical practices on a specific, as well as overall scale and teachers' self efficacy.

2.5.4 Beliefs about the relevance of computers and related technology such as Satellite TV in improving instruction and learning

Belief about the relevance of a particular computer technology resource is a key factor in determining whether teachers will utilize that resource or not. Many teachers fail to use

technology not because they are technophobic, but because they cannot understand how technology could be utilized in their teaching practices, or have doubts about the usefulness of technology (Lam, 2001). Morton (1994, as cited in Morton, 1996) found that one major factor that prevents teachers from integrating computer technology into their classrooms was lack of knowledge of how it can promote learning. Therefore, knowledge about the usefulness of computer and related technology is a key factor for integration (Dusick, 2008).

2.5.5 Relationships between internal and external barriers

Research has revealed that simply providing computer or other technology resources may not always guarantee teachers' use of them in their instruction. It seems that internal factors also contribute to the use of these resources. A study by Ertmer, et al. (2009) investigated the relationship between the external and internal barriers to technology implementation by observing and interviewing several teachers within an elementary school who had achieved varying levels of integration. The study was designed to look at differences in teachers' use of technology, their perceptions of the value or role of technology in the classroom, and their beliefs about what constitutes effective classroom practice. The results of the study suggest that teachers' internal beliefs about technology interact with external barriers to facilitate or limit teachers' technology use. Ertmer, et al. argue that although it is important to know that teachers need more equipment or more time to plan for technology use, it may not always be enough. It may also be important to understand teachers' reasons for technology use or non-use and their beliefs about the usefulness of technology in teaching and learning practices, Ertmer, et al(2009) emphasize that internal barriers may persist even when external barriers are removed, thus they suggest that while addressing barriers at each level of technology integration, the following strategies should be taken into account:

1. focus on pedagogical issues, as well as technological issues during training;
2. provide a broader vision of technology integration by explaining the basis and rationale and grounding for better teaching and learning;
3. provide help and guidance by models, mentors, and assistance from other colleagues in the implementation process;

4. and provide opportunities for teachers to reflect, collaborate, and discuss the integration with colleagues.

Gruich (2002) reports on a study which suggest that general attitudes toward technology based language pedagogy are a key predictor of adoption. The study investigated community college faculty attitudes in 15 public community and junior colleges selected in southern US toward utilization of technology, the flexibility of technology, and technology efficacy among faculty in community colleges. The study found that there was a relationship between attitudes toward teaching with technology and certain variables. These variables were teachers' beliefs about the usefulness of technology resources and their perception of flexibility and integration of technology in instruction.

Ely (2005) warns that teachers should change their beliefs about how technology is used in improving learning and teaching. Teachers should not expect technology to do all the work and answer all the questions. Teachers should learn to see technology resources as tools that they can manipulate to create opportunities for a better learning and teaching environment.

Kemp (2002) argues that the studies and theories previously cited have demonstrated the relevance of a range of variables such as, teachers' attitudes towards technology, teachers' self-efficacy, teachers' innovativeness and teachers' past experiences of educational technology in the classroom. However, according to Kemp, many studies fail to identify the extent to which these variables influence teachers' attitudes, self-efficacy beliefs and practices in relation to technology; nor do they look for a relationship between the variables and teachers' willingness to adopt technology into their classrooms. Kemp's study examined the influence these variables have on teachers' implementation and use of technology in their classrooms. She found that teachers who spent more time in professional development were found to have more positive attitudes toward technologies, (higher scores on self-efficacy practices, and higher innovativeness scores) than their colleagues who spent less time in such activities.

The common emerging issue from most of the studies reviewed is the provision of training. Most research agrees on the impact of training in overcoming both external and internal barriers to the integration of computer technology resources in instruction. The following section will go into

more detail on the impact of training on developing positive attitudes towards computer and related technology adoption and integration.

2.6 The impact of training on the use of technology resources

Research has shown that teachers who have more experience with computer and related technology are more comfortable using and have positive attitudes towards computer technology resources, while those with computer anxiety tend to avoid using them (Akbaba & Kurubacak, 2007). The expansion and success of instructional technology, then, depend greatly on teachers' attitudes towards and ability to use them in their instruction (Clark, 2008). Some researchers found that provision of opportunities and training to enable teachers to experience computer technology resources and learn how to use them in instruction is crucial for teachers' acceptance and use of them (Clark, 2008).

Tuzcuoglu (2000) investigated teachers' attitudes towards Technology Assisted Language Learning (TALL) in some secondary schools in Turkey. Tuzcuoglu stated that despite the availability of lessons on Satellite Digital Televisions (Plasma), and a request from the administration that teachers use the same for teaching; most teachers did not make use of it for teaching purposes. Tuzcuoglu's results revealed that teachers had positive attitudes towards using TALL in language instruction and were willing to teach with it. The teachers agreed that using TALL would increase students' interest and language learning abilities. However, almost none of the teachers had experience with how to play their role using TALL and thus needed to get adequate training on how to make use of teaching. Tuzcoglu offered suggestions about ways of using TALL in teaching English, highlighted the need for training teachers and revision of the curriculum to better integrate teachers and students with the technology.

Another study in Turkey, by Aydogdu (2001), investigated the level of educational technology use in teaching English among language instructors across eight state universities. The results revealed that teachers who have undergone training used educational technology resources in language instruction more than those who have not. The study highlights the need for pre-service and in-service educational technology training programs for ELT teachers. It also suggests that

the existing training programs should give more emphasis to the pedagogical potential of educational technology resources.

After analysis of the results of their study with 47 teachers from 20 K-12 schools in the US, in which they examined the use of computers by teachers and their perception of the impact of computers on their classroom practice, Dexter, Anderson, & Becker(1999) concluded that using computers in the classroom in a teacher-or learner-centered way is the teacher's decision. To make this decision, they argue, teachers will draw upon their knowledge and experience of using technology tools in the classroom. For that knowledge to be constructed and developed further, teachers must have opportunities to work with computers and technology resources, models of how these resources and tools can be used in instruction, and opportunities to reflect on the role of the computer and other related technologies in the learning process. In other words, teachers must be provided with opportunities to construct their knowledge about educational technology. School administration, trainers and curriculum planners offering technology should provide models of effective technology implementation and opportunities for learning, as well as positive reinforcement and support.

One of the major incentives for teachers to use technology assisted language learning might be to convince them of the benefits of technology in language instruction. As teachers become convinced of the learning benefits that may result from the adoption of new instructional practices, they may become more motivated to adopt these practices. As the above review of research has revealed, the way to convince teachers is to provide them with models, opportunities and training support. Jones (2001) identifies the same issue and argues that in order to better exploit the rich potential of computer assisted instruction schools should provide teachers with adequate training and time to develop pathways for incorporating technology into instruction and student learning.

2.6.1 Training Content

In-service training programs in most schools are usually in the form of brief workshops that make no provision for follow-up assistance or opportunity for evaluation and feedback. Consequently, teachers don't apply in their classrooms the training programs they are offered. Kassen and Higgins (1997) highlight that in addition to the need for teachers to have more access

to educational technology; there is also a need to improve the design of training opportunities. Based on the report of United States Department of Education 1995, Kassen and Higgins (1997) state that,

Technology training is most effective when it (1) offers teachers ample time to practice and experiment with technology and to share ideas ;(2) provides sustained support rather than a one-short training session; and (3) receives institutional commitment, thus clearly demonstrating to teachers that technology is not just another bandwagon.

Kassen and Higgins refer to a sample in-service training program at the Modern Languages Department of Catholic University of America, through which they addressed technology education by identifying three key issues. First was ensuring teacher comfort during training process. The number of participants in the workshops was limited so that there were enough tutors available for consultation during and between the workshops. Another concern was integrating computer technology resources into the curriculum; integration required not simply the use of computer resources in the classroom but their use to support curriculum goals. Lastly, in addition to providing opportunities for learning about the use of educational technology in ESL/EFL instruction and applying that knowledge, the workshop sessions were organized to provide time for reflection and discussion of the teachers' experiences. Kassen and Higgins conclude that the example training program demonstrated how these issues can be incorporated into schools to prepare teachers to continue their exploration of educational technology resources in foreign language education.

In order to promote quality in instruction with technology, professional development is essential to ensure teachers are prepared to meaningfully incorporate technology into the curriculum. Herman (2002) believes that the integration of technology is still in its beginning stages and has not yet been fully acknowledged and accepted by teachers. The effectiveness of educational technology is largely dependent upon the willingness of teachers to meaningfully integrate it into the curriculum. In order to ensure that teachers have the ability to effectively utilize the

technology resources throughout the curriculum, schools need to develop programs to train teachers. Baylor & Ritchie (2002) predict that successful technology integration depends on two variables teacher openness to change and the extent to which teachers experience and practice with technology. Regardless of the amount and the sophistication of technology resources, teachers will not use them unless they have the knowledge, skills, and attitudes necessary to integrate these resources into their teaching. Integration occurs, they argue, through both self-education and in-service training provided by the institutions.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

The literature reviewed in the previous chapter has described the current state of thinking and research in the areas of EFL teacher's roles in professional practice and professional learning in a range of countries, particularly in light of the influences of social constructions and technology. As noted in chapter one, this study is intended to influence teachers' professional development particularly through identifying the extent and means of EFL teacher learning through practice together with their roles in plasma supported English classrooms and their perceptions toward the use of plasma in the teaching of English. This chapter presents the methodology which used mainly qualitative, ethnographic data along with the quantitative data to assess EFL teachers' perceptions on plasma supported English lessons and their roles.

The methodology is designed to answer the following questions

- 1 What current and emerging teacher roles are found in classrooms using Plasma ?
- 2 What are EFL teachers' perceptions and attitudes toward the use of plasma in the teaching of English?
 - 2.1 What do EFL teachers think about the technology and the plasma instructor?
 - 2.2 What do they think of the technology with regards to enhancing language learning?
 - 2.3 What do they think with regards to how the technology helps or distracts their roles as teachers of English?
 - 2.4 What do they think as to whether their students like or dislike the technology?
 - 2.5 What do they think the overall advantages as well as the disadvantages of the technology?
 - 2.6 What do teachers think of ways in which the way the plasma lessons are presented could be improved?
- 3 How does the plasma based English language instruction affect the classroom roles of English language teachers?
 - 3.1 Which roles are replaced by the plasma and which ones are retained?
 - 3.2 Are there any emerging roles that do not appear in the usual classes where plasma is not used? If so what are they?

The conceptual framework for the study

The model of teachers' roles derived from the literature and the pilot study (shown in figure 2.1) was augmented by the addition of the infrastructures of engagement, imagination and alignment from Wenger's (1998) theory of communities of practice (Chapter 2, pp 21-24). This resulted in the conceptual framework for this study shown in Figure 3.1

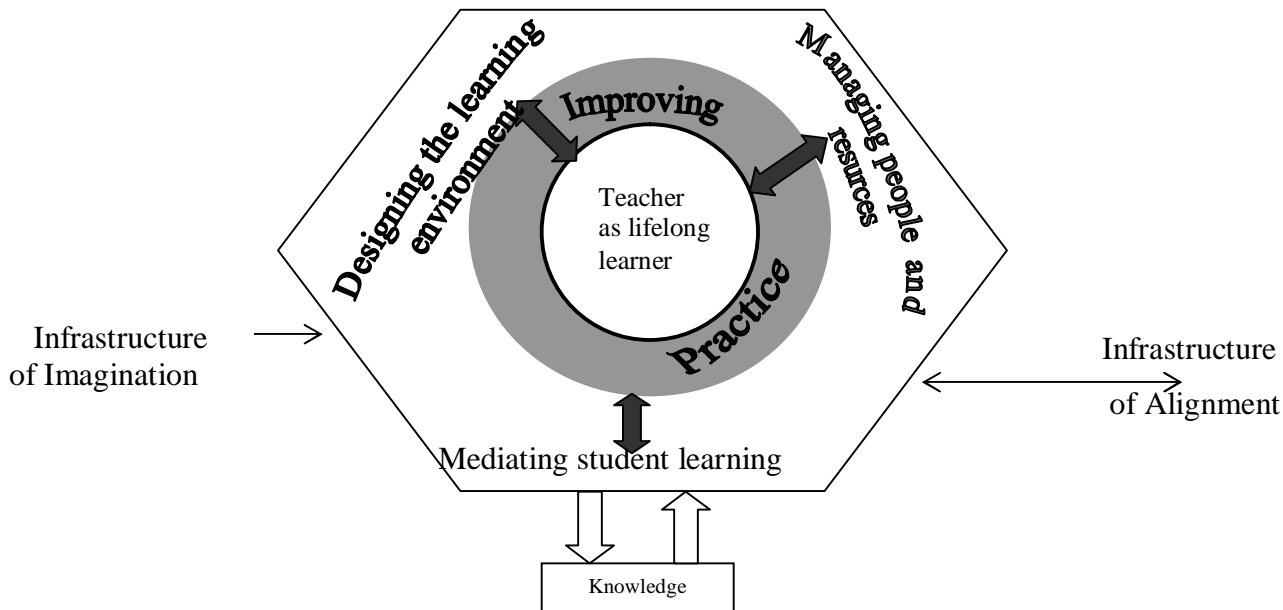


Fig 3.1 Conceptual framework for the study of teachers' roles in classroom communities of practice

This conceptual framework is based on a sociological understanding of relationships between people. The notion and community of practice, which in the first instance is based on the classroom roles, provides the hexagonal boundary which is the model, and the actors are primarily teachers and students. The task of the community in language classroom is creating knowledge and developing skill (Scardamalia & Bereiter, 1999). In order to carry out the task, the members of the community engage in behaviors with subjective meaning, and these behaviors constitute social action when an individual takes into account the behaviour of others (King, 1973). Therefore, within the community of practice, individuals exist in relationship with others and in doing so play various roles in relation to others and to the task. However, since elaboration of role theory is not the purpose of this study, the use of the term *role* is designed to

indicate the commonly understood classroom relationships of teachers with their students and teachers with other teachers.

The three substantive teaching role-*designing the learning environment, managing people and resources and mediating learning*- have separate characteristics although they are related. *Improving practice* is a role that crosses the other three. All roles are influenced by the three infrastructures of Wenger's learning architecture: engagement, imagination and alignment, and the relationships between teachers are expressed through these infrastructures, hence the thinner two-way arrows. I choose the hexagon to represent the boundary of the community of practice, such as the classroom, not only because it lends itself to accommodating the three roles on its faces, but also because it is a naturally occurring shape covering space. A single hexagon therefore encapsulates the classroom community, and in constellation with other hexagons shows how classroom communities can link with others in the institutions, and on a broader scale, how school communities themselves can be part of a wider system.

3.1 Overall approach and rationale

The preferred approach for this research falls within the interpretive paradigm, which itself reflects the constructivist approach of today's classrooms in which the role of the teacher is not so much lecture at students but to act as an expert learner who can guide the students in to adopting cognitive strategies such as self testing, articulating ,asking questions and reflections. As a response to Selwyn (2000) who calls for more qualitative approaches to research into educational computing, the chosen design is ethnography, based on what teachers and students are actually saying and doing in classrooms using technological facilities such as plasma display panels. The society of classroom is a rich context for learning, where teachers and students form a community of practice. The study is an attempt to record teachers' views of what they do and why they do it.

3.2 Ethnography

Ethnography, which grew out of anthropology and was taken up by sociologists, is the general study of cultures using observation, and subsequent written account of those cultures, usually through close association of the researcher and the researched. Educational ethnography aims to provide rich descriptive data about the contexts, activities and beliefs of participants in educational settings, particularly concerning educational processes as they occur (Goetz & LeCompte, 1984). Ethnographic strategies elicit data that represent the world views of the participants involved, and they are empirical and naturalistic. Further, they are holistic, seeking to construct descriptions of total phenomena within their various contexts and to generate the interrelationships of causes and consequences that affect human behavior and beliefs toward the phenomena. As teacher's classroom roles are one of the means through which their teaching behaviors and their relationships with their students are expressed, adopting an ethnographic enquiry can yield a more valid and reliable data (Denzin & Lincoln, 1994; Gotez and Lecompte, 1984, Kvale, 1996).

Therefore, Ethnography was a suitable choice for this study as it is open-ended and allows a variety of research techniques within the chosen cultures: communities of practice in schools with similarities and differences. The researcher provides both the mirror and the microphone, engaging in reflection with the teachers and students ensuring their thoughts and actions are documented. Goetz and LeCompte (1984) describe ethnographic research as rather generative, inductive, constructive and subjective in contrast to scientific methods. It is inductive in that it starts from the examination of a phenomenon and develops a theory to explain what was studied, and generative in relation both to the position of evidence within the study and to the extent to which results may be generalized to other groups (Denzin, 1978). A constructive strategy aims to discover what constructs or categories can be found in the course of observation and description. There may be a balance between subjective and objective analysis. It is intended that this study should meet the criterion suggested by Goetz and LeCompte (1984), who believe that an ethnographic product is evaluated to the extent that it describes the scene studied so that others can envision it in a similar way to the researcher. I believe it will be even more successful if participants can recognize the scene in a new light, so that

... the end of all out exploring will be to arrive where we started .And know the place for the first time (Eliot, 1963, p.222).

A feature of this type of qualitative research lends itself to the development of grounded theory, whereby theoretical understanding emerges from an iterative process based on constant sampling, comparison and analysis of transcribed excerpts (Strauss & Corbin, 1990). This study is premised on the belief that teachers reflect, act and interact based on certain assumptions they hold and problems that confront them in context (Schön 1991; Brookfield 1995). Therefore, this requires *understanding* and *measuring* behavior in its context—The four high schools in particular. It is believed that only with grounding of teachers' behaving in their context, the problems confronting them would adequately be delineated and measured.

Thus, the Constructivist Grounded Theory Method of data analysis (Strauss & Corbin 1998; 1990) is believed to be the compatible data analysis and interpretive framework. Grounded Theory is both approach to and method of qualitative data analysis (Glaser & Strauss 1967; Glaser 1978; Strauss & Corbin 1990; 1994). The influential theoretical framework for origin of Grounded Theory is *symbolic interactionism*. The three premises of symbolic interactionism are summarized by Blumer (Blumer 1969: 2 quoted as by Flick 2002: 17):

The first is that human beings act toward things on the basis of the meanings that the things have for them...The second is that meaning of such things is derived from, or arise out of, the social interaction that one has with one's fellows. The third premise is that these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters.

The central tenet for analysis, according to this view, is *perspective*—a conceptual framework used to make sense of the world. This view today has transformed a little bit to the social constructivist epistemology that reality is a social construct.

The current dominant version of Grounded Theory, which is congruent with the adopted approach in this study is the constructivist Grounded Theory advanced by Strauss and Corbin (Strauss & Corbin 1994; 1998; Charmaz 1990). This version facilitates generation of substantive theory, grounded in the accounts, experiences, perceptions and attitudes of the actors or participants in the study. In this study, these principles of Grounded Theory approach/method of data extraction and analysis has been adopted to contextually generate, conceptualize, and illuminate themes and categories that gave clues to not only the condition of teachers inability/ability to perform their classroom roles but also to determinants for improving the conditions.

3.3 The role of the researcher

.The role of the researcher takes into consideration what Beattie (1995) developed her ethnographic method of researching personal practical knowledge, derived from Connelly and Clandinin (1986), who describe it as an interest in understanding teaching acts in terms of personalized concrete accounts or people knowing. A researcher attempts to represent the participants' world views rather than a researcher's conceptualization on the teachers' constructs. In the ideal form, the teacher is an active participant and co-researcher, working on the data with the researcher. Theory is not tested, but developed through the collaboration of teachers, students and researchers who work together to reconstruct meaning (Connelly & Clandinin, 1986; Elbaz, 1983). Recognition and suspension of the researcher's cultural values and expectations are therefore of concern to the research. Denzin (1989) emphasized the positive aspect of holding up a social process for serious examination and confronting it in its own terms to isolate its key, essential features, and not classifying data according to preconceived categories but letting them arise from transcripts. However, it is also important to take an active role as a researcher, to adopt a reflective attitude (Richardson, 1999). Richardson suggests this broad approach to grounded theory recognizes the constructed nature of participants' conceptions of particular phenomena and the interpretive nature of social research.

With this in mind, I was introduced to the teachers by the school directors as a PhD candidate researching on Plasma /Satellite Television Lessons in Ethiopian high schools .I was not known to the students or teachers prior to the study. As the usefulness of the data is likely to be affected

by the quality of relationships, I felt it was essential to spend time on developing trust with participants. Initially I attempted to establish a relationship whereby the teachers and students did not feel that their classroom practice was being assessed. The role I took in this study could have been described as observer-as-participant, whereby observation is the main focus, but some participation may occur. This is to mean that in order to create good rapport with the classroom community so that the researcher can gather data from the classroom context in a naturalistic way, the researcher should participate in the teaching learning process for a longer period of time as learner while at the same time conducting the observation (Denzin & Lincoln, 1994). The nature of a professional conversation with practitioners may even demand involvement as the participants expect an educated response within the dialogue.

In light of the discussion above, the stance I took was influenced by prior views and experience. At once an academic researcher and a practitioner in the professional development of teachers, I might have been seen by participants as both insider and outsider. Clearly the role was on the periphery (Wenger, 1998), and as the research progressed, it was played out in different ways with the various teachers in the school. I facilitated processes of reflection among the teacher participants and students, and I generally attempted to maintain a low level of involvement, but some teachers encouraged greater participation in data collection. However, faithful to the recording of statements and events, and the suspension of cultural values, my voice intruded by providing constructs for categorizing and analyzing the data and making decisions about what was important to report.

It is possible that a researcher, taking a critical approach, might assist in disseminating the teachers' voices, and this occurred in the latter stages, but this calls for caution, as the researcher's values form a lens through which the observations are gathered and the conversations conducted. As the professional relationship with teacher participants grew over the course of the study, and professional interaction and dialogue developed, it became apparent that my role as a researcher was akin to *participant learner*. I participated in the educational discourse, experienced the constraints of structure and organization and shared the celebrations of collective knowledge building in the classrooms I visited. The students, the teachers and I were all learners in this endeavor, albeit with different purposes, but with mutual interests. A

researcher as participant learner is therefore involved in situated, authentic, reflective and dialogic practice in a community of learners.

3.4 Participant and Site Selection

With regard to site selections in a study such as this with the chosen research design of ethnography, there is a heated debate among researchers about single site research versus multiple site research. One view is that rather than taking multiple sites and losing the depth and intricacies of the data, it is by and large preferable to mainly focus on research subjects from single site and analyze the context from every perspective, for this would give the findings of the research a more valid ground. However, many scholars in the area of qualitative research such as Beattie (1995), Goetz and Lecompte (1984) Denzin (1978, 1989) favor the multiple site approach unless it is compulsory to employ the single site approach for its typical or its unique features. According to them, gathering data from multiple sites as long as the research participants have many features in common has its own contribution in heightening the validity and the reliability of the study. With this view in mind, I have opted for the multiple site option for the following two reasons:

- (i) the schools, which the research was conducted in, are all government schools with almost similar status in their structures, facilities, academic staff composition etc.
- (ii) the number of grade ten English teachers in one school was not more than seven, and this was felt inadequate to come up with sufficient information on teachers' roles and their perceptions about plasma based English lessons.

This study was conducted following convenient sampling technique at four government secondary schools in Addis Ababa namely: Dej Balcha Aba Nefso, Ayertena, Kolfe and Kelemework senior secondary and preparatory schools where plasma based English lesson is conducted. (while Ayer Tena and Kolfe senior secondary and preparatory schools are located in Kolfe Keranio sub city, Dej Balcha Aba Nefso & Kelemework senior secondary and preparatory schools are situated in Lideta and Arada sub cities respectively).

A sample size of twenty five EFL teachers and fifteen students were incorporated in the study. The representation of the teachers was 100%. However, in order to further supplement the data from the teachers, 15 students were selected on the basis of purposive sampling technique. The students were, roughly, believed according to the insider observations of their teachers, to be the type of potential reflectors i.e., they have more curiosity to involve in learning. This decision was correspondent with the researcher's belief that the aim of the study is collaborative, rather than competitive, understanding and transformation of the problem

In this research, in order to ensure a varied sample coverage, I strongly encouraged teachers who have also the experience of teaching English language with plasma in grade 10 but currently teaching in grade 9 and grade 11 to become involved. Apart from this representativeness was not a requirement, as the focus was on finding a range of conditions in which any developing theory would operate, rather than generalization of the findings across settings. Additional teachers with solid experience on plasma-based pedagogy and the schools' principals were also invited in an opportunistic way to participate in the research because of their interest or experience to support the development of theory (Miles and Huberman, 1994). In summary, as Table 3.1 shows, 25 teachers were involved, and all have BA or BED, Degree in English.

. Table 3.1 Demography of participating teachers

Teachers and School ID	Years of teaching	Age range	Gender
001 B	5-8	31-35	Male
002 B	1-4	26-30	Male
003 B	1-4	26-30	Male
004 B	1-4	26-30	Male
005 B	1-4	20-25	Female
006 B	1-4	26-30	Female
007 B	17 ⁺	45 ⁺	Male
008 KW	5-8	31-35	Male
009 KW	5-8	26-30	Female
010 KW	17 ⁺	41 ⁺	Male
011 KW	13-16	36-40	Male
012 KW	17 ⁺	41 ⁺	Female
013 KW	17 ⁺	36-40	Male
014 Ko	5-8	26-30	Female
015 Ko	9-12	31-35	Male
016 Ko	5-8	26-30	Female
017 Ko	17 ⁺	41 ⁺	Male
018 Ko	9-12	31-35	Female
019 A	9-12	31-35	Male
020 A	5-8	26-30	Male
021 A	17 ⁺	41 ⁺	Male
022 A	9-12	31-35	Female
023 A	9-12	31-35	Male
024 A	1-4	20-25	Female
025 A	1-4	20-25	Male

All in all twenty five teachers and their principals contributed to this study in different ways 5 teachers (20%) were aged over forty, two(8%) aged between thirty six and forty, eight teachers (32%) were aged between thirty one and thirty five, seven (28%) were aged between 26-30 and only three (12%) – two females and one male under twenty five. Their teaching experience at the time the research began ranged from one year to above 17 years. In comparison the average age of teachers was 32.8 years, and 40% of all teachers were females. In the data almost two of the schools had seven English teachers each, while the rest two had six English teachers by the time the study began

3.5 Data collection methods

The data collection methods were observation, conversation, document analysis (including curriculum documents, email messages and journals) and questionnaires. Through out the study I was able to establish collegial relationships with teachers in the school, test data collection methods and come to an understanding of teachers' broad classroom roles. The methods, and reasons for choosing them, are discussed in the following pages.

3.5.1 Observation

Observation is an important way to establish the current context of classrooms using technology (in our case plasma). Without this, Cicourel (1964) argues that the correspondence between the hypothetical world, inferred from tools such as questionnaire items, and the actual behaviour, remains an open empirical problem. Osterman and Kottkamp (1993) argue that to facilitate reflective practice not only do espoused theories need to be described, but also a clear understanding of theories-in-use through observation is required. Therefore, I undertook observations, mainly the role of observer as participant as recommended by commentators such as Osterman and Kottakmp(1993), Schon(1983) to provide evidence of classroom behavior. Teachers were encouraged to invite me to attend a typical class using plasma supported English lessons. Accordingly I had the chance to observe twenty teachers in the schools. Classroom

observations generally lasted the length of one lesson (40 minutes). In all cases, the learner's and teacher's behaviors were observed while the plasma supported English lessons were on air.

I observed classroom activity (especially teachers' role performance such as their roles of designing, managing and mediating) made notes, sketched room layout and took photographs to build up a rich description. Many of the classes were accustomed to visitors and were full of activity and movement, so that I was able to blend in quite easily. The observation focused on the teacher's and student's behaviors and I made notes of the teacher's interactions with the whole class, small groups and individuals, and the content of interactions between and among students, and the notes were written up as a summary and clarification was sought from the teacher.

Teachers who have just left the classroom are often engaged in reflection-on-action, immediately re-constructing and reconstruing events and actions as a professional act (Schon, 1983). It was intended to capture this reflection where possible. For some teachers this could occur at the end of the day if there were no other meetings, while for others it was sometimes possible if they had a free period or other break. However, some teachers were so busy, and it was difficult for them to reflect with me about their own classroom practice or role performance (See Appendix J)

As Savenye and Robinson (1996) suggest, videotape can be a useful means of gathering data. So, this was used as a main way of gathering data supplemented by written notes. In some classrooms I used a small, handheld digital video camera to record interactions between teacher and students. In these cases, samples of teacher behaviour, particularly in relation to the use of plasma, were videotaped for up to ten minutes. The camera allowed for instant replay on its small screen and episodes were used for stimulated recall immediately after the observed class, when the teacher was able to review and comment on the tape, (after Mayer-Smith, Pedretti, & Woodrow, 2000; Osterman & Kottkamp, 1993). This enabled some reflection during a short audio taped discussion with the teacher very soon after the lesson, to illuminate the behaviour and capture other comments. I also reviewed the videotape later and where useful, transcribed the tape for coding. Teachers were interested in reviewing their own behavior and found that the

video gave another window into student behavior upon which they could reflect, as in this discussion:

(Tape shows the classroom teacher in the middle of the plasma supported English Classroom addressing the whole class.)

Male teacher, [001] The instruction of the plasma teacher is clear is n't it Haimanot?

Researcher' What were you doing there?

Male teacher,[001] I was obviously explaining the task the plasma teacher gave them.

As most of them can't cope up with the pace of the speech of the teacher on the screen , I am the one who is responsible for further clarifying what they were asked to do by the plasma teacher. So I was telling them to select from the multiple choice items the one that best answers the questions.

Researcher: Then you went to the back benchers and told them in whisper

(Tape shows three male students sitting idle and teacher talking to them).

Male teacher, [001] They (the students) as usual came to class without books. They most of the time sit idly, despite I always advise them to learn seriously. That day also I was telling them to join other groups who had the book and to participate actively. (The students went and joined

In some cases it was difficult to collect good quality videotape because the intrusion of many voices in the classroom affected sound quality, and distortions from the plasma screens affected picture quality. However, photographs of the physical environment and student activities were taken at each school to supplement observation notes.

This study assumes that concrete behavior at micro level constitutes higher macro level qualities through action and interaction (Adler & Adler 1994). For that reason studying problems and processes pertinent to teachers' roles, which is the task of this study, requires direct and naturalistic observation of behavior and actions/interactions. Hence, two styles of unstructured observation were found to be pertinent, as recommended by Bernard (1995).

3.5.1.1 Unstructured Observation

The first one is unobtrusive or naturalistic observation, i.e. without impacting processes of occurrences of the actions/interactions. The researcher took Descriptive Notes pertaining to classroom teachers' actions/interactions seen, heard, 'tasted' in the research setting in unstructured and unobtrusive manner, as suggested by, (Holliday 2002). These involve extraction of data pertaining to **roles**: teachers' roles, role relationships, lesson planning; **procedures**: assessment, supervision, feedback style, pre-/post-lesson reflections, management of class room teachers' problems and interests; teachers' **values**: concerns, lacks, wants and desires; **assumptions** about action research, understanding of experience, effective teaching/learning of English in plasma supported classrooms. Manual note taking of the observation data was done spontaneously as data emerged in context (e.g., in the staff lounge arguments, discussions in the school compound, etc.). Similarly, descriptive jottings (Bernard 1995) of exchanges among and between students and teachers and teachers themselves were taken. The purpose was to understand the impacts of the televised lessons upon the roles of the classroom teachers..

On average, the researcher carried out a total of 12.5 hours of unobtrusive observations at all the four schools (1) Ayertena secondary schhol (2) Balcha AbaNefso Secondary School, (3) Keleme Work Secodary School, and (4)Kolfe Secondary School . During the first two weeks of the second semester of 2009/2010 course, unobtrusive observation and descriptions of what the classroom teachers were seen doing and heard discussing, particularly, as regard their lessons, roles, concerns, lacks, wants and desires were taken. For instance, the researcher took the descriptions while they discussed and were seen in the staff lounge on how they prepared for teaching. These unobtrusive descriptions were the core data for better understanding of their assumptions and perceptions about their classrooms roles.

The second type of observation that was selected was *complete observation* of classroom actions/interactions Adler & Adler (1994), where the researcher took *Lesson Observation Notes* or running *commentaries* of classroom teaching-learning happenings. With this style, the researcher took membership role (e.g., while-lesson recording of field notes, note-taking during pre-/post-lesson discussions and reflection), though participants were not aware of specific

constructs. The researcher considered the following constructs of classroom actions/interactions: **Language**: speech acts; **Activity**: a set of related acts classroom teachers do; **Object**: the physical things that are present; **Act**: single action that teachers do; **Event**: a set of related activities that teachers carry out; **Time**: the sequencing that takes place over time; **Goal**: the things teachers are trying to accomplish; **Feeling**: the emotions felt and expressed (Spradley 1979 in Flick 2002).

Together with the informant teacher educators, the researcher arranged and conducted lesson observations. The researcher observed 18 lessons . Descriptions of the nature of speech acts that were carried out; activities that classroom teachers did; objects that were present to facilitate teaching; acts that classroom teachers enacted; time management and use, and feelings that were felt and expressed were all taken. The research informants cooperated in taking similar descriptions whenever they carried out their own classroom observations for the same cause as the researcher's. They observed, "according to the norm, twice a teacher teaching". Their descriptions served for comparative and contrastive analysis so that validation of data was enhanced.

3.5.2 Conversation

In this study the use of the term conversation, rather than interview, is important as it is intended to signal an interactive relationship and a social constructivist approach to knowledge building. Conversation signifies the development of a creative or productive understanding rather than the transmission of pre-existing meanings from one person to another, and is used by writers who focus on human understanding and human experience rather than on abstract knowledge about ideas (Baker et al., 2002). It is, therefore, a suitable mode for this study, as it is a sign of the value placed on teachers' attitudes and experiences. Kvale (1996) argues that the research interview is a specific form of conversation where two people talk about a theme of mutual interest, and suggests that it is not very often that one person is interested in another's experience and views to this extent. It also acknowledges the importance of speech in making understanding explicit. From a Vygotskian perspective, teaching behavior cannot be understood apart from the thought processes of the teacher, and in conversation with a researcher these thought processes

can be revealed (Au, 1990). Similarly, a teacher's and students' attitudes and feelings, and the reasons underpinning actions, are scarcely visible except through conversation, according to Jackson (1990), who points out the value in listening to both what the teacher is saying and how it is said, as well as considering what is not said. The epistemological view is that conversation is a social medium where knowledge is constructed (Cavazos & the members of WEST, 2001). In the course of a discussion with peers and with a researcher, teachers and learners have an opportunity to verbalize thoughts that can be tested and refined in discourse with others. In contrast to an interview, conversation tends to be recursive rather than linear, as participants revisit previous ideas. Conversation maybe the ultimate context within which knowledge is understood (Rorty, 1979, cited in Kvale, 1996, p.37).

I engaged in conversations with individual teachers and principals, and with small groups of 1-7 teachers. While no interested teacher was prevented from being involved in the study, small groups were preferred in the conversation or group interview. Lofland and Lofland (1984) suggest that such interviews are beneficial because they can allow people more time to reflect, while one person's comments can encourage others to share opinions and ideas.

Conversations were scheduled with participating teachers at a time to suit them, usually after school or at lunchtime. Two of the twenty five teachers participated in only one conversation, while others were involved in several long and short conversation episodes (see Appendix J). The location of the conversations ranged from a staffroom or empty classroom to a public space in a school library or lunchroom. I attended each conversation, setting up the tape-recorder in the middle of the group. The aim was to play a low-key role to allow the participants to share ideas with each other, although not always profitably, as this unresolved exchange between two teachers in school B shows.

Teacher 001: As to me one of the basic constraints I have in playing my facilitation role is lack of books. The students don't buy books -----

The Researcher asked (Is it because of lack of money or interest that the students don't buy books?)

Teacher 001 --- I don't --- I don't think it's lack of money. You know the price of the book is four birr. You know even if you can't afford to buy a book for four birr, I said you can at least contribute 1 birr per a desk so that you can buy it.

Teacher 002 --- But I don't think it's lack of interest. I have an experience of two students who come to me and told me their reason as to why they failed to buy the book. because of lack of money.

This is not to say that disagreement should be avoided, as it can lead to new knowledge. In other cases, the conversation took place between the researcher and the participants, with probes to gather rich data, and questions on specific issues raised during the course of the discussion. The frankness of the exchanges during conversations indicated that quite early in the study participants felt comfortable with me, and spoke openly.

Bearing in mind that sometimes teachers and external researchers engage in a one-way relationship described by Troyna and Foster (1988) and Kvale (1996) as asymmetrical, and to avoid appearing to be taking without giving in return, I gave an opinion or technical advice when asked by teachers. For example, I engaged in this exchange with a male teacher [002]:

Teacher-I heard you saying the wash back effect in the middle of your question. What does that mean?

Researcher-This Is the backward effect of exams/tests on teaching and learning .For example,, as you have said if what the teachers teach with plasma is only on the four macro skills, which, however, are dominated by grammatical questions in the case of national exam, then the teachers would wish to teach grammar only.

Teacher - That means it's a technical term

As the conversations were completed, the first tapes were transcribed to digital documents by an agency, but this was abandoned in favor of transcribing tapes myself, because as well as being more efficient, it led to greater familiarity with the data and stimulated early analysis, as Lofland and Lofland (1984) suggest. Transcriptions were given to the participants for further checking and reflection and to allow them to build a type of reflective journal for further reflection in the future. Teachers in this study were encouraged to keep the conversation transcripts rather than the tapes for their personal use. Any notes I made during the interview were retained for cross checking with tapes to assist clarification of meaning.

Cicourel (1964) and Seale (1998) suggest the possibility of treating the interview as a social event in its own right, as a topic of observation. This was highlighted on several occasions, particularly where the group dynamics were revealed, and the extent of teacher collaboration became obvious in non-verbal ways. On one occasion two teachers met with me for a conversation in the school's mansion, after which one said it had been interesting because he and the other teacher "*never get the chance to talk about teaching: always about other things*". Comments like this unconsciously reinforce the purpose and highlight the need for this research.

3.5.3 Reflective journals

In addition to the personal narratives built up through the conversations, teachers were encouraged, but not obliged to write reflective journals. Accordingly, 8 teachers produced their journals. Writing is important in Vygotsky's view, as written speech is a self-reviewing structure of thought (Vygotsky, 1962) and as Jalongo (1991) argues, the stories of teachers recorded in this way are more than interesting anecdotes, but rather reflections of professional perspectives, priorities and practices. Reflective journals were employed as a strategy of both training and generating data. On the one hand, reflective journaling was used as a method for re-framing the situation of the problem of reflection skills development; to make it an object of collaborative improvement of practice with teachers. On the other hand, reflective journaling strategy was used as additional means for generating data for exploring determinants of overcoming the reflective inabilities of teachers.

As regards the types of reflective tools, two major types of reflective tools which are believed to be generative and bottom-up were adopted (1) Critical incident Journal (2) Dilemma analysis. Critical incident Journal promotes teachers to keep reflective accounts about high and low moments in their practice of teaching English or details of the significant incidents that stand out in the professional lives of teachers vis-à-vis teaching English language using Satellite Television (plasma). Brookfield (1995: 148-9) provides a simple guideline. Keeping record of critical incidents helps teachers decide what themes they want to explore in depth (ibid:48). But traced by group critical discussions, critical incidents provide clear focus for teachers, help them generate themes and realize that their personal stories are in fact generic, context embedded and far more complex. Furthermore, critical and reflective deliberations on the incidents enable teachers "discover that their personal struggles are not so different from those experienced by their colleagues" (ibid). Ultimately, this generates confidence, emotion management and emotive and genuine inquiry into one's own context dilemmas.

Dilemma Analysis is the other reflective tool that promotes teachers to identify and carefully analyze a particular dilemma that caught their attention and forced them to make a decision

during their practice (Talanquer et al, 2005). It promotes them to think and document why it was important or relevant to them, how the dilemma emerged, how it developed, how they tried to solve the problem, how the dilemma or problem influenced their beliefs about teaching or learning and what they would do about it next. “This tool would encourage the skills of alertness, sensitivity, perceptiveness and responsiveness” (Dereje, 2009: 64).

As has been discussed so far, two types of reflective tools that are believed to be generative and bottom up were adopted (1) Critical Incident Journal (2) Dilemma Analysis. From April 1 2009 to April 29 2009 (for 4 weeks), every weekend, their reflective journals were collected after the teachers deliberated to their colleagues in reflective discussion sessions organized by the researcher. However, they were informed that they could also keep their journal entries confidential when they did not want to share to colleagues but they had to submit for the researcher guaranteed confidentiality. Weekly entries in the teacher’s journals are the major source of data for the research. (See Appendix B for reflective Journals)

3.5.4 Policy and curriculum documents

I also asked teachers to provide any curriculum documents or lesson plans which would assist the research, while other relevant policy and planning documents were collected, from The Ministry of Education, ICT Department. According to Hedgcock (2003:303), they are the Community’s “formalized means of expression.” Similarly, the researcher believed that collection and analysis of documents of Satellite Television based lessons would reveal the institutional conditions that constrain plasma-supported lessons to become effective. In this regard, different documents such as planning and other curriculum documents were collected. The planning documents collected included school-level planning matrices and documents explaining the curriculum planning process for teachers. Other curriculum documents included Teacher’s Guide for the plasma lesson.

A two-hour interview was conducted in March, 2009 with the Head of Information Communication Technology Department with the Ministry of Education . The purpose of this interview was to clarify the broad curriculum expectations at system level, particularly with

regard to student activities and teachers' roles using technology, and to view support materials being prepared for teachers at that time. As researcher, I also attended two seminars conducted on the effective utilization of ICT for educational purposes organized by the ICT Department of the Ministry of Education and the Ministry of Information and Communication Technology.

3.5.5 Reflection through Email

Given the context of the study, and the fact that most teachers now a days have an email address, email was used to communicate with the participants. This proved to be problematic as some teachers found it difficult to access their email messages either due to lack of familiarity, lack of time, or malfunction of the system. Nevertheless, as email provides a record of communication in the way that a telephone call does not, I preserved with it, in addition to other forms of communication. Email messages were archived as documents containing potentially useful data, although in the first one year, little email contact occurred, except with three teachers. As this study was not an intervention, no email list was established for the purpose of communicating between the teachers in the school. However, in the following year teachers established their own email list and invited me to join, which I did. This enabled access to the public communication between the twenty five teachers, and the possibility of responding. All email messages containing reflective comments were included in the data, while some purely procedural messages were not.

Data were collected over a period of three years from early March-2009 to June, 2009, when the pilot study commenced, to late 2011 following the resumption of plasma after being interrupted for two years, taking in part of three school years, which have been designated Year One, Year Two and Year Three. The notes and transcripts of 25.5 hours of observation and 20.5 hours of conversation with teachers 3 hours with students were supplemented with print and electronic document. All in all, over 50,000 words of conversation were transcribed and over 10,000 words of journal writing were provided by teachers while observation, photographs, video clips and documents, both print and electronic, made up the data set.

Table 3.2 Forms of data Collection

Year One	18 observations (13 hrs)
	6 conversation with 7 teachers (6.5 hrs) beliefs and understandings
	Documents Lesson plans Journals from 2 teachers
Year Two	13 observations (12.5 hrs)
	9 Conversations with 13 teachers (6.5 hrs): on teachers attitudes toward plasma based English lessons. 5:30 hrs.informal and semi structured interviews with 10 teachers and four directors. 2 hrs informal interview with the research informants.
	4 Conversations with 15 students on students' perceptions of plasma based English lessons.(3 hrs) Documents: Curriculum and lesson outlines Research reports on plasma lessons by ICT Department, MoE Journals from 8 teachers Video tape with ICT Department Head, MoE for nearly 2 hrs.
Year Three	9 conversations with 11 teachers (7.5 hrs): on teachers' roles Informal contact at appraisal meetings on plasma based instructions.
	Documents: Journals from 5 teachers Curriculum documents Reports on plasma based lessons video tape.

3.5.6 Questionnaire

As one of the aim of the current study is to identify teachers' Perceptions of their plasma based EFL lessons, and the impact of the same on their EFL classroom roles, as teachers and learners, drawing such perceptions and looking in to the relations between the two can best be done by questionnaires and observation that is based on a check list and a rating scale (O'Maley & Chamot 1990).

Therefore, questionnaire composed of Likert scale item is a useful and effective means of determining perceptions (Turner 1993). In this regard, a questionnaire item for teachers is prepared based on past relevant studies ,for instance, from Archer and O'Rourke,(1972:186) "*Teachers' interest in technology supported Foreign Language programmes*" ,and from Tursi(1990:29)"*Foreign language attitude Questionnaire*" were adopted. For the sake of decreasing ambiguity, 'closed ended' type questions were used based on Richards and Lockhart (1994).The questionnaire for this study is composed of four sections. The first section is aimed at gathering background information about the participants: their names, sex, years of teaching experience and their academic qualification (for the teachers). Though this part has no direct relevance to the research questions, it is believed that it will give the reader certain pieces of information about the demography of the research subjects.

Section two of the questionnaire mainly focuses on teachers' beliefs abut language learning using plasma satellite TV.

Section three basically focuses on the perception of teachers about plasma supported English lessons.

The final part, section four, mainly focuses on teachers' perception of their roles in plasma based English lessons.

Each of these sections is composed of Likert scale items in which the participants are asked to circle one option that best reflects their opinions about the effects of the Plasma supported

lessons on their English language classroom roles. The responses' options are 'strongly disagree' 'disagree' 'undecided' 'agree' and 'strongly' agree. Interpretations of the means of responses are made according to the scale below following (O'Maley and Chamot,1990, Turner !993)

1. Strongly disagree: mean values between 1.00 and 1.80
2. Disagree: mean values between 1.81 and 2.60
3. Undecided: mean values between 2.61 and 3.40
4. Agree: mean values between 3.41 and 4.20
5. Strongly agree: mean values between 4.21 and 5.00

3.6 Data management Strategies

In order to record, store and display the qualitative data in an organized and systematic ways, code books and matrices were designed and used, based on Dereje (2009).

3.6.1 Codebooks

The researcher prepared codebooks (Appendix C for codebook layout) before entering research sites. Ryan and Bernard (2000:781)) define, code books as "simply organized lists of codes (often in hierarchies)", and codes are "mnemonic devices used to identify or mark the specific themes in a text".

Accordingly, two categories of codebooks were designed (Appendix D). The first category is codebooks for recording field data—observations and conversations. Following Bernard (1995), each codebook began with code Number (Code No.) 001 (three digits) and proceeds indefinitely till data capturing ceases. Character codes such as the specified time, place, the interviewee or the observed were taken at the top margin. A wider space was left for capturing field notes—interviews, descriptions, and methodological and theoretical notes (the latter two are discussed below).

The second category of codebooks was designed to take reflective **notes**. Reflective notes involve systematic thinking and insight into patterns and processes of the phenomenon under

investigation (Elliot 1991; Bernard 1995; Strauss & Corbin 1990; 1998). One kind of reflective note was the **methodological note**. This comprises field notes pertaining to methods used, reasons for using them and justifications for possible changes of the methods (Appendix E). Another type of reflective note that the researcher took was the **coded note**. Coded note is data or individual with specific labels attached. Data or indicators are codified using code numbers (Appendix H). Besides, each of the seven teachers and fifteen students were codified. Reasons for codifying are to easily remember and to reduce data. In the case of participants, the purpose was also anonymization, for they wanted confidentiality. Finally, a codebook for taking a theoretical note was also designed and employed. A theoretical note involves the researcher's understandings and insights into the properties and patterns of the problem in its context. It can comprise both induction and deduction (Appendix F).

3.6.2 Matrices

The first category of matrix is the conditional matrix. A Conditional Matrix is a visual "analytic device" that illustrates the "relationships between macro and micro conditions and consequences of both to each other and to the process" (Strauss & Corbin 1998: 181). Conditional matrices were constructed to trace and illustrate these relationships in the data.

The second type of matrix constructed was the data catalogue. This comprised documentation pertaining to data-case codes, incidents described or participants interviewed, the specific place, date and time of the participant observation (Appendix H). For instance, the catalogue informs us that DN0012/3 is catalogued as Descriptive Notes (taken in an unobtrusive observation strategy) whose description is about what participant teacher educators' (code-named as T001, T002, T003, T004, T005, T006, T007) account/behavior and was captured at Balcha Abanefso senior secondary school on 07/04/2009 at 8:15-9:00 GMT. The catalogue documents all the data collection methods except Artifacts/Documents because the latter were collected at once from inside the school and the ICT department of the Ministry of Education documentation centers. Cataloging of the data in this manner facilitated the processes of identifying, refining and sifting data.

The third and final type of matrix that was used to organize the qualitative data was the corpus data matrix. A corpus data matrix was developed to store the sorted out, refined bits of data from the messy, unrefined raw field data (Appendix I). The refined data bits are also called *indicators*. The Matrix demonstrates Domains (Column I) Codes (Column II) and, due to space constraints, only major indicators (Column III), each of which was identified during coding of field notes. The Codes refer to abbreviated form of the participant observation method for data collecting followed by the page and/or the line or indicator number on the same page. Double quotation marks are used to show that the indicator is directly taken from the raw data while single quotation marks are used to indicate paraphrase or summarization of bigger data. In Data Analysis and Discussion chapter (Chapter Four , Chapter Five Chapter Six, Chapter Seven , Chapter Eight), excerpts from the Corpus Data Matrix are cited as evidence for each theme constructed out of the indicator (s).

An example of data citation technique is demonstrated below. It shows that, as an example, the indicator IIN001/1 is verbatim data (in double quotation mark) taken from the first (001) Informal Interview (IIN) method or data case conducted with two teachers (codified as T001, T005). It is the first indicator of the category of Speech Act (Column I of Corpus Data Matrix) identified as first (1) indicator on the IIN code-book as indicated after the slash (/). It was captured at Balcha Abenefso Senior Secondary School (School B) on 07/04/2009 at 8: 15-8:30.

Table 3.3 Catalogue of Field Data

CODE	D/ I	SPECIFIC PLACE	DATE	TIME (in GMT)
DN004/3	T001, T002,	School B	07-04-09	8:15-9:00
IIN001/1	T001, T005, T006	School B	23-04-09	9:15-10:00

“The time given for accomplishing a certain task is too short. So you fail simply to play your facilitating role” (DN004/3), and hence “ in order to make plasma supported English lessons more effective, I think the timing should be adjusted.” (IIN001/1).

Table 3.4 Corpus Data Matrix

Category	CODE	INDICATORS
Speech Act	DN004/3	“ The time given to accomplish a certain task by the plasma teacher is not sufficient. So group work is practically not genuine.”
	IIN001/1	“In order make plasma supported English lessons more effective, a relaxed time for genuine collaboration is needed. So the time should be increased.”

3.6.3 Data Reduction, Organization and Analysis Methods

For simultaneous data reduction, analysis and organization processes, the researcher adopted the three procedures of Grounded Theory method. These non-linear procedures are: (1) *open coding*, (2) *axial coding* and (3) *selective coding*. The logic is that the analysis process should fundamentally move from observation of events in the data, to generation and interpretation of themes and categories (representative of aspects of the phenomenon being studied), to provision of explanation of the phenomenon. Below is detail about each of these theory ‘discovery’ steps which were employed during the data analysis process.

3.6.3.1 Open Coding

The researcher began data analysis and reduction with open coding the qualitative data. Qualitative data is defined as “a string of words capturing information about an *incident*” (Fernandez 2004: 87 Emphasis is added). A Grounded Theory analyst begins analyzing the qualitative data in open coding by ‘opening up’ the data and identifying indicators, breaking down the data into discrete *incidents* (Strauss & Corbin 1998: 101). *Indicators* are possibly relevant word, phrase, sentence or summary of a bigger text or data in the area of investigation. Indicators indicate or constitute themes or concepts. Themes or concepts are condensed, abstract, often fuzzy, constructs discovered by the analyst (Ryan & Bernard *www*). In other words, themes stand for unrefined incidents in the domains of behavior, viz. cognitive, psychomotor or attitude. Various techniques for identifying indicators and conceptualizing themes were employed in this study (Ryan and Bernard *www*; Glaser 2002; Patton 1990; Strauss & Corbin 1990). They are discussed below.

3.6.3.1.1 Repetition

Words that occur a lot are often seen as being salient in the minds of respondents (Ryan and Bernard *www*). Therefore, repetitive words were identified and underlined.

3.6.3.1.2 Reflecting

A pertinent technique used for unearthing deeper patterns in the data, was reflective questioning. For this the researcher employed the following reflective data-analysis questions: ‘What is the main issue or problem with which these teachers seem to be grappling?’ ‘What keeps striking me over and over? Although it might not be said directly, what comes through as salient concern?’ (Glaser 1978, 2002; Strauss & Corbin 1998).

3.6.3.1.3 Constant Comparison

Constant comparison is addressed by looking for similarities, differences, and consistency of meaning in the data carefully and line-by-line. Glaser and Strauss (1967:101-116) suggest asking "What is this data about?" and "How does it differ from the preceding or following statements/indicator?" This kind of detailed work keeps the researcher focused on the data themselves rather than on theoretical flights of fancy (Charmaz 1990).

The researcher employed all of the above techniques to identify and underline an indicator, relate it to other indicator(s) and construct *themes*. Themes are related to generate *categories*. A group of similar categories were classified together. They form a classification or a *central category* (Appendix I). Once identified, indicators were stored in Corpus Data Matrix (Appendix H).

3.6.3.2 Axial Coding

Another Grounded Theory data analysis and organization procedure used is axial coding. Axial coding involves further generation of categories and systematically linking them. Categories are higher-level, more abstract, than themes. A category represents real phenomena or aspect of a phenomenon.

In order to facilitate the systematic linking of themes and categories, conditional Matrices were formulated based on the works of Grounded Theory methodologists (Strauss and Corbin 1998). Strauss and Corbin's element of a conditional matrix is basic frame of generic relationships which involves the *conditions* of the phenomenon and the interrelationships of the data, themes and categories in terms of *causals*, *context*, *contingencies*, *co-variances*, and *consequences*.

Causals refer to the factors that lead to the occurrence of the *phenomenon*. A phenomenon is "the problems, issues, concerns, and matters that are relevant to those being studied" (Strauss & Corbin 1998: 114). In this study, the phenomenon is (an aspect of) teaching roles of EFL teachers at the four senior secondary schools. *Contingencies* refer to broader or narrower *mediating* conditions that "mitigate or otherwise alter the impact of causal conditions on

phenomena” (Strauss & Corbin 1998: 131). *Contextual conditions* refer to the moderating “specific set of conditions (patterns of conditions) that intersect dimensionally at this time and place to create a set of circumstances or problems to which persons respond through actions/interactions” (Strauss & Corbin:132). *Co-variance* refers to verbal and/or non-verbal action/interaction strategies that agents (participants) perform in response to the phenomenon and intervening conditions under given situations. Finally, *consequences* refer to the outcome, effects or results (intended or unintended) of the action/interaction, or lack of action/interaction.

Similarly, conditional matrices were constructed in this study in order to organize the emergent themes and categories systematically and discuss vis-à-vis the problem under investigation . These make the key instruments for Data Analysis and Discussion chapters.

3.6.3.3 Selective Coding

The final step employed in the data analysis and organization procedure was selective coding. Selective coding is “the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development” (Straus & Corbin 1990: 116). To aid selective coding, *theoretical sensitivity* is an essential technique adopted in this study. Theoretical sensitivity refers to alertness and sensitivity to what is going on in the research data (Glaser & Strauss 1967; Glaser 1992).

In this study, to facilitate theoretical sensitivity, Paradigm Model, which shares similarities with Conditional Matrix discussed above, that was formulated by Strauss and Corbin (1990; 1998) was adopted, as it consists a systematic cause-effect scheme for relating categories (Fig.2 below). Similarly, models that represented processes and patterns observed in the data during data analysis were constructed.

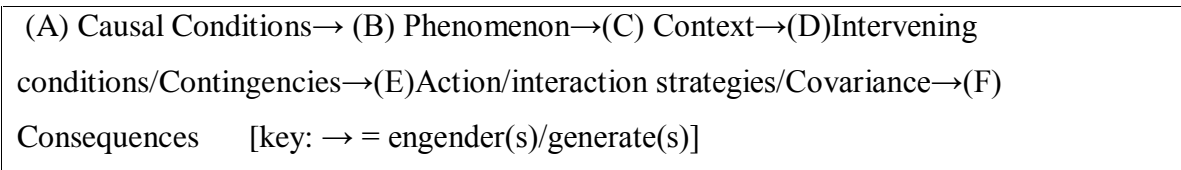


Figure 3.2 Strauss and Corbin’s Paradigm Model (adapted from Strauss & Corbin 1990: 99)

In Strauss and Corbin's views of causality, causal conditions are linked to action not through the individual's cognition but more indirectly through the phenomenon, context and intervening conditions, each of which may include elements of the wider, context-bounded and shared assumptions (All as discussed in Dereje,2009).

3.7 Trustworthiness

If this study is to achieve the purpose of informing professional development, its findings must be seen to be trustworthy and therefore worth considering by policy makers. Schon (1991) suggests that both validity and utility are necessary aspects of rigour in a study of practice such as this. Rigour, says Schon, depends on the researcher's ability to generate, compare and discriminate among multiple representations of phenomena, while remembering that there is no absolute truth waiting to be uncovered.

Lincoln and Guba (1985) address trustworthiness by suggesting that credibility, transferability, dependability and conformability are required from a study. First, they suggest that in order to demonstrate truth value, the reconstructions that have been arrived at by the researcher should be credible to the constructors of the original multiple realities (the participants). Similarly, Walsh (1998) suggests participant validation as essential in ethnographic research, whereby the researcher shows findings to the participants for their agreement that this is what they say and do. Participants were encouraged to respond to the transcripts that were sent to them soon after each interview, and in a few cases participants responded by email with additional explanation or clarification. Little feedback was received from teachers, but this cannot be construed as evidence that they agreed with all interpretations, as they were all very busy with other tasks. In most cases feedback indicated complete agreement, while in one case a participant sent a detailed email message in which he revised his thought.

Triangulation was also used, giving an opportunity to compare different kinds of data from different sources to see whether they corroborate each other. In this study journals and observations were such a source, as they could be compared with conversation transcripts for

particular teachers. The journals were more regular than the conversations and provided more information, written in the course of teacher's practice and shared in chunks of at least a term's worth of writing. They built up a picture of classroom life, especially when coupled with the oral reflections of the participants.

In terms of transferability, Lincoln and Guba (1985) suggest that it is contextual similarity that makes one set of findings appropriate to another setting, and that the responsibility of the original researcher is to provide sufficient descriptive data to make such judgments possible by others. Although the participants all came from a similar broad context- government schools in Addis Ababa- I found it necessary to gather rich descriptions of their particular settings, through text and images, to allow for such applicability. My previous extensive experience in this context was also brought to bear on the descriptions in this study.

Lincoln and Guba (ibid) suggest that both dependability and conformability can be achieved through accurate audit trails of the products generated throughout the research. A large amount of material was filed by date and participant (or school), in order to allow for simple retrieval. The categories of description developed manually can be traced over time although they are my own construction and others might arrive at different categorizations of the same data. With this in mind, it must be remembered that the analysis and discussion of findings reflect a personal view, but one that is acknowledged and documented throughout.

3.8 Data analysis

The nature of the research questions, particularly the focus on identifying new and emerging roles that assist the teaching and learning process in the plasma supported English classrooms demanded detailed analysis of all available data. In the first instance all documents were coded in a simple frame based on the conversation prompts and the teacher roles identified in the study manually. This enabled me to establish a broad picture of the cohort to be established, while the coding categories allowed for comparisons to be made between teachers based on the demographic data, particularly gender, experience, and age etc. Categories were also developed to cover the physical environment and the types of student activities (consumption, reproduction

or creation). Examples of individual and collaborative practice for both students and teachers were classified.

Manual coding enabled me to generate numerous reports, based on simple coding categories or a cross-tab approach, in an attempt, to identify patterns in the data. On many occasions, the data samples were referred back to their context- the original document- to assist interpretation.

Although conversation was the form of much of the data, the method of conversation analysis (Sacks, 1992) was not used because the form and procedures of conversation as interaction were not the focus of this study. However, as Lofland and Lofland (1984) suggest, the data were also analyzed to identify instances where topics raised by some teachers were evaded or ignored by others, as these can also be important. The transcripts were then considered holistically and annotated to identify any new dimensions.

3.9 The development of propositions

In Grounded Theory approach to data analysis ‘theory’ is defined as “an explanatory scheme that systematically integrates various concepts constructed from data through statements of relationship” (Strauss & Corbin 1994: 279). A core category that appears from data analysis defines the theory. A core category should be able to “pull the other categories together to form an explanatory whole” (Strauss & Corbin 1990: 116). Once discovered, it is the Core Category that answers the basic question of the study as well as terminates the data analysis and collection. Besides, once constructed, the core category also indicates that data collection and analysis sooner reaches *saturation point*. This refers to where no new or relevant data seems to be emerging pertaining to the core category.

In this study, the researcher constructed core categories and central categories pursuing similar procedures. Though it was time consuming, manual coding was preferable to using software programs (Strauss & Corbin 1998; Glaser 2000; 2002). This allowed iterative and reflective analysis(i.e a means which assists the researcher to mainly go through the data back and forth), each of which no software program could do.

Bassey (2001) argues that a study such as this with the intention of providing advice to teachers, schools and systems should tackle the issue of what *could be*. For this reason it was important to capture singularities or single instances, because if an occurrence supporting knowledge building is found in one setting, it might be able to be implemented elsewhere. As the study proceeded, and particularly as I reviewed and reflected upon conversations and observations, it became evident that while all teachers played the four roles to varying extents, they displayed characteristics across a continuum from facilitating to knowledge building, and that the gap between the facilitators and the expectations set by knowledge builders constituted a zone of proximal development (ZPD), in Vygotsky's terms. The analysis proceeded with a return to the original transcripts, using manual coding to perform simple text searches situating coded comments in context, and the development of a series of propositions based on the data. These propositions clearly did not all apply to all teachers and students participating in the study, but there were instances of each one occurring to varying degrees, and in a few cases, many of the propositions applied.

The guidelines for including a proposition were based on at least one instance in the data – a singularity (Bassey, 2001) – with supporting or explicating literature. As the propositions relating to each role were developed, clear themes became obvious in terms of teacher beliefs, open-endedness, or collaboration with technology, for example. Continuing contact with several of the teachers throughout this research provided an opportunity to hear them reflect on and discuss their practice, while I conducted further searches of the literature for research evidence which might support the propositions. In this way the propositions that were grounded in the data could be situated in the broader context of teaching and learning based in the literature. This then provided the structure for the findings from chapter four to eight. While the findings are intended to show practices that enhance effective teaching and learning of EFL using technology (in our case plasma), they are tested only against the literature and through teacher feedback: that is given the definition adopted by this study, and what we already know, they are thought likely to enhance knowledge and skill building.

Having thoroughly combed the data and developed propositions regarding each of the four roles in the model, illustrative quotes from the text and images of classrooms were selected from the many available. Since I felt that the insightful words of any one participant could illuminate the future, there was no intention to provide a balanced coverage in terms of teachers or students representation, but to show examples of themes emerging in teachers' roles. Quotes were selected on the basis of their clarity, representativeness of a position in the literature, representativeness of observed teacher's culture, and in some cases, uniqueness of thought or action (Bassey 2001). Since the tools of conversation analysis were not required in this study, and oral language was to be presented in written form, many quotes were edited to improve grammar and syntax in order to clarify teachers' meanings. To make each chapter manageable, many quotes and images were not included. Data presented in each chapter were labeled by school type, gender and assigned identification number to maintain anonymity. A table indicating the number of quotations from each teacher is found in Appendix J: Notes on Data Analysis.

In the final phase, the findings were considered as aspects of a community of practice (where the practice is building students' language proficiency). The theoretical framework developed by Wenger (1998) incorporates coverage of the facilities of engagement, imagination and alignment. This provided a way forward to describe the characteristics of skill building teachers and their communities of practice and, where the data made this possible, to make explicit how they had come to achieve this. This forms the bulk of the final chapter and is designed to support the policy advice for professional development for teachers.

3.10 Pilot testing

A pilot test of the research methods had been conducted from March to June 2009 at Balcha Aba Nefso Secondary School (A school located in Lideta sub city, here in Addis Ababa), on seven English teachers in Plasma Supported EFL class rooms (See Appendix A).

The major aim of the pilot study was to see, among others, the weaknesses observed on the data gathering tools and also their strengths so that the necessary measures would be taken in

improving the weaknesses of some of the data gathering tools. It was also the aim of the pilot to give direction to the main study based on the lessons learnt from it.

Originally structured observation and interview guides designed were planned. However, these were found not gathering valid and adequate data. One reason was that the teachers were unable to adequately express themselves in English. The other reason was that they were too anxious under the structured condition. Still, some self organized, i.e validity checking of the information they gave did not correspond to reality. For instance, they claimed that they were “aware of all their English classroom roles.” However, in the actual situation the researcher came to understand that some teachers were totally in confusion as to what roles they are supposed to perform..

Likewise, the research auditors (two of my colleagues. one an assistant professor ,another an MA holder in TEFL who conducted observations, and conversations in the same schools with the researcher to further validate the data gathered by him) the schools were very much uncomfortable with more structured ways of interviewing. One of the research auditors described the situation as uncomfortable, unforthcoming and sometimes apprehensive of sitting for structured interviews. Thus, conversation, which signals an interactive relationship and signifies the development of a native or productive understanding rather than the transmission of preexisting meanings from one person to another person has been used. This, according to writers such as Baker et al (2002), Kval (1996), Au (1990), is helpful for studies such as this which focuses on human understanding and human experience than on abstract knowledge about ideas.

Thus, the researcher abandoned the structure styles and resorted to naturalistic participant observations modes. Interview items were rather constructed from context rather than predesigned. Classroom events, speech acts, feelings, activities and teacher roles were made in such a way that details of these generic domains would emerge from data. For instance, the activities of students and teachers, speech acts, their feelings were made domains of focus but under each domain the properties and patterns emerged from data. Similarly, in order to gain understanding of the nature of the emerging roles, interactions between teachers and students etc,

unobtrusive observation style was chosen to describe what was going on in the plasma supported EFL classrooms.

The ultimate purpose of the pilot study was to measure the reliability and validity of the research methods. The shift from the structured to less structured style bore fruits. The validity checking of the emergent themes indicated that the methods were relevant.

With regard to coding, in the first instance, all documents were coded in a simple frame based on the conversation prompts and the teachers' roles using software. However, this was later on abandoned in favor of manual coding. Though it was time consuming, manual coding was preferable to using software programmes (Strauss & Corbin 1998, Glasser 2000, 2001). This allowed iterative and reflective analysis each of which no software programme could do.

Still another area of weakness identified in the pilot was the transcriptions of the conversations.

As the conversations were completed, the first tapes were transcribed to digital documents by an agency, but this was abandoned in favor of transcribing tapes myself. This is because as well as being more efficient, it led to greater familiarity with the data and stimulated early analysis as Lofland and Lofland (1984) suggest.

With the view of maintaining the validity and the reliability of the study, transcriptions were given to the participants for further checking and reflection in the future.

As has been discussed above, because the structured data gathering tools could not produce valid and adequate data, I resorted to relatively unstructured data collection methods. Although comprehensive, the relatively unstructured data collection methods resulted, on their part, in large amounts of seemingly disconnected data from the various teachers and to some degree from some students. As it was felt that such a tool would increase the range of perspectives of the research subjects, different data management procedures such as codebooks and matrices were designed and used.

With regard to the quantitative data, some of the questionnaire items were not clear to the respondents for they had lack of clarity. As a result, some of the respondents skipped them with

a question mark. For example, questions number 11,12,13,14,17,and 28 in the questionnaire item were not answered by the five respondents out of the seven for they lacked clarity, because of problems in syntax. This gave the researcher an opportunity to come up with a clearer version of the same for the main study.

3.11 Leaving the field

As a final recursive step in this main study, the findings were reworded as a two-page framework (or map) for teachers to reflect on their own teaching behaviors in a community of practice in English classroom. All the twenty five teachers involved in this study were sent the document with a covering letter, indicating that it was created from my analysis of their conversations and other data, as a means of reporting back to participants. The document (as found in Appendix K) was given to teachers who had shown that they used this form of communication readily, and posted to the rest in December, 2011 and all were invited to respond. Twenty did so almost immediately, indicating that it could prove to be a useful tool.

This chapter has established the parameters of the research, and discussed and justified the choice of particular ethnographic methods: classroom observation, conversation, written reflection and document analysis. In the following five chapters, I present the findings of the study based on the four roles of teachers in the conceptual framework and also their perceptions about plasma supported English lessons. Chapter 4 considers in detail teachers' roles in designing the learning environment. Chapter 5 considers managing people and resources, and Chapter 6, mediating student learning. These three roles are all influenced by the fourth, improving practice, which is considered in Chapter 7. Chapter 8 treats teachers' perceptions about plasma supported lessons. In the final chapter, I draw these elements of teachers' roles together to provide a comprehensive framework for knowledge building, and discuss the implications of the study for theory and practice.

CHAPTER FOUR: ANALYSIS AND FINDINGS OF THE STUDY: DESIGNING THE LEARNING ENVIRONMENT

4.1 Introduction

This chapter examines the first four classroom roles of teachers identified in chapter 2 designing the learning environment. In Figure 4.1 the focus is on this role in relation to the classroom, with minimal reference to managing people and resources (M) and Mediating student learning (ML).

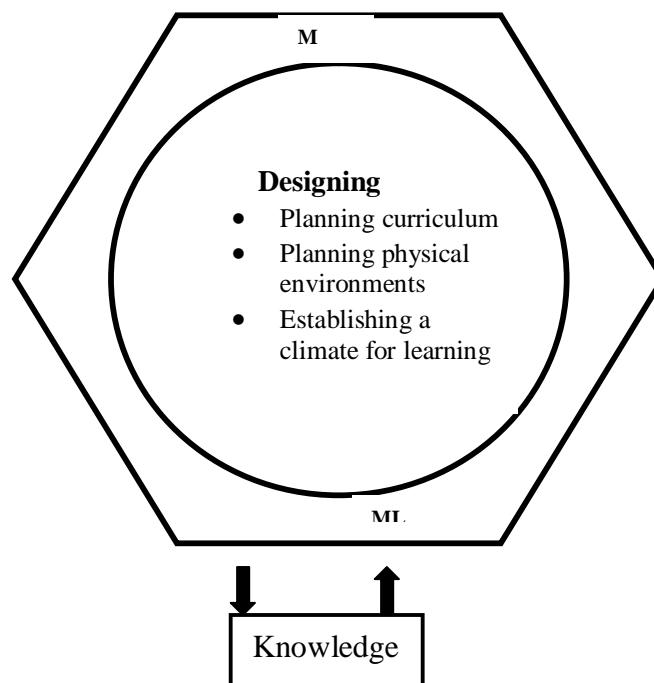


Figure 4.1 Designing the learning environment

The literature reviewed in chapter 2 showed that design can be seen as a problem solving process played out in the context of teachers' beliefs and understandings and their theories of learning (Fraser & Spiller, 2001). Further as facilitators, teachers set the mood or climate of the class, clarify purpose for individuals and the group and make a wide range of resources available (Rogers, 1969). While some believe that curriculum frameworks and outcomes controlled by education systems give teachers little scope for activity (Culan 1984, De Marris and Lecompte,

1999), others see them as structure which can be filled with wide range of activities designed by teachers and students (Scardamalia & Bereiter 1999).

The evidence of teachers' designing role was taken from documents, conversations and observations of the physical environment in which they work, as outlined in chapter 3, and the outcomes of curriculum design activities were seen in the classroom through student behaviors and products presented during observations or sent to me be it electronically or otherwise. As the focus of the study was on the perceptions and emerging roles of teachers and students in plasma supported English classrooms, these are the major areas covered in the data. Within the designing role, the data were considered in terms of the extent to which they represented a knowledge building culture among teachers and students, leading to a set of propositions regarding teachers' and learners' interaction in language classrooms. This is not to say that all teachers and students in the study displayed all the behaviors or beliefs, but that they were evident to varying extents among the participants. The four propositions are presented as numbered heading and framing the structure of this chapter, while the participants are designated by gender and an identification number.

4.2 Teachers' and Students' understandings about learning in informing design

Current approaches place the emphasis on a student centered classroom. When discussing their role in setting directions for learning, teachers and learners observed and participated in the conversation in this study readily incorporate elements of constructivism and its consequences for the teacher's role as a facilitator in to their discourse:

The teacher is a facilitator. For example, he/she groups students based on their interest or their performance. When the plasma teacher asks questions, the students may not be able to understand the question, then explaining the question would be my role (female teacher, school B). [conv10/005]

The teacher has a role of facilitating the class. When we say facilitating,, some of the students may fail to listen something or something about the transmission. You also simply guide the students and help them perform their roles very properly (male teacher, school KW) [conv10/11].

However, the lesson observations mostly showed that the teachers themselves have poor English proficiency. As an instance, the lesson was a reading comprehension on a topic **Pollution**. The plasma teacher asked the classroom teacher to assist the students to work on the pre reading activity, one of which was contextual guesswork. One of these words whose meaning had to be negotiated contextually was *ENVIRONMENTAL DEGRADATION*. Surprisingly, the teacher's answer was *KEEPING THE ENVIRONMENT SAFE*. (Male teacher school B) (LO 13/004).

Consequently, it is possible that “the most frequent complaint of some intelligent students is teachers' poor English proficiency” (DN0012/3), and it seems because of this reason that teachers are mostly “forced to give feedbacks to their pupils in the medium of Amharic” (Male Student (Conv 1/001). This is not code switching; according to Richards and Schimdt (2002: 81) code switching is a “sign of cultural solidarity or distance or serve as an act of identity”. It is rather a sign of inability expressing one's experience in English. In contrast, an EFL classroom in the context of these participant teachers can be regarded as effective only when they acquire not just the pedagogic/teaching knowledge, for instance how to effectively teach reading, but also when they acquire and use the code (English) used to convey the content (knowledge-in-the-reading).

With regard to individual differences in discussing various aspects of design, including the physical environment this teacher had the following to say:

: *According to my opinion, there are situations, or conditions that obstacle the teaching learning process. May be the 1st and the most prominent one is the seating arrangement. I think the fixed chairs (desks) make group work difficult. How can you validly then sit them all down and have a lesson for the whole class? (male teacher school B). [conv7/003]*

Still another teacher observes,

I mostly find it difficult to have a conducive environment to facilitate collaborative learning and as a teacher that is just a simple geographical thing that we need to be aware of interms of providing appropriate learning situations (male teacher, School A). [conv10/24]

Some teachers showed awareness that understanding individual differences also refers to students' cultures, prior experiences, languages, and (dis) abilities, and helping them through any possible means.

It is hardly possible to find out a heterogeneous nature among students. Definitely in a school such as ours, there are many students who haven't had technology based instruction until they joined grade 10. For them technology means something extraordinary which they can't adapt with. In such a situation, the role of the teacher is immense. I try to mix the good ones with the weak ones. I am always quite good at dealing with the students who are middle and above (female teacher, School KO) [conv6/18]

Some teachers have also incorporated the notion of a scaffolding structure into their theory of learning reflecting Vygotsky's (1978) concept of a Zone of proximal development (ZPD) which one teacher referred to in these terms.

If the activity is task based and engaging and if it is not beyond their level of difficulty; if it is neither difficult nor simple, there is a very good chance for the students to learn (male teacher, school A) [conv2/002]

However, other teachers had developed pragmatic responses to these theories that address individual styles in different ways, as these two teachers explained:

I don't look at individual students as such. I just think "well I can't provide 25 different ways of learning. That is not within my capacity. I'm not even going to try" (female teacher, school B) [conv13/005]

Rather than saying this student is a type of this, this student is a type of that, I think you have got to try and balance those things up and take that into consideration in planning any activity and you try and do that as much as possible, using the constraints that you have (male teacher, school KO) [conv3/16]

Awareness of and belief in particular learning approaches can assist teachers to argue for particular design modifications. Where teachers value collaborative approaches, they should experiment with various configurations of classroom furniture to encourage group and pair works (Fosnot 1996). Virtually all the sections which I visited have fixed chairs which make collaborative learning a very difficult task. Figure 4.2 shows one of the grade 10 classrooms where the plasma screen is placed in front of the students' desks which are in rows facing a board allowing little room for other activities.



Figure 4.2 Classroom design and Seat arrangement of one of the plasma supported English class rooms (Class Room B).

In these cases, espoused learning theory was mostly overwhelmed by physical constraints, or may show that social constructivism was not a strongly held belief. With regard to the impact of

the very physical setting of the class on the role performance of both students and teachers a male teacher 003 says.

One of the most difficult thing that always becomes an obstacle in the teaching and learning process is the very fixed nature of the desks. This always makes group discussion a very uncomfortable business to the learners.(School B) Conv007.

4.3 Teacher's awareness of the purpose for technology use

The importance of purpose for learning and using technology as a whole is often noted (Blyth 2002), and women are said to look for purpose in their use of technological facilities (in our case Satellite TV or Plasma) than men (Delaney and Dyson, 1998). The ways in which teachers design with technology mirror the three ways in which students use technology outlined in Chapter 2: Consumption, (re) production and creation. The potential for knowledge building in the designing role is enhanced by communication technologies (Herman, 2000).

Teachers in this study generally had a similar point of view in that their lack of awareness on how to effectively play their own roles and make their students beneficiaries of the plasma based lessons for there is no clearly designed syllabus nor the curriculum at their hand always made their experience of plasma supported English classes a bit dissatisfactory.

A teacher writing in her journal described her ineffective use of the plasma lessons as follows.

As there are no clear guide lines given either in the curriculum or in the syllabus; even as, there is no a well prepared teachers' guide on why and how I can effectively use' the plasma based lessons in equipping my students with the necessary knowledge , I don't feel sometimes satisfied in my practice of teaching. (female teacher ,School B) [TRJ 9/009]

However, a male teacher emphasized on how technology based instruction can serve several purposes in EFL classrooms in a reflective journal he wrote to me:

I understand that plasma is a good pedagogical tool. Let me give you an example. For instance, while we are teaching about pollution, if there is no plasma through which the students can see clearly what pollution is, I can't tell them simply its meaning. [male teacher ,school B][TRJ 9/004]

However, in effectively utilizing the technology for EFL teaching, the other member of the participant teachers stressed how technology supported English lessons could have served several purposes as follows, given certain preconditions fulfilled.

In the project (plasma supported English lessons project) if there were the culture of using and developing collaborative planning models they would provide a real life, routine, engaging and challenging way to utilize the technology in an appropriate and integrated way. It could be seen as a highly powered method of delivering staff, peer to peer and student peer professional development. However, as such planning models have not been so far implemented. The effectiveness of the technology is still far reaching (male teacher ,School B).(conv7/007)

All in all, the above accounts suggest that teacher's lack of awareness on how to effectively play their own roles and make their students beneficiaries of the plasma based lessons for there is no clearly designed syllabus and teachers are not given any training on how to effectively use the plasma as a resource has made their teaching practice full of anxiety.

4.4 Teachers' Involvement of Students in Curriculum Planning

Diaz, Neal and Amaya – Williams (1990) suggest that verbalizing plans, rationales and goals encourage student self regulation, and Bober, Sullivan, Lowther, and Hamison (1998) suggest that teachers need to be more explicit with students about the goals for learning.

4.4.1 Setting Goals and planning lessons

Teachers in this study did not commonly share curriculum goals with students in a general sense. As many of the teachers observed and participated in the conversation revealed that let alone for them to discuss the very goal of the lesson with their students, even they themselves don't have the chance to have access to the very goals of the lessons they teach in the curriculum.

I know that students have a sense of ownership of what they are doing which is also challenging for me as a teacher because they expect a lot from me. However, as the satellite TV lesson is channeled from a center whether I like the content or my students dislike it, I have no option except facilitating things. (Male teacher, school A)[conv14/19]

Another teacher further strengthens this statement in the reflective journal he wrote in April 2009:

Today (April 27, 2009) my students just asked me to teach them grammar. Their interest was due to the fast approaching National Exam, which was predominantly on grammar. However, since we have been told by the school authorities that the plasma lessons shouldn't be interrupted, on behalf of non plasma classes, I had no option except teaching the day's plasma lesson (Male teacher, School B).[TRJ 3/001]

This idea is also further strengthened by a male and a female student in an informal interview I held with them :

We are by no means encouraged or allowed to select the areas we would like to learn. Even our interest is artificially dictated by the content of the questions that appear in national exams. Our teachers also don't have a say in entertaining our interest [Male student IIsN3/ 007, Female student IIsN3/013]. [Translation is mine].

However, nowadays the students themselves tell you by their own initiative as to what they would like to learn because of some compelling situations. In one of the observations in school B, I made note of the following dialogue between a teacher and his students.

Students: *Teacher why don't we have the non plasma classes! Because exam is fast approaching (translation is mine)*

Teacher: *Ya, that is better you see, but we can't do that, because the plasma lesson shouldn't be interrupted. This is what we are strictly told.(male teacher, school,B) [LO 18/002].*

This conversation between the students and their teacher shows that there is no as such a space where by classroom teachers and their students can negotiate on the content of their learning.

The conversations (conv) and informal interviews (IIN) and collection of artifacts carried out also indicated how the classroom teachers plan lessons in Plasma supported EFL classrooms. The informal interviews (IIN) made with the teachers indicated that all hold the assumption that they “don't have to design lessons” since they “just use the Student Text Book for pupils and the Teacher's Guide for themselves”(Male teacher School KW) (IIN7/008). This view connects with their decisions that they “...must simply follow the plasma syllabus” (Male teacher, School B) (IIN 4/002) since “replacing plasma lesson by own designed lesson is disallowed”. Similarly, the official Teacher's Guide (TG), for instance, states “teaching materials required for teachers are textbooks and for pupils is exercise books and pens” (TG 2006/10).

Perhaps, due to all these, effective planning, for the teachers, is “accomplished”, when their lesson plan formats provided to them by schools or the faculty is filled out to match the school syllabi. For instance, the semi-structured interviews revealed that for them “a good lesson plan is that which corresponds to the contents and objectives set in official Teacher Guide” (Male teacher, School,KW (conv 8/10). For them designing lively tasks sidelining the official Guide was impossible. The frequent comments of the teachers was that, “even if they believe in it, preparing lesson tasks has no value as the *plasma* does it” (Male teacher,School KW) (conv 8/11). Consequently, they practice *teaching inauthentic lessons*. For instance, in a lesson the

issue was “we cleaned our village yesterday”. One pupil raised hand and said in his mother tongue, Amharic, “Teacher, that is false. Our village is still full of trash” [translated]. These are just instances of lack of both conditions and skills of reconstructing the pedagogic skills of conceiving, planning, implementing meaningful lessons.

On the whole, the above accounts suggest that these teachers practice teaching English under the circumstance of *over-dependence on lessons pre-defined in the official Teacher Guide and transmitted on TV*. Validity checking trail with the research informants also revealed that they unanimously agreed on the persistence of this circumstance as an aspect of the plasma lesson situation. This might well make planning of lessons personally meaningless and unnecessary. This circumstance, thus, might be partly implicated in the teachers’ lack of opportunity for developing adequate pedagogic skills in/out of their classroom teaching roles and experiences.

4.4.2 Role change

Experienced teachers described the fact that their classroom role has changed with the introduction of task based pedagogy (which mainly prioritizes students’ active involvement in the lesson) from being the center of the lesson to a facilitator of learning. The introduction of plasma based instruction in EFL classrooms has even brought additional roles to be played by English language teachers. However, one thing, as many of the teachers underscore, remains unchanged, this is the imposition on teachers not to be more involved in the design of the curriculum as the following teacher laments:

In many aspects with the introduction of the plasma based instruction, I feel I have more roles to additionally accomplish even than the previous days. However, one thing always remains constant. When I began teaching it was pretty much you just go to class and teach what the curriculum has set whether you like it or not. Now a days too, the story is the same (female teacher, School B) [IINT 15/003].

In designing the curriculum in the secondary schools in focus, many of the teachers maintained the view that they are not in control over the content and the learning activities, as a result

allowing varying degrees of student choice is impossible. However, some teachers who attempted to involve the students in negotiating their own learning by breaking the syndrome, felt that the students took sometime to adapt to this change:

It's one because for years we've been telling them "This is what you do" and all of a sudden you say, "well, what areas would you like to work on? male teacher, conv16/001)

You like to " Some of them do, but it takes them a while to get in to it (female teacher, School B) [conv 16/005].

However, as indicated in 4.4.1, and repeated below, now a days the students themselves tell you by their own initiative as to what they would like to learn because of some compelling situations. In one of the observations in school B I had the following dialogue between a teacher and his students.

Students: *Teacher why don't we have the non plasma classes!
Because exam is fast approaching (translation is mine)*

Teacher: *Ya, that is better you see, but we can't do that, because
the plasma lesson shouldn't be interrupted. This is what
we are strictly told.(LO23/001,male teacher, School B)*

To supplement this with further example, the time was when the National Examination for grade 10 students was fast approaching and the students' interest was to learn more of grammar than the other macro skills. The reason, according to almost all the students who participated in the conversation was the focus of the very exam on grammar. The following excerpt taken from student 14 puts the point fully on board "I personally prefer learning grammar to the other skills not because of lack of awareness that the other skills are not important, but rather due to my interest to pass the exam which is mainly based on grammar which in turn is not given due coverage in TV lesson."(School B,conv1/14)[Translation is mine].

The implication of this is that there is not as such a space where by classroom teachers and their students can negotiate the content of their learning and there is clearly the wash back effect of the Grade 10 National General Exam.

The following teacher from school Ko seems to look at this point from a slightly different angle. According to him, if the school culture doesn't support the negotiation on content between the teacher and his /her students, it would be better if the statuesque is maintained.

I have tried to run classrooms where the students have selected the types of topics that they do, from their textbook, but in the long term you tend to make the decisions about what they learn and how they do it (male teacher, School A). [conv 13/019].

4.5 EFL Teachers' incorporation and binding by curriculum framework documents

Petraglia (1980a) champions open-endedness, arguing that if the learner is to think in the knowledge domain as an expert user of that domain, might think limits on content denying possibilities of knowledge creation. The recorded history of Ethiopian modern education has documented that curriculum development was the responsibility of the state not that of the individual schools. Currently, the state/region wide curriculum and standard frame work contains desired outcomes and suggested content in all key learning areas across English language from 1st cycle to years of preparatory school (Ministry of Education ,2004). This document points out that students will undertake a wide variety of learning activities and tasks, and that the indicators do not prescribe or limit this range or determine how teachers will assess.

As the document reports, the curriculum of grade 10 plasma based instruction focuses on the four key language areas of study: speaking, writing, listening and reading. These broad types of learning activities suggested by the Ministry are shown in Table 4.1. It can be seen that these activities cover the range from consumption, using task contents as input to creation (producing their own piece using the task contents as inputs).

Table 4.1 Student activities suggested in curriculum Standard Frameworks of grade 10 English subject

Speaking	Writing	Listening	Reading	Vocabulary
Talking about a problem	punctuating a passage accurately	Listening for the gist	Skimming	guessing the meanings of selected words
Listening to other students' Point of view	Completing a composition	Listening for specific information	Scanning	completing a cloze exercise
Expressing agreement and disagreement	Dictation	Note taking	Comprehending and responding in written form	
ways of asking for help	Summarizing		Answering specific questions based on the passage	
Speaking on phone				

Source: Teacher's Guide Grade 10 English Lessons (2006).

However, the conversations (Conv) and informal interviewing (IIN) and collection of artifacts carried indicated that there were clearly two broad views of the curriculum documents among teachers in this study. One, the minority view, saw the framework as a spring board for designing the curriculum, while the other saw them as a constraint imposed on teachers from above. The proponents of the first argument say that "it is a curriculum which is more likely to support knowledge building, because it allows for more open ended content." IIN 7/004. Some teachers had a positive view of the curriculum frameworks and used them as a basis for designing learning, as these two teachers from school B discussed:

Male teacher: they guide our checklists (Conv 7/[007)

Female teacher: and our reports and our planning too. (Conv7/ 006)

Male teacher: So that is what our checklists are-students make up certain points to complete certain outcomes to show the understanding that they're gaining. Conv 7/007]

In another school, a teacher described how the team of teachers based their planning on the documents with out feeling constrained:

One of our former teachers here at the school was heavily involved in the curriculum design when it was developed and we think it is a magnificent piece of work because it gives the teachers a wonderful starting board. So we have it open the plasma lessons and use it as a starting board or a spring board for our learning (male teacher,school A). Conv 6/25)

Just as Ball and Cohen (1999) believe, teachers know little about how the curriculum is constructed. The last teacher quoted who commenced teaching in the early 1990s (before the plasma curriculum) indicated in conversation that he and his colleagues saw the curriculum solely as the content of the system driven curriculum documents, rather than as all experiences in the school. For some teachers, this can have effect of reducing a sense of ownership of the curriculum. Other teachers in the study showed varying levels of familiarity with the curriculum framework particularly with regard to technology, and many didn't link the suggested plasma based English lessons with topic guides for teachers and students, or reports to any concerned body. One teacher made this typical comment:

In terms of assessing learning outcomes, I'm aware of those curriculum documents to some degree, but I haven't really got into that in a big way yet(male teacher School(KO)[conv12/17]

Generally individual teachers appeared to adapt the curriculum documents to their previous practices or to students' interests rather than using them as a base for discussions about curriculum. Some teachers were not very familiar with the documents and their potential. One

described his attempts to maintain interest, presumably for the students, although possibly for himself as well:

The hardest part is finding something interesting in the curriculum document or the syllabus. Whatever you're governed by finding something interesting in it, and finding a way to make it interesting, and then get the lesson plan and chop it up a bit so there is a bit of variety (male teacher, school KW [conv 17/008]

In the following comment from another secondary teacher in the curriculum documents of the grade 10 English lessons that are transmitted on plasma, there is clearly a feeling of constraint, and a suggestion that resources limit teachers' choices:

As the syllabus nor the curriculum is with us in most cases, I simply become learner whether I like it or not. For example, in some areas I feel that there is time constraint to do certain tasks but since it's given by the plasma teacher, no option. I wish I had the right to determine the amount of time for a task. However, most of the time my classroom events become full of disorganized activities [female teacher, School KW]. (Conv17/009).

In this respect the set of classroom events that occurred in the teachers' practice observed and analyzed indicated that classroom events were full of discrete and incomplete events over which classroom teachers have less control. For instance, one of the recurrent events is that "TV – teacher asks students to find out information in the passage... However, there is no discussion, all are silent. The classroom teacher feels embarrassed at the silence. He commands them again and again 'Discuss!'" (Male teacher, School A)(L019/19). To add, the classroom teachers frequently experience events such as: "TV-teacher's lip-movement and sound mismatch. The former appears a couple of seconds after the latter"(Female teacher, School B) (LO6/005). Still, common in their classrooms is this event: "Classroom teacher and students await TV to begin broadcasting the lesson, silently. Several minutes pass. TV-teacher appears....After a couple of minutes, power cut occurs.... Teacher shifts to dictation. It seems he plays the role of the TV-teacher" (LO 6/005).

What all the above events suggest is that, in plasma supported lessons, *discrete* and *incomplete* teaching is both features and contextual conditions of poor teaching/pedagogic skills. These teachers practice teaching under a circumstance they have little or no control over. Effective role performance on the contrary, requires a condition conducive for teachers to control, analyze, connect and change, if necessary, the situation of the events. Teachers can be regarded effective when every effort is made to control, analyze, interpret and construct holistic meaning out of a pedagogic event. Thus, from the nature of the classroom events, it can logically be deduced that the existing situation might make teachers unable to construct connected and coherent meaning out of what goes on in their classrooms.

Documents on teacher's guides were also collected and are one of the main data for analysis. From the exploration of the documents, it was understood that one of the key impacts of the documents is that they provide guide to the classroom teacher on how to implement plasma supported English lessons.

The document in the findings of the assessment of Satellite Television Programmes of the Ministry of Education on Ethiopian Secondary Schools (MOE, 2000) also shows the roles of classroom teachers by dividing it into three phases which are listed as follows:

With regard to the roles of teachers before the Satellite Television Programme starts, for instance, it requires the teacher to "familiarize" self with the topics of the lesson, following the Student Textbook, and, for students, to prepare their "pens and pencils".

As long as the roles of EFL teachers while the Satellite Television lessons on air are concerned, the teacher is expected to:

- control the activity of each and every student
- jot down the main points from the lesson so that he/she can summarize the main points to the students when the lesson is over.
- assist the students as per what the Satellite Television teacher instructs.

- initiate classroom interaction between and among students upon requests by the plasma teacher.
- entertain students' answers in class following questions raised by the plasma teacher or to mark their written answers if there are any
- encourage students to do their class work/and assist them also by giving them clues if there is the need.
- not interfere in the lessons unless invited by the plasma teacher (observer role).

After the Satellite Television lessons are over:

- the classroom teacher is expected to give students further explanation.
- the classroom teacher encourages students to forward questions.
- he/she is expected to give students adequate answers to the questions raised.
- the classroom teacher is also expected to encourage students to do their assignments given by the plasma teacher.

As is depicted above, the classroom teacher has many roles, and these require adequate time . However, what the data from observation have indicated is the reverse to this. For instance, under Teacher activity, during the while stage of the plasma lesson, the classroom teacher is expected to perform so many duties within the maximum of 10 minutes. Even this is affected by other external and internal variables such as students' discipline and power interruption. A prototypical example of what commonly happened was captured as follows:

The plasma already has started lesson presentation. Still, however, pupils knock at the door one after the other, coming in after break time. TV teacher reminds the past lesson. Then displays: 'Page 22.A2.10 Sequencing information. Read the story of the accident again, and then make a summary of what happened using the following frame. First Ayantu...,Next she...,Then...,After...,Before...While...'. Then, begins 10-second countdown. 'Please teacher, divide the class into three groups' said TV-teacher. Again, 10-second countdown begins. But no division was possible to do so since the chairs and tables are fixed. Plasma gone due to unknown reason, perhaps power cut (LO7/001).

The implication of this episode is that there is no opportunity for classroom teachers to reflect and consider re-planning a lesson in a different way. Still, it is not clear as to how these items could be achieved practically under the condition where lesson contents and procedures are already pre-set in the national Televised-lesson, Student's Textbook and Teacher's Guide. In short, they are rather *research-based items* than operative, bottom-up or reflective items. Consequently, classroom teachers cannot perform their roles effectively.

In general, all the above arguments can be instances of why the classroom teachers lack adequate freedom in performing their roles as designers, managers, mediators and professional learners in classroom and school environment—an aspect of the problem that was one of the main thrusts of this study.

4.6 Discussion

As noted in Chapter 3, this study aims to provide direction for the future of teachers' learning based on emerging roles of teachers, and supported by literature (Bassey, 2001). Within these guidelines, the findings of this chapter indicate that it is likely among teachers in technology supported EFL classrooms that:

- teachers' understandings about students inform design
- teachers incorporate, but are not bound by, curriculum framework
- teachers have clear purpose for technology use, but this is impeded by various factors.
- teachers don't involve students in lesson planning.

It is clear that teachers have built up a substantial knowledge base in relation to designing the learning environment, although their emphasis is more on the curriculum than on the physical space. Although the notion of classroom community implies place and space, teachers in this study rarely saw themselves as able to act in this environment in creating suitable condition for learning. While teachers saw themselves as being responsible for facilitating the learning of students in the classroom, they did not engage as deeply in identifying systemic design

constraints and problem solving around the design of space. Nor did they encourage students to contribute to the design of their physical learning environment.

In terms of decision making regarding design of the learning environment, the data show no significant input from the main stakeholders, students and teachers. Within the classroom community many teachers in this study didn't display that much specific design behaviors that were likely to encourage knowledge building. In most classroom cases, teachers are passive implementers of the instruction given by the plasma teacher. In most cases, teachers simply implemented the already designed curriculum by the Ministry of Education including topics, tasks and assessment.

The findings regarding teachers' awareness of the purpose of technology use have indicated that they fully understand the positive role that plasma supported lessons can play in bringing the desirable outcome in terms of the language proficiency of their students. In this regard, virtually all the teachers have aired their positive stance toward plasma based language instruction. However, as the teachers are not given the opportunity to be active participants in the planning modes of the curriculum itself, being aware of the purpose of the technology only on the teachers' side can't be on its own a means of getting success in plasma supported English language teaching and learning.

The findings of this chapter are presented in the language of social constructivism, both in terms of the teacher-student relationship and the professional relationship between teachers. Together they represent current behaviours, which are likely to support knowledge building in EFL classrooms and across schools. Knowing what teachers know and do in this regard is important in terms of Hargreaves (1999) call for audits of teacher's practice. If teachers are supposed to enact their varieties of roles among which designing the learning environment is one of them, the established practices of simply imposing strict curriculum from the superior vantage, the Ministry of Education or Regional Education Bureaus have to change. Also EFL teachers teaching English using plasma and wishing to play their role in this regard, should also change established practices for themselves and with others where they simply become consumers of

curriculum given from the top as it is. The findings indicate that in some cases this would require substantial structural and behavioural change.

The role of teachers in designing the learning environment sets the context for both student and teaching learning and is therefore a crucial and fundamental role, affecting all others. In the following chapter the role of managing people and resources will be examined in terms of its potential for effective teaching and learning process in technology supported EFL classrooms.

CHAPTER FIVE: MANAGING PEOPLE AND RESOURCES

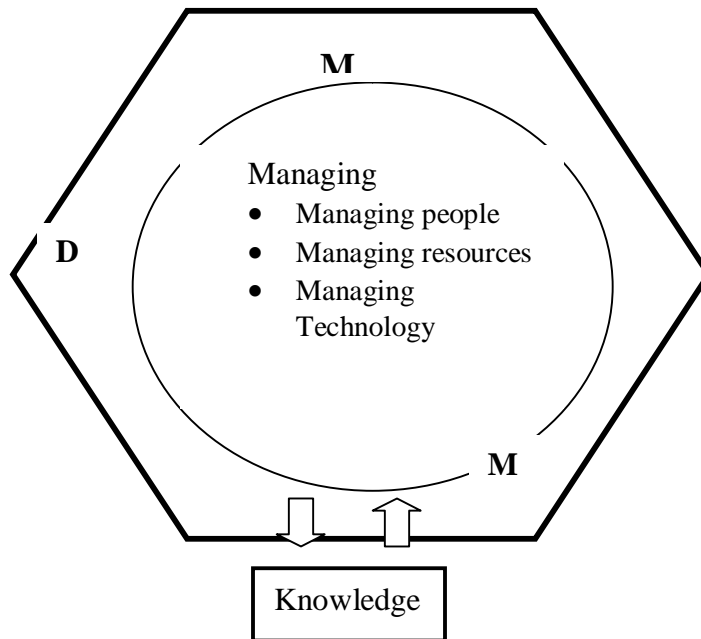


Figure 5.1 Teachers' classroom managerial roles

As the literature reviewed in Chapter 2 noted, teachers manage relationship with students, staff, parents, experts in the community and other contributors to the learning process, expanding the notion of the school as the learning organization. They want people to feel a connection to the school community which as Filk and Kilpatrick (2000) argue, builds a sense of belonging as well as providing the framework for people to reorient their views of self and others in order to be willing to act in new ways, in other words, to learn. Teachers are said to be flexible and opportunistic (Jackson, 1990) and they have initiated or responded to the introduction of technology based instructions in various ways. In coping with a high degree of uncertainty and ambiguity, they create varying degrees of structure including the arrangements for students to learn individually and in group's expectations of the level of freedom allowed, and controls over resource use. In the case of Ethiopia's context, introducing plasma based lessons in to schools has required many high stake decisions to be made about management structures such as: time tables allocation of teachers to classes and location of the plasma screens in classrooms due in part of the major investment made in the technology while also offering opportunities for new

types of learning. A research finding of some scholars like Hill & Rusell (1990) has suggested that the rigidity of school organization practices which allow students only short period of time on particular activities is not conducive to optimum learning. On the other hand, Elmore, Peterson and McCarthy (1996) were unable to find evidence that changes in organization lead directly to change in teaching and to improvements in student learning. The explanation for this paradox could lie in Rowe's findings that the teacher in the classroom makes the difference (Rowe,2002).

Social interaction in a language classroom mainly in technology supported ones is to be seen as an essential prerequisite for effective language learning Sailsbury (1996), and managing this is important. However, the design of the school as a work place influences, and often impedes both teacher-teacher interaction (Nias, 1987) and teacher-student interaction, as noted in Chapter 4. Managing scarce resources, such as wherever there are fewer books than students, can range from highly controlled to laissez-faire. Where equitable access is a consideration, the teacher must play a role in managing and monitoring resource use, as research shows inequities can arise in laissez-faire environments.

The analysis of the data leads to three propositions in relation the role of the EFL teacher as a manager of people and resources for knowledge building and skills development. In every case there was a range of commitment to the proposition: some teachers strongly display the behavior, while others were less likely to do so. As the previous chapter noted, the propositions are presented as numbered headings, while teachers are identified by gender, and identification numbers.

5.1 Teachers Involvement of Students in Management

In the constructivist classroom students are autonomous, or self-directed learners, free to take risks in learning, assess their own progress and develop the insight necessary to improve their own learning Brown & Palinscar(1989), Freire (1993), Goodman & Goodman(1990) and technology is expected to support this. Through self management, students are expected to learn how to learn in order to be life long learners. Managing to this end, demands a dynamic

equilibrium balancing structure and openness depending in part on the management skills of the students and the willingness of the teacher to relinquish control (Nias, 1987).

5.1.1. Student-self Management

Teachers in this study generally encouraged students to manage their own learning both individually and in group. As this teacher described.

Most of the time I encourage my students to be self motivated, self regulating, so trying to get them to focus on themselves as a learner to recognize strengths, weaknesses in learning to know. Building in that responsibility for self time management and the contracts. That's what I'm about with the students here [female secondary teacher, School B][conv19/005]

One student in an informal interview she had with me reflected on the freedom she enjoyed:

Most of the time our teacher allows us to discuss a given task among ourselves directing ourselves. That gives us strong sense of interest to speak, write, listen and read in English when given a task to do so by the plasma teacher. However, one obstacle to this end is the time given for such activities is so limited. (Female student, school B).[IIsN1/005]

In the plasma supported EFL classrooms, groups of students were observed frequently ranging from teams to fluid groupings of two or more students. Those teachers who encouraged self management were prepared to step back and allow students time to organize themselves in groups, valuing the collateral benefits students of not interfering in their choice of group members. One teacher described how students organized themselves.

I've got students that always choose friendship group to work with and I try not to interfere with the way students choose the way they work. I try to get them to talk to each other (though the fixed chairs are real obstacle) and find out who has got a common interest to work with a like mind ([female secondary teacher, school KO][conv7/16].

Another described how the students handled the work load:

When the students are given a certain task to perform in group – I could say mostly they do it in a self regulated manner. Groups of students were telling to each other what they were supposed to do and how they do it. Once they sorted out the six topics, then they collaboratively worked. (female secondary teacher, school B) (conv7/005).

In spite of teachers' beliefs about self management, they found out at times that some students were reluctant and didn't work well together when they chose their own groups or pairs. As a result, they intervened to group students. For example, teacher [004] of school B was observed intervening in grouping students' from the high achievers the medium and the low achievers. (See figure 4.4 below).



Figure 5.2 A teacher intervening in grouping students and encouraging collaborative learning

5.1.2 Managing with Technology

In technology based classrooms one of the major challenges and an emerging role which teachers need to adapt to is dealing effectively with the pros and cons of the technology itself (Preston 2001). Teachers, currently, using the technology in the classroom frequently lack technical support and are often less skilled in using the technology than the students they teach. It has been also noted among many teachers and highlighted by many scholars like Boyle and Scopes (1998) that teachers know how to manage students based on cultural norms and codes of conduct, yet teachers who wish to empower students and allow them to experiment with their learning are also faced with managing new forms of communication and expensive hard ware. For inexperienced teachers particularly, the introduction to the plasma technology with its

associated malfunctions challenges their role in classroom management and calls for new problem solving techniques, frequently involving students. One teacher reflected:

I think the aspect of control is interesting because I find in plasma based English lesson. If something goes wrong I am not in control (Male secondary teacher)[conv19/002].

In this case the teacher was referring to students' ability to troubleshoot and assist in the smooth running of the equipment. This was observed in numerous classrooms. All teachers also experienced occasional management issues that they believed required discipline strategies such as students mistreating the equipment (plasma) or affecting the learning of other students. They had generally devised strategies to deal with these, either individually or within the school's code of conduct. Students in the school, however, did not appear to be involved in the management decisions and those who experimented by interfering with plasma settings were generally frowned upon as this sign indicated.

Hacking the network or tempering with the setup will result in the most unpleasant consequences for you (studentsconv4/007,4/009,4/0012).[Translation is mine]

Student self-management, a long term goal for many of the teachers in this study, was enhanced by whole school strategies that allowed students to make decisions about how they worked and with whom, and the products they created, while providing flexible structure and support to students. It was impeded in some cases by students' and teachers' prior experience and levels of flexibility.

5.2 Teachers' Encouragement of Students' Motivation through Intrinsic Means

A constructivist approach tends to value intrinsic rewards in contrast to the treats offered in some traditional classrooms (Jackson, 1990) or even grades and the promise of future benefit (Dexter et al., 1999). In the early days of computer and related technologies use in classrooms, teachers sometimes used access to computers as a reward in the extrinsic sense, but the facilitator relies

on students to be motivated by a desire to implement the purposes which have meaning for them (Rogers, 1969).

5.2.1 Interest for Learning English with Satellite Television (Plasma)

A recent Ethiopian study found that students have negative stance toward plasma based EFL lesson Getinet (2008), Tekeste (2006), and this was echoed frequently by teachers in this study, as this teacher expressed:

As many of the students do have listening deficiency, they can't cope with the pace of the plasma teacher. As a result they always become reluctant to pay their full attention (Male teacher)[conv3/003].

The following teacher also shares the same point, but from a different perspective:

When you simply try to observe the class, most of the high achieving students are highly motivated to learn English with the plasma for they have good background in the language. However, when you come to the low and medium achievers, they simply have little knowledge about the language, as a result of which their interest in learning the language with the plasma transmission is lesser (Male teacher) [conv3/002].

However, this notion which teachers hold about their students seems to be in a total contradiction with the assumptions of the latter and even takes us to a totally different scenario:

We basically feel that plasma supported English lessons are good and they have their own greater contribution in enabling us to be good at the language. Even the plasma teacher is a more experienced and better qualified than our classroom teachers. However, the problem is, we can't rely on the contents of the plasma lessons as what appears in our national exam is grammar not writing, listening or speaking (female student) [conv3/007, translation is mine].

This idea is in fact shared by all the 15 students who participated in the conversations held at different times be it individually or in group.

This finding clearly showed that the students' lack of intrinsic motivation is not because of their natural disbelief on the benefits of plasma based lessons but rather on their target- the national exam, whose emphasis is grammar.

5.2.2 The Effect of the Technology on Motivation

While some teachers claim a positive effect of technology on student motivation, others like Papert (1991) see the task, not the technology as enhancing motivation:

It is just like anything; you have to put the time and the effort into it (Male teacher schholB) [IIN3/007] as to me the teacher's role, the teaching environmentall contribute to the effectiveness of plasma supported English lessons (Male teacher, schoolB) [IIN 12/001].

An indication that students see their time on the plasma as purposeful is not that much, as this teacher reflected.

They [the students] prefer the non plasma class because most of the time (the plasma teacher) focuses on listening skill and other Skills and the like, but the listening skill doesn't appear in the exam (Male teacher) IIN 10/001].

In contrast to some of the findings in the literature (eg. DETYA, 1999), several teachers like this one found girls to be very active in plasma supported English classrooms for collaboration and communication.

Girls are always highly motivated in performing tasks collaboratively. My biggest problem with them is "No you should not be more than 3 in group" (Female teacher, School B) [conv6/005].

On the other hand, two of the teachers saw benefit for boys:

I have been teaching for more than 5 years, and there is more flexibility. In particular boys get more out of it. They enjoy learning with the plasma more (with all their dissatisfactions as well)(Male teacher School B)[conv6/004]

more girls from my experience find plasma based EFL lessons boring than do boys. Some girls see them as too much sophisticated and can use this as an excuse to avoid engaging in technology supported language instruction (Male teacher School B) [conv6/003].

The gender of the teachers in these situations could provide a clue to the differences in observations. However, it was personality rather than gender that this teacher observed.

Some students by their nature are very quiet. They are highly shy to interact while others are easy going type. So always the extrovert ones use the opportunity in playing an active role while the quiet boys and girls miss out on the staff (Male teacher School B) [conv7/002].

In contrast, one teacher reflected on the change in social relations she had noticed in recent years.

I'm always amazed on how well our students seem to get on with each other, you know boys and girls. I often think about this. Even just a few years ago boys didn't want to sit next to girls and I think it's a whole social change that may be happening (Female teacher, School B) [conv8/006].

Like their teachers, students appear motivated to use technology when they see a purpose, as this teacher indicated.

Students though at first seem to be a bit reluctant,, they are interested in new applications. But are not easily fooled by new applications that do not have intrinsic value (Male teacher, School B)[conv4/007].

All in all, although teachers in O'Rourke's (2002) study found that it was easy to engage students in using the technology, but more difficult to engage them in the social and intellectual purpose of the task, the teachers' quest here generally focused on a purpose for the task, and encouraged students to use the plasma as a tool to achieve the purpose being proficient in their communicative competence.

5.3 Teacher's Management of Classroom Resources for Students to Develop their Communicative Competence

Since language learning naturally entails opportunities of collaborations which allow students to perform at a higher level than they would independently (Vygotsky, 1978), teachers who see the potential and manage access to technology accordingly, promote the construction of new knowledge through social interaction (Imison and Taylor 2001); Leafe, 2001; Scardmalia & Bereiter, 1999; Spronll & Keiser 1991; Wiegand 2006). However, this was an issue which teachers in this study found very concerning as they attempted to manage access to the scarce resources in an equitable way.

One major scarcity observed in the class of EFL was lack of books. More students were coming to classes without books once the televised English lesson began. One of the teachers explained how he managed access and encouraged collaboration within the classroom. Placing students in group of three or four to complete a given task

I just simply brought students without books and made them join group of students having books. In this regard I at least try to engage everybody on the task by of course assisting and encouraging them to engage themselves on the task (Male teacher School B) [conv3/002].

Figure 5.3, on the next page, shows five students in one of the EFL plasma supported classes collaborating each other on a writing task.



Figure 5.3 Students on group discussion (Classroom B).

However, the teachers have stressed on different problems as factors that affect their facilitator role in promoting collaborative EFL learning.

According to my opinion, there are situations or conditions that become obstacle in the teaching and learning process. Maybe the first one is the seating arrangements of students. Language learning requires group and pair work, but the fixed chairs are not comfortable for this purpose (Male teacher, School B) [conv7/003]. For me class size is also the other factor. As there are too much students in a given class, it will be very difficult for the teacher to run the discussion The desk has to be either in a U shaped or circular to make the discussion easier (Male teacher, School B) [conv9/001].

5.3.1 Efficient Use of Time

Because the satellite TV (plasma) based lessons are transmitted from a center, their time is rigidly fixed and the classroom teacher doesn't have any say on it. In such cases, i.e., when there is time limitation, it places its own pressure on students' performance of the task which they are supposed to do that will on its own right be leading to some tension between speed and efficiency in completing tasks and thoughtful learning (Papert, 1991). It was quite repeatedly highlighted by all the participant teachers and students that shortage of time is one of the most notable factors that have impeded the successful integration of the technology, as these indicate:

In order to make plasma supported English lessons more effective, I think the timing should be adjusted. The time a given task needs and what is given in the plasma are not totally proportional. Sometimes the plasma teacher gives long time for unnecessary topics and short time for the necessary parts (Female teacher, School B)[conv1/005]

I share her idea, for example, the time given for the teacher to conclude is not enough. Because it's too difficult to conclude the topic within 5mts. But it will be fine if the teacher is given 15 mts....(Male teacher, School B)[conv1/004].

The following teacher even highlights on the impact of time on the teaching learning process.

The time given for accomplishing a certain task is too short. So you fail to simply play your facilitating role. You fail to do that. If you simply go to the first group, it will become the end. So I think this is one major obstacle (Male teacher, School B) [conv1/002].

It has been argued that the emergence of plasma based instruction in the Ethiopian secondary EFL classroom starts to impact on instructional practices (FDRE, 2004). However, this finding partly indicates that effective integration of the technology into English language teaching will

not happen unless conscious efforts have been made at various levels to genuinely view the process of learning and teaching as of a more reciprocal nature. This, according to Wenglinsky (2000), includes fair distribution of time to problem solving activities; otherwise the whole endeavor would be fictitious.

What the observation suggests is the role that the classroom teachers play is characteristic of non reflective implementers of the TV-lessons rather than inquirers or practitioners. Brook, too observed teacher's roles in the current EFL classrooms and concluded that "this role can be carried out by any gatekeeper" (Brook, 2006). This, as has been noted in this study, is due to the very nominal time given to collaborative language learning and the role of the classroom teacher. During lesson broadcast, the plasma teacher ordered the classroom teacher "to divide the class in to three groups" giving him 10 seconds countdown. During the five minutes given to them just before the TV-lesson, they carry out the task of "reminding lesson." For them, this means, in their words, "reminding the past broadcast lesson." In the five minute after the TV-lesson, they summarize the lesson, meaning "recapitulating the points transmitted" (DN002/4).

Thus, the shortage of time to which teachers are limited to can be implicated as one of the main factors for EFL teachers' inability to accomplish their roles effectively by reconstructing their skills of presenting and concluding meaningfully a lesson.

However, one improvement that has been witnessed in the newly revised plasma based language instruction is the time given to the classroom teacher has been increased from what it was as a whole 10 minutes, 5 minutes for introducing ,and 5 minutes for summarizing the lesson to that of 20 minutes, 10 minutes each for introduction and conclusion. This improvement, to some degree, has given the class room teachers to perform their classroom roles with a slightly adequate time.

5.3.2 Trouble Shooting Technology

With regard to this subject, the informal discussions I held with the school principal(School B) revealed that the school had its own technician trained in the area of ICT and who had received

special training on trouble shooting. In spite of the provision of technicians across the school system, EFL teachers in plasma supported English lessons frequently lack timely technical support, and are often less skilled in manipulating the technology than the students they teach. As Drenoyianni and Selwood (1998) found, many teachers spend a great deal of time trouble shooting technology and didn't perform as expected, but there was evidence of an attitude among many which indicated that they see this as part of the real world, and a consequence of trying new ways of working. A range of problems was observed and reported with the Satellite TVs and their peripherals, especially where teachers were unfamiliar with the resources. This is also believed to be by most of the teachers, as the major source of the problem of teaching English with the technology, as this teacher expressed in her journal:

I have had trouble with the plasma this week. In the middle of the lesson the plasma got stuck due to some technical reason, I think. But since I didn't have the know how nor my students in that class, we had to look for the technician. Up until his coming and solving the trouble, the period was over (Female teacher, School KW) [TRJ13/12].

Her colleague also strengthens this point:

I think a lot of that breakdown mentality still exists with us. Even without any failure, we would be a panic, and we call for the technician to come in. In fact having a technician just to deal with those real technical issues makes a big difference (Male teacher, School KW) [conv13/013].

These extracts from observation notes also show evidence of the real life approach most teachers take when technology doesn't function properly due to technical or power failure.

The teacher says; "right everybody. This is exactly what I don't want to witness.

The Plasma has gone on strike. The only option we have is to call the technician, but for the time has gone, let's disperse. [Male teacher, school B) [LO007/002]

From these excerpts and episodes, one could say that our teachers' lack of trouble shooting skill in some cases makes the televised EFL instruction ineffective as can easily be understood from the following excerpt.

If you miss the transmission due to technical fault, it is gone, you miss it. The technician should come and help me (male teacher)
[TRJ12/002]

5.4 Discussion

Bearing in mind the nature of the development of the propositions above (as described in chapter 3), the findings of this chapter mainly revolve around the following areas of teachers' managerial roles:

- Involving students in managing their learning
- Encouraging students motivation through intrinsic means.
- Managing resources for students to assist the teaching learning process.

Teachers in this study managed the learning environments in a range of ways, from an emphasis on student autonomy to high levels of teacher direction, from collaborative to individual management and from loose to rigid conceptions of time and space. Teachers, were rarely observed attempting to manage the whole class as one group, but organized students into pairs or small groups and dealt with them at that level. However, the time given to them by the plasma transmission was always a constraint.

With regard to teacher's encouragement of student motivation through intrinsic means, in many classrooms, the teachers don't involve students in classroom management practices and in making decisions such as what to learn and how to learn. This is due to lack of flexibility in the curriculum on which teachers are supposed to strictly follow the guideline of the plasma lesson.

Thus, with regard to learners' intrinsic motivation, the findings suggest that this practice appeared to discourage flexibility and had not the effect of motivating students intrinsically. According to the finding, most of the students are not intrinsically motivated because the plasma lessons don't prepare them for the final national exam of grade 10 they are due to take.

In terms of management practices, the findings suggest that modeling of collaborative practices is likely to enhance knowledge building. However, in spite of the opportunities technology provides for collaboration, this is an area of novelty, with accompanying concerns among teachers about how to manage a free and open flow of ideas in a professional context. Managing technology itself is an area that occupied a great deal of time and intellectual energy for the teachers in this study, and it's in this role that the changes in both the classroom and the social context have an enormous impact. Managing the functioning of the plasma and its peripherals is extremely important in a classroom operating on just in time access. Although some teachers in this study claimed that they were able to deal with plasma problems themselves, they declared that they are still dependent on the technicians or their students.

In terms of their capacity to enhance effective language teaching and learning, the range of teachers' managing behaviors constitute a zone of proximal development which provides guidance for professional learning. Most teachers in this study saw the classroom as their domain of management and made decisions at micro scale with their students though only sometimes.

The previous chapter indicated that the role of the teacher in designing the learning environment is important in establishing a context for learning there by influencing other roles of teachers. The findings of this chapter indicate that the management of people and resources is an important and time consuming activity which also impinges on and interacts with other roles, particularly influencing the time available for the teachers role in mediating student learning which is considered in the following chapter.

It is also the finding of the study that the shortage of time given in the plasma lesson is one of the most notable factors that have impeded the successful integration of the technology.

CHAPTER SIX: MEDIATING STUDENT LEARNING

This chapter focuses on the data that relate to the third role of teachers: Mediating student learning with in the designing and managing roles. The mediating role is that which provides an intermediary in the learner's quest to make sense of human experience. As the review of literature showed, the role includes the aspects shown in figure 6: instructing, demonstrating and coaching, monitoring and assessing, and reflecting on learning

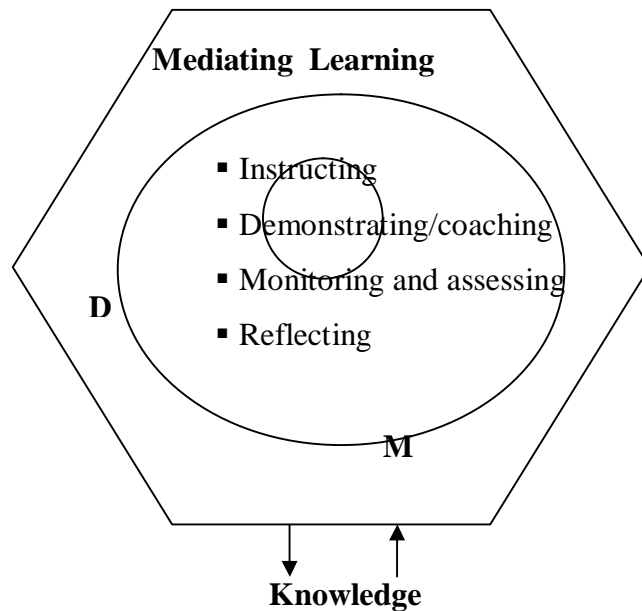


Figure 6.1. Mediating student learning

Laurillard (2002) explains mediation as the process of turning experiential knowledge into formal knowledge. Vygotsky (1962) suggested both adults and peers could mediate an individual's learning, while more recently Denis (1997) suggested that the teacher is but one of the mediators in a vast array of multimedia influencing learning.

Nevertheless, teachers as mediators add value to the learning experience by helping learners to develop their ability to use new knowledge, to change the pattern of their previously acquired knowledge (Goble & Porter, 1997), to make links between existing and new knowledge (Jones et al, 1995, Selinger, 2001), to make personal sense of the ways in which claims about language learning are generated and validated (Diver et al, 1994), and to challenge existing constructions (Freire,1993). Clarification of this role assisted by developments in our understanding or learning

(Marzano, 1992) is important to the future of teaching as a profession (Crook, 1994). Rather than stepping back to allow the technology to take over the role, Moll (1990) suggests that teachers should develop new forms of mediation to take practice of teaching forward. Further, the research indicating that the quality of teaching and learning directly affects student's progress (Hill & Crevola, 1997, Wang et al, 1993) makes it important to find ways in which teachers share their knowledge of mediation and collaborate in the practice.

Mediating includes ways to encourage discovery, guide participation and engage in reciprocal teaching (Brown & Campione 1994), to help students refine their problem solving strategies and ultimately to learn how to learn (Jones et al., 1995). Teachers become keen observers and students of their students; adjusting the level of information and support as required (Jalongo, 1991) and scaffolding the task with structures that will be removed as the learner progresses (Mercer & Fisher, 1998, Wood & Middleton, 1975).

Five propositions about mediating learning in plasma based EFL classroom based on the data and supported by the literature were developed and are presented as headings in the following pages.

6.1 Teachers' assisting students to learn how to learn

The practice of teaching is based on knowing about learning, and teachers using a constructivist approach to assist students to act, observe and reflect in order to evaluate and improve their own learning processes (Brown & Palincsar, 1989). However, both the classroom observations conducted and the conversations held with teachers don't show this being implemented in EFL classes.

I fully understand that students need to become independent. They should be allowed to reflect on their own learning in order to improve their own learning process. However, the limited contact hour I have with them doesn't enable me to do so. You can't do everything with in 40 mts. (Male teacher, School B) [conv17/001].

Where teachers in this study use particular resources in designing the curriculum, they were rarely observed to articulate and discuss them with students in both theoretical and practical terms. Classroom discourses included the individual learning styles and multiple intelligences (Gardner, 1999), and the use of meta cognitive terms and strategies.

6.1.1 Understanding Self

Technology assisted Language classroom (in our case plasma) naturally call for student-centered teachers who can implement student-centered approach (Brown & Palinsar, 1989). In this regard, student-centered teachers always begin with helping students to know and articulate more about themselves (Jones et al, 1995). However, this doesn't seem to happen virtually in all the classrooms observed. The description of this teacher also shows the same:

*I believe that students should be encouraged to continually set themselves questions and goals as well as reflecting on their learning path in relation to a broader context. I believe this has to be done. But I rarely do it. You know why? Because the students are not experienced to such kinds of circumstances. So nobody listens to whatever you say (male teacher, School B)
[conv 12/001]*

6.1.2 Time for Reflection

A pause for reflection is often a starting point for Meta cognition. In all the plasma supported EFL classes, it was rarely observed that teachers used either whole group reflective discussion at the end of the day or individually, in pair or in group for various purposes, either personal and social. The following episode is representative of almost all the teachers' practices throughout the study.

The day's lesson is on writing a letter of complaint. The plasma teacher says:

Students imagine that you are the chairperson of a Kebele environment protection committee. The residents in your area are complaining about the pollution caused by a nearby factory. They have three complaints. The first one is smoke and poisonous fumes from the factory's chimneys. The second is chemical waste and rubbish discharged in to the river. The third is noise and traffic fumes from lorries entering and leaving the factory. (L017, female teacher, School B) [005]

The plasma teacher ordered the students to write a formal letter of complaint from the committee to the manager of the factory. The role of the classroom teacher was to make the necessary supervision and give guidance and help whenever necessary. However, there was no element of reflection in the teacher's mind as the episode below indicates:

Ok students now the lesson is over we will meet tomorrow with another exercise on punctuation (L017female teacher, School B) [005].

This episode represents virtually all the other teachers' practices in that there is no end of session reflection which according to scholars such as (Brown & Palincsar 1989) gives an opportunity for both the students and the teachers as a starting point for metacognition.

Effective use of time is a key pedagogic skill, especially, connected with the skill of reflection-in-action as part of teachers' classroom role. The informal interviews and the lesson observations generated properties pertaining to the extent to which the classroom teachers use their lesson time. For instance, a salient classroom event is that: "The class room teacher tries to turn on the plasma TV. He fails. A student helps. Four minutes are wasted. Still the teacher continues to battle with dodgy line of the channel" (LO 21/006). A Similar problem was at work when a classroom teacher said "myself could never find enough time to read the text displayed on the

plasma screen, let alone my students. The plasma is too fast” (IIN 2/009). Observations of the teachers’ lessons (LO) also indicated that the plasma gives for instance, “four minutes for pupils to read a three page text” (LO 1/001) and “ten seconds for classroom teacher to seat pupils in groups” (LO1/001). Frequently, teachers were also heard to complain “it is too difficult to group students under the plasma presentation due to shortage of time” (DN 007/14). Similarly, the classroom teachers frequently complained that “much of their lesson time is consumed by “frequent power cut”, “switching on and off the plasma”, and “taking attendance and regulating students’ misbehavior” (DN 006/23). During power cut, what the teachers resort usually was *strategy of dictation*, for instance, “on how quotation mark is used” (LO 12/12). These kinds of events and actions curb reflection-in-action.

All these incidents and accounts are not only aspects of the teachers’ inability to re-construct pedagogic skills of using time for effective teaching, but also mean that these teachers practice under a condition of not only *speedy lesson time*, but also *no-control over the time*. Under such condition, they could not pause, reflect-in-action, revise and self-monitor as they practice teaching. Since they have no control over time, the teachers were frequently put under stress. Researchers such as Biggs (1999: 67) found out that where “no time is available to students and teachers for reflection”, they develop “*time stress*” (emphasis is added). This in turn, leads to “surface approaches” to learning teaching such as “an intention only to achieve a minimal pass”, “under engaging”, “high anxiety”, and “genuine inability to understand particular content at a deep level” (ibid:14-15).

This situation correlates fairly well with research findings in some other countries too . As an example., researches conducted in some countries like China & Japan show that though the delivery of courses on line plasma display panels has been technologically advanced, plasma based language instruction still faces many pedagogical challenges. Many plasma classes provide very little venue for two-way interaction. Students tune in to the plasma broadcast (similar to web cast) as if watching a non-interactive on line TV (Carey,1993).

Therefore, it can be inferred that teachers’ lack of control over and use of their lesson time might be one of the causes for their inability to reconstruct reflective skills and practical understanding

on their teaching experiences. The implication for the reflective action is that there is a serious need for teachers to take hold of the flow of classroom practice teaching times.

As a whole while many teachers agreed, as indicated in the pervious chapters, that students should be responsible for their own learning, there were relatively few examples of teachers articulating the process of learning.

6.2 Teachers share of teaching and learning with students

In a community of learners, teachers are co-learners with their students (FDRE, Ministry of Education 2004; FDRE, Ministry of Educations, Quality Assurance Department,2006) while students are at times' each other's teachers (Brown and Campione, 1994) and even teachers of the teachers. In such a community, every one needs to know how to teach and how to learn, to both an expert and novice. Modeling teaching and learning involves thinking aloud to show ways to learning as well as demonstrating skills and processes (Jones et al, 1995 Rusell, 2000), sharing personal meaning and articulating uncertainty, a process of teaching and learning results (Mercer & Fisher, 1998).

6.2.1 Co learning

While teachers in this study held a range of perceptions about the appropriate teacher student relationship, as articulated by this teacher, who used the structural metaphor to delineate the community of practice including teachers and students:

As plasma based language instruction is a new mode of delivery, we are learning its pros and cons together. We have got a framework in which we are going to learn this stuff and there has to be some kind of roles and fences around that. And I think that is the thing that we have developed very well in the school. (female teacher, School Kw) [conv27/009].

In terms of teaching and learning, this view can sound rather laissez-faire, perhaps even devaluing the important role of the teacher, as in this comment:

It is not so much me teaching them, it is just a sharing of information and knowledge as need arises (male, teacher, School A). [IIN5/023]

As Jarvela (1999) found, this new relationship between teachers and students represents a change in attitude to status and behavior for those who have been teaching for many years and were generally trained in transmission models based on differential power like this teacher:

That is all I did, was to instruct I'm not all threatened by not knowing. I used to be really threatened by all that, but I'm not at all now (female teacher, School Kw). [Conv17/012]

Other experienced teachers, who had changed their method of teaching to become co-learners with the students, commented on the shift in power and were enthusiastic about the change:

Being a co learner is just empowering for me. Students love it and it's more natural (male teacher, School A) [Conv 20/020]

I find it really stimulating that the students then become my teacher; they teach me things and that is what I found very beneficial. That relationship between the teacher as the provider of the information and the student as the person who absorbs it, that is completely changed. Every one is just a learner and engaging in some sort of exchange, which I find excellent. I think this is one of the most interesting things I have learned about teaching English using plasma (male teacher, School Kw) [conv 23/017].

6.2.2 Cooperative learning and peer teaching techniques

EFL Teachers need to encourage student learning through peer collaboration and be happy to share the mediator role with students, sometimes through scaffolding techniques (Brown and Campione, 1994). One teacher established a formal cooperative learning technique giving these written instructions:

Once you have completed your writing of the letter individually then your group responsibility comes in. You are to form into three groups, with a representative from each group to coordinate your efforts and report to the other group what you have written (Male teacher, School B). (Lo4/001).

Later he described in conversation how the task they performed would be shared with the whole class through presentations:

There formed many groups and they are all working on writing a letter of complaint. We used cooperative technique roughly, but it worked out in friendship groups. They are working out on a formal letter to a manager of a factory complaining on pollution caused by the factory (Male teacher, School B)[conv 10/001]

He also articulated his reasons for having students teach each other:

I also encourage cross fertilization of ideas, so that these boys who did well.... A way to reinforce what they've learnt is to get them, to teach, say, the girls. They know something and they pass it to some body else; it makes them proud of what they're doing (male teacher school B) [conv 10/001].

Another teacher also reflected that allowing extra time for students is essential for effective cooperative learning and peer teaching techniques. However, shortage of time is becoming a real challenge, in this regard highly affecting the quality of the mediation:

I want always to make my students learn the language through cooperation. However, when the plasma teacher teaches she is very fast, and the students couldn't handle it.....they couldn't finish in the time given even to do it by themselves, let alone to discuss in group. This is the major problem (female teacher) [conv 12/005].

These comments, in fact, reflect the benefits of collaboration to the group, as indicated by Slavin (1990), to individual self esteem (Cherednichenko et al., 2001).

However, collaboration between students was not universal in this study. One teacher reflected on the students' expectations of teacher direction, in spite of his own beliefs:

I don't think students have enough of an idea of recognizing the impact that other students can have on their own learning. They see the classroom teacher as the provider of the classroom activities and they don't listen as quickly as they could to other students. They don't use other students to get feedback on their own ideas, or exchange ideas. Over the whole school, it's very teacher driven. (male teacher, School B) [conv 22/007].

Another disagreed with the practice of students mentoring or teaching others, and explained why she found this approach problematic on plasma supported EFL, classrooms:

It devalues the classroom teacher's role and it's not right for the students. I mean it's better to empower the classroom teacher and manage the teaching learning process by himself/ herself. I have heard a lot of people say proudly how can students be expected to be proficient in the language learning with plasma? I share their ideas for many of the students need directly my assistance (female teacher, School Ko). [conv 22/018].

From the discussions presented so far, it could be concluded that teachers have differing opinion on implementing collaborative learning among learners depending on their beliefs and stances. As the unstructured and complete observations gave clues to the aspects of teachers roles in facilitating collaborative learning, one serious reason as most of them also claim, is their engagement on carrying out disconnected and fragmented teaching acts. For instance, frequently observed actions were *reading out from Student's Book to the students*, for example, on “how Defining relative clauses differ from Non defining relative clauses” (LO004/9), and *telling* students to “open appropriate pages on the textbook following orders from the TV-Teacher” (LO005/10).

Sometimes, observation showed the teachers' actions conflicted with that of the TV-Teacher. For instance in an observation “teacher tries to justify how the adjectives of quantity: using ‘a few’ and ‘few’, ‘little’ and ‘a little’ differ each other. However, TV-teacher introduces a different topic lesson—*Adjectives of quality*” (LO0011/7). Still, in another observation some interesting discussions are stopped. For instance, in an incident observed “..... teacher goes on asking what would you do if you found a bottle containing things that look like sweet ?Would you eat one to see what it was like ? Leave the bottle where it is? Pick it up and take it to an adult?... hands up. A pupil responds ‘Eat one’. Another student responds ‘Take it to an adult’...Nice and hot participation. Meanwhile plasma lesson appears on muted screen. Classroom teacher adds volume. The discussion stopped. Both the teacher and his students begin watching TV. The TV-Teacher, she, takes over and begins lesson-casting” (LO001/20).

From these observations, it could be concluded that the EFL teachers' classroom teaching skills are characteristic of a set of *disconnected* and *fragmented classroom acts*. This might be partly implicated in the teachers' inability to develop teaching/pedagogic skills on performing their roles properly, such as facilitating collaborative learning, because under such circumstances, *attentive thinking* and, hence, reflection-in-action can be impeded. This is possible because, according to Schön (1984: 7), under such conditions, experience becomes “mere information divorced from action” since “operational attention”, or, in his words, “a readiness to translate what we [observe] into action”, is obstructed.

6.3 Teacher's mediating role in creating connection between people.

The concept of the classroom as a society or connected community underpins social constructivism, and Vygotsky (1962) emphasized the importance of learning through everyday activities in a holistic and situated way, rather than focusing on sets of disconnected skills. Teachers working in technology based EFL classrooms need to play a mediating role if at all successful language learning is to be witnessed (Wenger, 1998). This notion of learning has direct implication in language classrooms in that language learning requires social connectedness for it inherently requires the mastery of the four skills. This according to Harmer (1991), Nunan (1991), Rivers (1987) calls for collaborative engagement between and among learners. In this study too, one of the recurrent themes that have prominently emerged is the idea of teachers' roles in creating social connectedness as discussed below.

6.3.1 Social connectedness

Teachers in the school under study valued social connectedness and saw that they had a role to play in students' feelings of belonging, as those teachers expressed:

I think that is also important as well, life shouldn't, school, shouldn't just be about books, it is how you interact with other people in your class, peers (male teacher, School B) [conv 09/004].

I mean we all live busy lives, but you may be their one stable adult in their life, so it's just taking time. It might be five minutes, it might be two minutes just to have those incidental conversations, making it personal, letting them know that you actually know about them (female teacher, School A). [conv16/022].

Wenger (1998) argues that new comers and old timers should be engaged in shared practices, not only for purposes of transmitting cultural heritage, but also for the mutual negotiation of identity.

While few teachers raised this, one secondary teacher spoke of the mediating role of the teacher

working with students to make sense of technology in a generational encounter.

Teachers can offer the opportunity to create a space in which students can discuss issues around technology. They are person who is able to mediate discussion, they are a person who is able to talk about ideas, they are able to talk with students about the future and the past so they are able to make use of the plasma technology in context. They are able to work with students about the best way to use and manage the technology and also how to deal with the new ideas (male teacher, School Ko) [conv 10/017].

6.4 Teachers' Scaffolding of student's learning individually and collectively

Scaffolding learning implies that there is a distance between what exists and what one is capable of. In Vygotskys terms, the Zone of proximal development (ZPD), teachers work with students to set expectations of capability, creating the ZPD and then work together to meet those expectations. This presents a challenge for teachers in terms of knowing their individual students, leading Mercer and Fisher (1998) to prefer the notion of a community of inquiry, where by cooperative learning groups encourage generative learning among individuals. In this regard an attempt has been made, in this study, to identify the roles which EFL teachers perform by way of assisting their students' individual learning needs as is presented below.

6.4.1 Scaffolding individuals' learning

Those teachers in this study who knew their students well were able to provide individualized scaffolding to varying levels, as required. One teacher described how he took the lead from students who knew their learning needs:

A lot of them know the areas they need to develop. They know the areas they want to learn more in. Not just need to want to so it's giving them that freedom to give you direction on where they want the guidance, where they want the help and what areas they want to deal with themselves (male teacher, School A) [conv 006/020].

While explaining her view of scaffolding, his colleague revealed her feeling of inadequacy in scaffolding with technology:

It's actually creating opportunities for that teaching moment. You happen to be standing right near them, so you see where something could go. It is being able to see where the next step is but I don't feel I've got it with plasma (female teacher, School B) [conv12/006].

Through scaffolding, teachers build student confidence to take risks, thus enhancing the dimension of imagination (Wenger, 1998) as this one suggested:

I think just little things like encouraging them to take risks: "Don't worry about getting things wrong. Have a go don't be afraid" (male teacher, School B) [IIN011/003].

They also provided a range of ways for students to express themselves while learning English with Plasma:

I try to spend a lot of time with my students just talking about how to cooperate and solve a given problem. In so doing, I know the students can unconsciously use the language. So group interaction is one means of sharing knowledge. However, in the present circumstance, it is unlikely for every thing is at the hand of the plasma teacher. (Female teacher, School K) [IIN 12/011].

Classroom observations also indicated that out of the forty minutes allocated for English lesson a day, for around thirty minutes, pupils are audience to the TV-teacher, except the first five and the last five minutes, where the classroom teachers introduce and summarize the day's lesson. Although the TV lessons have spaces for learners to do tasks in groups, pairs and individually, there is inadequate opportunity for the EFL pupils and teachers to play the role of communicators, interlocutors, arguers and speakers in classrooms in the target language

(English) due mainly to “shortage of effective use of time” (DN009/5). A salient and recurrent event was described as follows during lesson observations:

TV-teacher says ‘Write the answers in your exercise books.’ Then a 2-minute countdown began. TV-screen displays ‘Page 11 Exercise B 1.3 Adverbs of frequency. Students could not do the tasks because some couldn’t understand and some have no copies of Student Book. The countdown completes. TV teacher starts telling the right answers to what adverbs of frequency are by giving examples using sometimes, often, never etc. Students got confused. Classroom teacher tries to justify why these adverbs are called adverbs of frequencies but TV-teacher goes on talking. Classroom teacher finds it difficult whether he should go on justifying or whether he should listen. He stopped and began watching (LO006/8).

Brook (2006) and Dereje (2009) and Jeylan (2006) also observed similar phenomenon. What this means, in the classroom teachers’ views, is that the flow of lessons is not controlled by the classroom teacher. This role of EFL pupils is similar to what Williams and Burden (1997: 58) call learners-as-spectacles view. By this view they mean where EFL learners are “filled with knowledge [through] instruction and information-giving” (ibid). Similarly, Freire (1984) calls such misconception as *banking model*, where learners are like bank accounts into which money (knowledge) is deposited and drawn (tested) upon.

It is possible that the situated social construction of EFL learners can be implicated, indirectly or directly, in the teachers’ difficulties of re-constructing the skills of English language, teaching and inquiring into their practices because in order for them to play the role of scaffolding (inquirer into own practices and abilities besides practicing their facilitation role), there has to be relative or corresponding changes to the role of the EFL learners. This condition makes teachers construct their EFL learners as **absorbers** of the inputs transmitted. But, there is indication that there is some awareness on the classroom teachers’ part that the condition of the pupils is inadequate and inappropriate for learning English. For instance, on their reason-giving informal

interviews, the classroom teachers argued that they labeled the pupils, metaphorically, *spectator* to mean that the pupils are reduced viewers—in contrast to learners--of satellite TV transmission of lessons.

6.4.2 Timely interventions

Mercer and Fisher (1998) suggest that the timing of mediation is important. In many observations, teachers noticed certain ambiguities, on students and initiated scaffolding interventions with individual students. In one classroom, the teacher took an expert role and explained the way the student should do the task with out dialogue.



Figure 6.2 Scaffolding intervention

The interaction unfolded as follows:

See here first think over the subject. Then make an outline- for eg the topic you are expected to write a paragraph on is, learning a new sport; gather as ample information as possible. Then write your first draft based on the outline. That is what the plasma teacher is telling you (male teacher school B) (L007/001).

The student wrote the topic and began contemplating as to what ideas he could write to further expand the subject and the teacher continued with the instructions.

Don't worry, write any idea you feel is appropriate. Just set it up at the moment and see if there is any thing in your outline you don't like about it, Ok? (L007/001).

In this case the writing task presenting a report on learning a new sport- appeared to be paramount for both the teacher and the student; and the plasma lessons were highly facilitated by the classroom teacher. The classroom teacher in this case instructed the student regarding the way the task is to be performed. Hence, little time was spent on interaction regarding the mechanics of the writing task, in order to focus on the content. One conclusion that can be drawn from these observations is that where there is proximity between teacher and student, mediation can occur in a timely manner even if the interactions themselves are brief.

6.4.3 Expectations of teachers in terms of teaching English using plasma

While research indicates that teaching quality is enhanced where teachers set high expectations (Rusell, 2000), some teachers had difficulty clarifying appropriate expectations in terms of teaching English using plasma/Satellite TV).

Though I believe that plasma based lessons have great role for shaping and developing the students' ability, my expectation on its outcome is lesser. This is because, if there a brake up of electricity, you will miss the transmission The second is the plasma teacher fails to repeat the lesson like the classroom teacher. (male teacher, School B) [conv 9/001]

This idea is also shared by other teachers like this one:

There is nothing which the mere transmission of the English lessons on the Plasma screen can do unless the classroom teacher is highly empowered. So with in the very limited role I have now, I don't expect that the plasma lesson on its own creates miracle (male teacher, School Kw) [conv 21/008].

An element of any teacher's or practitioner's practices is his/her emotion as influenced by the conditions under which he/she practices. The participant EFL teachers' expectations and feelings were identified with the data collection tools. In an informal interview, for instance, a participant teacher described his feelings saying "I was happy that the plasma was gone due to power cut. It only makes me and my students disorganized and too tense" (DN 007/10). This comment was supported by observations. For instance, an event was such that "TV-Teacher says 'She lives in Gondar'. Students laugh loudly because they recognized the 'She' who appeared on the screen was non Ethiopian, perhaps South African, and, hence, classroom teacher gets *disappointed* at students'" loud laugh. My presence as a participant observer made him far more anxious" (LO006/6). Such *inauthentic situations* are common in the teaching –learning situations. To add more incidents, "teacher turns on the TV.... 'Discuss the meaning of the new words' is displayed. List of words appear.....students shout 'We did this last week', and teacher feels upset" (LO 018/12).

All these suggest that the EFL teachers practiced teaching under enormously unpredictable and decontextualized context that could generate diminishment of their mediation role. For instance, in a post-lesson observation reflective discussion, a teacher said he felt "If I don't get my expectations fulfilled, what am I doing here?" He meant "on the one hand, he wanted to practice some new ways of teaching, on the other it [the way he was practicing to teach] was simply the way he was taught when he was a secondary student few years back" (conv 02/007). Another teacher expressed what all his colleagues agreed: "for me, to be a full [effective] teacher is to teach like the plasma teacher" (conv 01/006).

All these are as much properties of inadequate inquiry skills as inadequate conditions for developing these skills—the skills to question traditional assumptions and practices and re-construct new understandings so that teachers can perform their roles effectively. The teacher education reform policy and strategy documents contend that effective practical learning involves, intrinsically, doing and understanding anew. However, the data obtained implies that the plasma serves more as socialization rather than creativity and re-construction of new understanding and skills. This can be one of the factors that generated the problem of the

teachers' difficulty to develop inquiry skills in/on their mediation role –one of the objects of this study.

6.4.4. Questioning

Many teachers were observed using open ended questioning techniques to encourage students to think about problems as they arose, or given in the tasks. One teacher from school A described her process of dialogue:

A lot of questioning, it's not statement oriented. You're questioning the children so you pose a question and you're getting them to give you an answer to that open ended questions and open ended thoughts. Just getting them to think beyond that (male teacher, School A) [conv18/023].

However, another teacher lamented:

If students have a question, I don't always answer it. I say, "Why don't you go away and investigate and see if you can find the answer?" Quite a lot of students say, "I don't do it any more if you won't tell me (female teacher, school K) [conv16/012].

From the afore cited quotations we can conclude that the levels of teachers' expectations, on how technologically supported lessons could bring the desirable outcome or not, needs to be given more attention as it has quite a paramount significance in any teaching learning process including in plasma supported EFL classrooms.

6.5 Teachers and learners talk together to increase learning in plasma supported EFL classrooms

Talk plays a major part in scaffolding learning, and the introduction of technology supported instructions has led some to suggest that the very technology can take this role, or can mediate the teacher student or peer – peer – dialogue, Leask and Pachler (2001) argue that learning with computers and other related technologies (in our case plasma) is more likely to occur through

interactions between classrooms teachers and students (rather than students and the plasma screen, and the plasma teacher) whether they be in the form of dialogue, reciprocal teaching strategies Palincsar (1986);Socratic questioning (Burbles ,1993) or Conversation Cherednichenko et al (2001), Laurillard, (2002). This involves social competence for both teachers and students in learning to listen and negotiate, engaging in exploratory talk and express ideas, persistence in problem solving and generosity to acknowledge the good ideas of others (Renshaw 2002).

6.5.1 Dialogue and Conversation

Teachers in this study were rarely seen at the front of the class, and rarely talking to the whole group at once, except for initial instructions at the beginning of a session. They mostly engaged in face to face dialogue and conversation with small groups or individual students. Treating the plasma lessons as the focus of the discussion, numerous interactions took place in the class as teachers moved around classrooms, stopping to talk with students.

In one observation of plasma supported English lesson in school B (L0 29/001), a student and the teacher engaged in a learning conversation (Laurillard, 2002) regarding task content. The task given by the plasma teacher was punctuation which later was discussed by the classroom teacher (001) as to how the students could do it. The punctuation exercise is in unit 4 page 89.

The title of the text is the Aswan High Dam – a mixed blessing. A student had finished punctuating. The teacher who was informed this by the student came closer, and asked him to explain the meaning of the title the Aswan High Dam, a mixed blessing, which he attempted. Then, he asked him as to why he capitalized ‘n’ in Nile as ‘Nile’ which he said it is a name of a specific river. However, the student didn’t replace in ‘the’, at the beginning of the paragraph, with its capital letter ‘T’. The teacher suggested that the student could modify it in that way telling him that any word in a paragraph when it appears at the beginning of a paragraph or after a full stop, its starting alphabet should be in capital letter. As he made the changes, on similar subjects, discussing with his group mates, the teacher came back again and gave him feedback saying “what about nasser?” as this is also a name of a specific dam. He again modified this and

wrote nasser as 'Nasser'. In this dialogue, while the teacher and student negotiated their ideas/ views of the very task given by the plasma teacher, the classroom teacher took an active role in guiding the student's learning and even modifying the learner's perceptions.

In another example, the focus of the conversation the classroom teacher and the students in a plasma supported English classroom was also content. A female student in school Kw initiated a dialogue by asking teacher (008) a question about 'official letters' as part of her writing task. The teacher repeated once again what the plasma teacher had already defined by saying "there are letters which we sometimes need to write to businesses, government departments and other organizations: The student said," Now I know what that means." The teacher said "Do you need to put it in your own words? Do you know the lay out of a formal letter?" As they read the definition of formal letters (or business letters) together, the teacher suggested "may be that is not more significant, focus rather on writing the lay out of formal letter on page 116. This is what the plasma teacher suggested to do (Male teacher, school K) [LO 007/008].

6.6 Discussion

In terms of the mediating role of teachers in student learning, the findings of this chapter indicate that it is likely that in order to enhance students learning:

- teachers help students how to learn
- teachers share teaching and learning with student
- teachers build on students prior experience
- teacher facilitate connections between people
- teachers scaffold student learning individually and collectively
- teachers and learners talk together to increase learning.

Many of the observed EFL classrooms operate as communities of learners in which teachers are important as experts in the process by which knowledge of the language is created and the skills are developed. In reality they are both expert and novice, confident that they can articulate processes and goals, model teaching and learning and work as partners with students, but aware of their lack of expertise in technical skills and in practical trouble shooting of the plasma when

something goes wrong. Hence the first findings (6.1,6.2, 6.3) are focused on expertise and power relations in the classroom culture. Many teachers defined their role as experienced lead learners in the classroom community. This represents a shift in power relation and could be one of the important effects of the technology on the role of the teacher, as it raises awareness that change is possible, possibly by creating the conditions for change rather than the change itself. Although teachers expressed their knowledge of teaching and learning privately, many of the teachers rarely tended to discuss teaching and learning with their students and rarely incorporated action and reflection in to their classroom practice. This, as they emphasis, is due to shortage of time given for the classroom teacher. Many teachers in this study saw learning how to learn as an aspect of students becoming more autonomous learners.

In conjunction with the first proposition (teachers help of their students how to learn) which is essentially a stance, the second and third refer to processes where by teachers share teaching and learning with students. Although not all the teachers in this study were comfortable with their sometimes novice status, they were generally able to reveal this to students with out feeling they were losing face. While teachers and students do not (and, one might argue, shouldn't) have equal responsibility for this in the classroom, some teachers appeared to have relinquished any claim to expertise with regard to technology displaying marginality (moving out of the community) rather than peripherally (becoming more central) (Wenger, 1998), which is of concern in terms of their continuing role both as teachers and learners. In the social constructivist classroom, collaboration among learners is important, but since students are apprentices (not yet experts) in the processes of learning, it remains the teachers' responsibility to be a meta mediator. In this study the amount of time teachers spent on this was small in comparison to the time spent on managing people and resources.

Mediation builds on learners' prior experience, and the findings show that teachers generally recognize the value of building on students' prior experience and all the diversity of culture language, gender, ability and resources they bring to the classroom. To work with in individual zones of proximal development, it is important that they know their students well, and teachers in this study generally addressed this through informal means such as observation and conversation. While some teachers appeared to know their students well, others specially those

with fragmented contact, found it quite difficult, and in some cases resorted to addressing collective zones of proximal development.

This chapter has presented the findings regarding teachers' role in mediating student learning, which, in conjunction with designing the learning environment (chapter 4) and managing people and resources (chapter 5) forms a triad of EFL teachers' classroom roles revealed by this study. In the next chapter, another important classroom role which influences all- the three improving practice- will be discussed.

CHAPTER SEVEN: EFL TEACHERS' ROLES IN IMPROVING PRACTICE

The three previous chapters have presented findings in relation to three roles of teachers designing the learning environment, managing people and resources and mediating student learning. As was described in the conceptual model in chapter 2(see also figure 7.1 below) , this final chapter presents findings regarding EFL teachers' role in improving their practice.

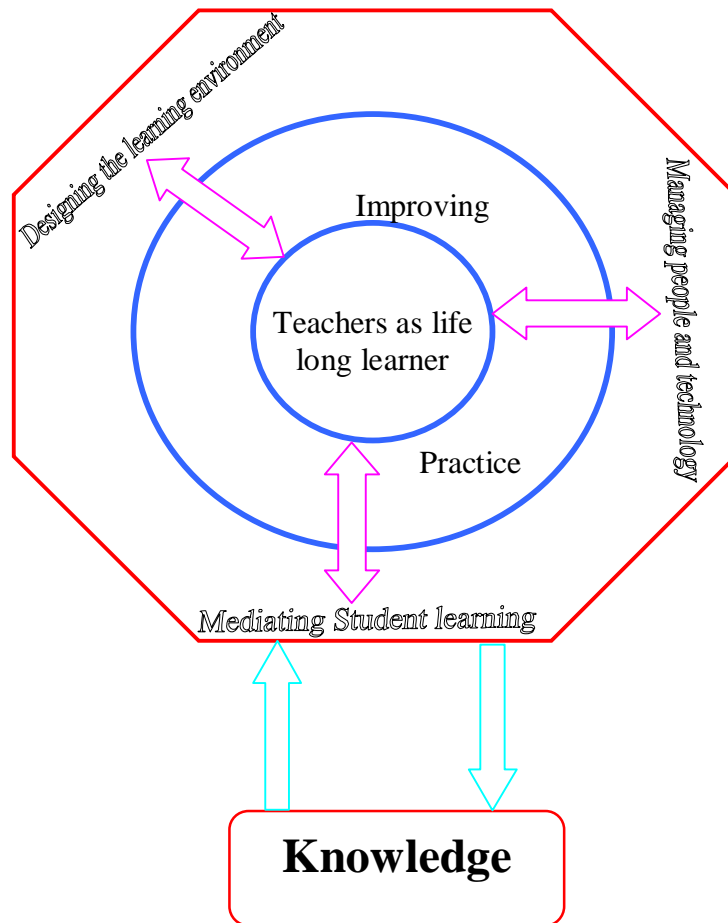


Figure 7.1 Improving practice

In this role, as a whole, we see how EFL teachers in technology supported classrooms act on the society of the classroom and the school to effect change, while themselves modeling life long learning. In a broader sense the purpose of the teacher learning is to improve practice, and the literature in chapter 2 considered a social constructivist approach to teacher learning, which implies that teachers value and build on each other's prior experience and their multiple perspectives when talking about their practice (Ball & Cohen, 1999). If teacher professional development is to be experiential, grounded in inquiry, reflection and experimentation, collaborative, sustained and on going, and connected to their work, as Darling Hammond and Mc Laughlin (1996) argue, it is likely to commence in the work place. Professional learning is, therefore, not separated from professional practice: rather, professional learning emanates from and is part of professional practice.

The findings of the previous chapter have developed the concept of a community of practice based in the classroom, as teachers and students work together on the task of developing four of the macro skills of the English language. In this chapter the concept is broadened so that in order to effectively perform with the plasma supported English lessons, all teachers learn and deepen their understanding through the practice of constructing professional knowledge. Within a school there are expert and novice teachers as well as expert and novice students. In this respect, to become full participants, teachers and students must engage with the technologies of everyday practice of constructing professional knowledge and connect with their history, as well as participating in the social relations, production processes and other activities of the community (Lave & Wenger, 1994). In this way they move from the periphery to the center of the community –Cochran-smith and Lytle (2001) suggest that teacher's inquiry should also have a social purpose connecting local knowledge to larger social, cultural and political issues. In a culture of teaching and learning, teachers (and their students) can contribute to shaping the new roles of the teacher, the organization of schooling and the future of the profession. These could prove to be major tasks with profound impacts on society.

In the three previous chapters the detailed areas of EFL teacher's classroom practice that provide the content for the teacher inquiry designing, managing and mediating were described. In this

chapter nine propositions about how EFL teachers in technological settings improve their practice with in their work place have been developed from the data.

The nature of relationship, or interaction and communication between and among school teachers themselves and their relation with the schools' administration with regard to professional learning emerged mainly from the unobtrusive observation data and conversation. This shows how data pertaining to interpersonal relationship was difficult to obtain in the context of this study. Formal ways of generating such data was found not helpful.

7.1 Teachers' and school administrators' encouragement for each other in new ways of working and learning

If the qualities of flexibility, networking and activity are important for students, they are also important for teachers, according to Hargreaves (1999). In the context of EFL classrooms using the plasma technology, teachers need to be flexible and opportunistic to develop new ways of working and this can be enhanced or thwarted by school culture and leadership (Hord, 1997; O'Rourke, 2002). Where principals and teachers look out for each other, it seems they are able to take on new ways.

7.1.1. Teachers' and School Administrators' Relationship

In one of the unobtrusive observations, one teacher from school B was heard describe the nature of relationship that existed in the school site:

...that there are three categories: teachers, students and school administrators. There is high insulation when it comes to communication. School directors have no communication whatsoever with school teachers. The former consider their role as supervisory, and they are there only to show their power. No time have I observed when the three parties sat together to discuss matters on how to improve the teachers' professional practice. There is annual school teacher and the school administration staff consultative workshop, but it is more about managerial issues rather than about how critical reflective practice is to be promoted (DN 009/002).

Quite similarly, one of the unintended themes that the researcher's unobtrusive observation generated was that the English teachers of the school were labeled, by the school administrators, as '*ferenjochu*', the Amharic equivalent of "those English speakers". These show the prevalence of more alienation than collaborative climate. Furthermore, the teachers were heard saying they "teach for 33 hrs per week, and, they have no time to sharing experience due to overload" (DN 001/21). A teacher, according to data from the unobtrusive observations, is accountable to, on average, teach 50-60 students per class. They are expected to mark papers of 300-350 students at least five times in a semester. This implies that teachers spend most of their time working on their daily routines, which results in shortage of time to share experience. " (DN 001/22).

The above evidence might compel us to believe that the teachers practice teaching under the condition of relationship which can be interpreted as monological, non-trustful and non-collaborative (Brookfield 1995: 247-251). Under such a supervisory relationship, re-constructive learning is impeded. This kind of relationship directly speaks to the researchers' experientially observed problem of teachers' inability to reflect and reconstruct new understandings and skills. Reason (2002) argues that effective learning from practice requires practitioners' collaborative research, inquiry and exploration. Improving practice, thus, should be considered as where knowledge is created, subjected to criticism, counter criticism and refinement.

7.1.2 New ideas or New teachers?

Since knowledge building requires new ideas and connections between ideas to be made, it seems that in knowledge building schools teachers should be open to, and excited by, new ideas and supported by school leaders. Several participants in this study spoke of long term and broad scale changes in the arrangements for schooling, and some particularly principals, claim that they encouraged their school communities to develop a vision for the future. One principal suggested:

I guess when there is a change from what is done traditionally; there is always the inertia effect. People want to maintain the stats quo. The same was true with plasma supported lesson. First both teachers and students had their own resistance, but now things are changing. To this effect the school leaders must be change agents with strong vision
(male school principal, School B)

If we had a principal, who came in, who had knowledge of learning technologies, and had the ideas and the vision of down the track and the way to achieve these, then we would be a lot better off. (female teacher, school B). [conv10/005].

However, the informal discussions I held with some teachers have revealed that there were no support teachers received by way of either introducing them with the strategies of accomplishing their roles effectively, or facilitating the ground for experience sharing. As one teacher from school Ko put it “What we are bored is the rhetoric of so called school leaders who simply verbalize what they do not do for their propaganda consumption.”(DN 27/15).

In order to sell new ideas like these, principals considered teachers’ individual differences, just as teachers use their knowledge of individual students to help address learning needs, as this principal reflected.

Well everybody copes differently. I guess, and some people take longer than others to put their foot in the water. (male school principal) [School Ko].

Other participants referred to teacher attitudes to new ideas, indirectly raising the issues of the ageing teaching service and the effect of personality and openness to learning and hinted the potential for work place learning to maintain the status. One experienced teacher raised concerns about age, or more specifically, lack of other experience:

I think as well the teaching age group has a bit to do with it people get stuck, they have been in the school for twenty years twenty five years or whatever, and they tend to think this is the only way to do it (male teacher, School Ko). [conv 009/017]

Another, a relatively younger teacher, also expressed the need for exposure to new ideas:

I guess all the research in the end says the difference between classrooms is the teacher. But if the teacher is not exposed to different ways of thinking, new ideas and new understanding, probably continue along the track that they have always gone on (female teacher, School Kw). [conv 021/012].

As data obtained through informal interviews have indicated, there are remarkable ideological differences between teachers of the old and the young generation in the way they see collaborative learning. As an instance, one relatively aged teacher in school B with 17 years of teaching experience stated that ‘the teacher decides which knowledge is to be taught and the students accept and learn that knowledge. As a teacher, I do have great reservation on the use of plasma for teaching purpose, for my classroom roles have been confiscated by the plasma teacher. So since every thing is taught by the plasma teacher, where is the value of learning from my colleagues?’(IIN22/007). Another young female teacher with only 2 years of experience in teaching says ‘Even though plasma based instruction has dwindled my classroom roles, I feel that it is high time for us to share our experience and make our presence in the classrooms felt.’(IIN 16/24). As can be understood from the two excerpts, schools with teachers of varied age ladders may find it somehow difficult to implement work place professional improvement by narrowing the gaps of such polarized ideas

7.1.3 Sources of inspiration and innovation

There are numerous ways the new ideas can be found, from professional reading and visiting other schools, to working with challenging experts. A great deal of research reports on the importance of school leader in promoting new ways of working (Hord, 1997; Lieithwood et al, 1999). As plasma based instruction is, relatively, a new instructional practice in EFL classrooms, the influence of strong leadership is of vital importance too. One teacher explained how strong leadership influences major cultural changes:

Committed leadership has its own great role in the effectiveness of any newly introduced pedagogical tool such as plasma. For example, teachers should have time to discuss ways of better performing their roles, and share their experiences. Therefore, committed school leadership would play a facilitation role (male teacher, school A) [conv 20/025].

With in an on going professional development, strong relationship between teachers of different expertise level in sharing knowledge is quite essential. A secondary school worked in closer collaboration with the experts of plasma supported English lessons of the ICT Department of the

Ministry of Education to consider ways of effectively utilizing plasma based EFL instructions, as the principal explained:

Every possible means has to be devised by the school management in capacitating the school's teachers; specially when there are innovations, such as plasma display panels so that the teachers can develop professionally and assist the learning of their students. To this effect, we have arranged some mini workshops on plasma based instructions as a whole with the view of using the forum as a capacity building one (secondary school A's principal).

One English teacher in the school reflected on the importance of the activity and the involvement of academics in supporting teachers through a change process.

For our staff it was a real confirmation of yes. This is what we are doing, and we're challenging those limits. Just to give them that positive reinforcement because it was a huge shift to let go and move into that different realm of teaching and learning language. These students are going into a very different world and we are equipping them for what's ahead of them. (female teacher, school A) [conv11/022].

Even though such trends are mushrooming to a limited degree, the schools' administrations nor have the teachers themselves been observed working toward collaborative knowledge building with all the necessary commitment.

As an instance, one of the mechanisms that enable teachers to enact their teaching role of improving their practice according to Hord (1997), Lieithwood et al (1999) is through visiting other schools and crossing into other communities of practice, and this occurred infrequently among teachers in this study:

I personally haven't had such experience. I feel that was beneficial if given. (female teacher, school B). [conv 003/006].

EFL teachers clearly espoused the notion that they are learners, and claimed that they learn from students and other teachers, but some did not see themselves as responsible for developing others in a symbiotic relationship. One teacher expressed her view:

I think you have to look at yourself the same way you look at your students trying to become an independent learner, so you have to develop yourself (female teacher school B) [conv 002/006].

This individualism is not surprising, given the culture of schools and system requirement for career progression. However, knowledge and skill building approach would suggest that teachers should move from independence into interdependence, from developing and being developed by others (Jones et al; 1995; Venezky & Davis, 2001). One principal commented on this occurring in his school to some degree:

To some degree they bring people along and there is a lot of teamwork. To make this kind of stuff work, you can't be little island in your classroom with your door shut like we used to be (secondary school Ko's principal).

The discussions above clearly indicate that, in our schools, there are clear discrepancies between espoused theories and theories in use. The reason for this can be implicated to various issues, but lack of commitment from both teachers and school administrators could be the most prominent cause whose prime causes need further investigation.

7.2 Teachers' framing of personal and social goals for their learning

Setting goals for professional learning clarifies purpose, and just as students are motivated by ownership of their learning, so too are teachers (Beattie, 1995). One of the basic roles which teachers need to play is framing the goals and means of their professional development (Clark 2001), linking them to school and societal goals (Cochran-Smith, Lytle, 2001) so that they would develop a sense of purpose that motivates them.

A sense of purpose motivates EFL teachers to enact their roles properly in a technology based classrooms. Teacher's learning includes an awareness of their beliefs about technology capability and some knowledge of its underlying conceptual framework (Loveless et. al 2001). This knowledge helps in setting and achieving goals by performing their classroom roles adequately. Like their students, teachers benefit from learning when the need arises, using the resources at hand (Jamieson et. al, 2000). And most teachers articulated a need for just- in -time learning to match their personal purposes. This, however, doesn't seem to be a real phenomenon. These two teachers were typical in their comments:

I usually feel that if given training on how to deal with plasma based lessons and perform my roles better, that would be some thing good. However, so far in this area I haven't received any training except in some language skill areas like speaking, listening etc. As plasma based lesson is a bit new introduction, unless you are offered practice, you tend to do it unscientifically and that is dangerous (male teacher school Kw) [conv 13/008].

I haven't been given any training as to how I could perform my role and make my students beneficiaries of the plasma lessons. Do you know what I mean? Just talking of plasma, I don't know how it's going to apply to me. So I'm not interested in plasma lessons, unless I have been brainwashed as to its contributions in language learning (female teacher, school Kw). [conv 12/009].

Because of this need for purpose, not all work place professional development is seen to be useful, especially if it is top down (Hargreaves & Fullan, 1996) or outside in Hoban (1997), presenting a given product before the participants have established a purpose in their own minds. Many of the participant teachers in this study referred to the introduction of plasma based

As we hadn't any sort of awareness about plasma supported lessons, as to their purposes and merits, many of us at the beginning were shocked about it, including our students (female teacher, school Kw) [conv 15/008].

English lessons as basically good. However, they are critical mainly on lack of sense of purpose and awareness creation for they were not set up before like this one:

From this afore cited discussions, one can possibly say that in order for teachers to accomplish their classroom roles effectively, the need to raise their awareness of their beliefs about the rationale behind the curtain to introduce plasma based instruction is quite significant. This knowledge, as Loveless et. al (2001) argue, helps teachers in setting and achieving their goals by performing their roles to a significant degree.

7.3 EFL Teachers' making time for sustained professional learning based in the work place.

As Day (1999) argues time and opportunity are key factors, but scarce resources, and in teacher development new ways of looking for these are required. When learning is situated in the working place, it is more likely to address substantive concerns as well, such as learning to integrate technology in to their classrooms to meet a current purpose. Although the teacher's work place, the classroom, is a suitable place to start (Wenglinsky, 2000), a broader conception of the work place (incorporating school and community, for example) is required to enhance knowledge building in general and language learning in particular.

7.3.1 Life long learning

The need for on going professional learning was accepted by all in this study, and was an issue that principals were particularly concerned to assess across their schools, as this one expressed.

I think the trouble with technology is, it's a continuous never- ending thing. It is going to be year after year and I think you're going to have to get used to that. The teachers have to keep going back learning more all the time. How do you do this is an issue (female teacher school A). [conv /15/024].

Two other teachers focused on situated, lifelong learning opportunities for teachers starting with the classroom but looking outward:

I believe if you want teachers to work with students and create life long learners, they need to be encouraged to be life long learners themselves. You've got to give them the opportunity to see beyond their own classroom and the daily work grind, and give them the time (male teacher, school A) [conv 12/023].

It has to be authentic, which is why it has to be placed in classrooms. It has to be on about what we're on about. It might be a refocusing about how a teacher evaluates and plans their daily classroom practice enhancing that not adding to it (male teacher. School B). [conv 19/003].

While the views of the teachers on life long learning basically reflects its positive contribution for improving practice, the data captured through teachers' accounts and descriptions pertaining to a set of related acts, or activities, that teachers were involved in, reveal how these assumptions become intangible on the ground. For instance, in an informal interview moment, one of the teachers described her class room activities, which others also agreed resonated with theirs too. The reason-giving account goes "My lesson was on simple past...first I introduced this, and then told them that it is used to express past action...that -ed...then plasma began.... Finally, started summarization of the plasma lesson... for evaluation I asked to tell what simple past mean" (IIN 010/4). The teachers' lesson plans also consistently indicated that their activities, as written under Teacher Activity column, are divided consistently into three strategies: '*pre-plasma*, where they introduce the lesson, *while plasma*, where they tell and check students to follow the plasma, and *post-plasma*, where they summarize the TV-lesson'. The director of school B, who is also an English teacher by profession, discusses the nature of activities that most school teachers to whom English teachers are not an exception, in general, are involved in, as follows:

Our school teachers' routines involve reading schedule on the notice board, waiting for bell to ring, entering classroom, switching on satellite TV lesson, telling the day's lesson point from Teacher's Guide [can proceed the latter sometimes], monitoring if students are listening and watching the screen teacher, switching off TV-set when lesson ends, and summarizing what TV-teacher presented before leaving for another 40-minute similar activities....

All this evidence might compel us to conclude that the nature of activities that these particular teachers took part is, on the most part, *formulaic activities* i.e. fixed and repeated activities. Executing these kinds of activities, where they are always certain of what they do during the pre-/while-post-plasma, communicate the nature of the inadequate skills of inquiry—a problem that the researcher has noted through out the study as one of the major problems that confronted teachers to engage in continuous professional development.

7.3.2 Teachers' learning from each other

Sustained work place learning includes modeling teaching practice for other teachers (Weng linsky 2000, Joyce and Showers, 1998). This, however, was not an overtly part of the culture among many of the teachers in the schools, as this teacher from school A expressed.

In my 11 years of experience in teaching English in high school, I rarely engaged in talking and role modeling from the other staff. We don't have the time to see the other teachers in action nor given the opportunity by the school administration (female teacher, School A) [IIN3/022].

This idea is also further consolidated in what this teacher comments:

We shouldn't sit around and talk about what we need to do with the plasma supported English lessons. We should be in (classroom) working with them. Principals should be the best teachers and should also assistant principals. They should be essentially teachers and they should continue to create favorable condition for that. However, so far nothing happened (male teacher, school A [IIN 4/025].

The vast array of literature in the area of general education to which language education is not an exception, suggests that when any innovative practice is introduced in the language pedagogy such as (plasma based instruction in this case), teachers are expected to open their classrooms to other teachers which would have the effect of raising the accountability of teachers in these schools to a wider audience.

One teacher spoke of the power of this experience (if there were) in terms of professional learning:

To me if there were such a tendency of having access of observing one another class of ours, we could be fruitful, but this is not totally the practice in our school (male teacher, school B). [conv 21/003].

However, as this teacher expresses his positive experience on learning from his colleagues, be it with in the school or outside:

I had such an opportunity (though not frequent) to visit other teachers while teaching in the earlier times; I gained lots of knowledge, but now no such an experience. I regret why that experience is missing (male teacher, school KW). [conv12/010].

From the excerpts discussed so far, it could be said that sustained workplace learning is not that much given an emphasis and being practiced these days. As a result, accountability of teachers is still becoming a missing link between plasma supported EFL lessons and effective teacher's classroom role performance. One way through which teachers can grow professionally is through observation of teaching learning practices.

Observing is an initial and key process in reflective learning. How the EFL teachers considered learning through observation and the way they observed was obtained through the informal interviews employed.

Interviews made with the teachers generate data pertaining to what observation means to them. In semi-structured interviews, asked what ‘observation’ means to them, the majority of the teachers responded “watching how school teachers teach and how the plasma teacher teaches” (IIN012/20). Still, for some of them observation is “identifying class size and how pupils participate in the class.” (IIN012/21). All suggested that the ‘school observation’ does not help that much for the practice in plasma based instruction is uniformly the same. One of the teachers from school B described his observation of how the school teachers taught English: “their main activities were, before the plasma, introducing what the plasma teacher would teach, then controlling whether pupils watch attentively and finally recapitulating what the screen teacher had transmitted” (IIN010/4). This result reverberates with Usher et al (1997) argumentation that where teachers are only exposed to school practices without critical reflection on the practices they cannot develop the skills of problem-posing. Similarly, Schon (1997: 169) argues that exposure to the existing school practices without critical reflection on the nature of the practices often leads to *over learning* the existing practices, i.e., assimilating them without reflection.

Therefore, what is implied is lack of variety in the style of teaching between and among the different teachers associated to observation can be considered both as an aspect of and a generative mechanism for the teachers’ lack of pedagogic skills—the skills of conceiving, planning, and effectively implementing appropriate lessons. This, in turn, suggests the need for a revision on the way the plasma curriculum and the lessons are presented in such a way that it would engage teachers on active, critical and continuous observation. This might involve incorporating to the Plasma curriculum content where teachers make a distinction (i) between appropriate and inappropriate practices, (ii) between what they theoretically know and what actually goes on in schools, and (iii) a critical observation of the gap between what is taught by the school teachers or the plasma teacher and what ought to be taught in accordance to empirical theories.

7.3.3 Finding time to learn

As Leonard (2002) found even where teachers believed they should work together, their actual circumstance particularly lack of time, make this difficult. Teachers in this study, who are

teaching English in plasma based classroom frequently held concerns about the amount of time available to them due to their teaching and other professional demands. One principal explained:

You've got to develop a shared vision with the staff and say, "we should discuss issues on academic matters, as to how we thought and improve our teaching practice. To this effect "what is your major problem?" we say to staff "what is the most problematic thing for you?" And they will tell you "Time" (male principal, school KW).

As schools increase in size, so does the teacher's load. This makes it more difficult for teachers to find the time to collaborate (Leonard 2002). One teacher reflected this in his comment:

The key for teacher's take up is the time aspect. You know if we haven't got time to take it up then quite often we are not going to do it. For example, I teach 33 hrs per week excluding night classes. You can imagine I spend the day in class so, no time to spare on sharing knowledge (male, secondary teacher, school A). [Conv1/001].

Pooling the major themes discussed so far together, it is believed that many of the teachers are not engaged in sharing experiences in most cases, due to different reasons of which time constraint is one of them.

7.4. Teachers' learning through dialogue and conversation

Teachers like their students, learn through dialogue and conversation (Baker et al, 2002), and through this develop a shared discourse (Hogarty et al, 2002). Two discourses are well known: that of the local school community and that of the system. This gives rise to a concern that teachers have no personal professional discourse that crosses local boundaries, leading their

discussion of practice to be subsumed in to the system's narrowly defined language (Chesedichenko et al, 2001).

7.4.1 Challenging discussions

Teachers in this study generally valued work place harmony rather than argument and critique, perhaps missing an opportunity for learning (Boyle & Skopp, 1998). One, however, saw possibilities in teachers discussing from different positions:

If teachers are really challenged at their core for an extended period of time, the dialogue that might be polarized to begin with eventually will come together (male teacher, school B). [conv 15/004].

Another argued for more challenging discussion and research in put particularly in professional development programs run outside school:

We have to start talking about our practice in a way that is not just superficial, because a lot of teacher discussion is superficial. As you move up the ladder when you go to conferences and you work in special programs, the thinking is very deep and the talk is very deep. Discussion of plasma supported English lessons and my role in it with the researchers and other people is at another level and that's what I love about it (male teacher school A). [conv 27/025].

This teacher also went on suggesting topics for discussion.

Well we need to discuss, teachers need to be allowed to have a professional discourse around the changes that the technology has brought to students including things like their ability in the skills areas and all those issues related with learners and teacher's roles in technologically supported EFL classrooms We haven't really touched on those issues, (male teacher, school A). [conv27/025].

The practice on the ground, however, was captured through unobtrusive observation based on what teachers were discussing in the lounge during lunch time. Surprisingly enough, the teacher from whom the above excerpt was taken was observed remain defiant to accept constructive criticism from his colleagues.” When there is, for example, technical failure with the plasma, as a teacher you need to have the know how to solve the problem...but you are techno phobic .Even you do not know still how to make use of internet facilities appropriately.”(male teacher, school A)(DN22/23).The response of the other teacher was ” ...our skillful teacher...shut up!”(DN22/25)

Such hypocrisy, according to Hogarty et al (2002), is a clear manifestation to the widely existence of disparity between what teachers claim to believe in and what they actually do, and this needs serious attention.

Further, like Nias (1987) another teacher suggested that teachers’ apparent reluctance to change is related to the preservation of their sense of self – and the role of the teacher – but also saw that they could help each other:

They’re fearful about what it will do to their job, you know, how their role changes. They feel that they are not the experts of their subject any more because the plasma teacher I think, is the one who is given more emphasis and knows more than they’ (the classroom teachers) do. That is the fear we are facing. Teachers need to talk about what and how they envisage their job will change and how we can help them through that process (male teacher, school B). [conv 11/001].

Though the rhetoric is across the board the same, still what teachers blow their whistle on is the fact that the plasma teacher has confiscated their role; thus, there is nothing which they open challenging discussions on.

7.5. Teachers' freely sharing of their knowledge

Stahl's (1999) notion of unfettered sharing of knowledge among teachers, while laudable, goes against the historical and cultural practices of many, requiring the deprivatisation of practice. Isolation is of particular concern where it discourages professional conversation, hides practice and therefore removes an opportunity for others to learn (Ball, 1996). The substance of teachers' on going learning remains part of the tacit knowledge in many schools.

7.5.1 Attitudes to sharing knowledge

The notion of collective responsibility Venezky & Davis (2001), requires a mature sharing relationship based on trust. Teachers must be able to trust each other regarding both personal insights and professional products. Several participants in this study revealed that they did not raise this balance of trust and accountability, as the following teacher lamented:

I personally feel most ashamed that most of us do not have enough trust one another to share our personal insights in to our professional practice, for reasons which I'm not sure (male teacher, school B) [conv 22/004].

Another spoke of the obligation of one teacher to another which creates interdependence, but is not practiced:

As a teacher if you observed another teacher doing that then you've got a professional obligation to go to them and say " I think the idea that you've got about using technology is really good, but can I show you some ways to use plasma supported EFL lessons more effectively so that you will be happier with the results that you get? However, such a practice is not existing. (female teacher school KW). [conv 23/009].

Like time, intimacy was important for many teachers. Teachers who had stronger intimacy, valued the opportunity to share, such as these two in school A setting :

Female teacher: *Yeah it's good. I have certainly learnt from (male teacher). Let me tell you about this idea. When I get trouble on some methodologies he shares me his idea; that is great. [conv 24/022].*

Researcher: *What do you learn from (female teacher)?*

(male teacher): *It's probably just the general structure, because I'm still fairly new to teaching, just the general way you go about it (conv 24/025).*

These teachers, one very experienced and one in his first year of teaching showed that quite different needs can be addressed through informal work place learning in this way.

No teacher in this study was basically opposed to sharing information and knowledge, but some found practical constraints worked against them. In the following extract, a teacher who worked across different primary and secondary schools experienced physical isolation and felt that other teachers in his team didn't want to share:

I don't know how many times I've tried to encourage that sort of thing, over the last two and a half years, to get people to come along to meetings, to actually sit down and talk about what they do in classrooms. People are not prepared to do it (male teacher school Ko) [conv 12/016].

From what has been discussed so far, it seems fair to argue that teachers are not courageous enough to openly criticize their weaknesses. As a result, most teachers have been observed remaining in their classrooms shutting their doors inside. This partly is because of the Ethiopian culture which holds a more conservative view on critiquing which is regarded as one way of spoiling our personal and social relations.

7.6 Teachers' reflection on their practice and sharing of their reflections

Where inquiry is a stance, teachers can use a range of methods to research their own practice individually and collectively. Reflective practice serves to make connections between the daily work, its underlying assumptions and the agenda for school and social change. By virtue of the research design, the most common types of reflection were reviewed (less formal reflection on-action at a particular point in time) and research (more systematic reflection-on action over a period of time) (Zeichner & Liston 1996). Many review comments were found in teachers' journals, where they tended to analyze classroom practices and events, like these two:

The majority of the students were quite absent from class on this date (May 22,2009) and only below half of the students were in class. I asked them "why the majority didn't come?" They told me that they are either at home or in the library to study their subjects, as the national exam was approaching fast. The next day, I had a non plasma class, where the majority attended. I asked them the reason. They told me that "since the non plasma class focuses on grammar which is also the focus of the national exam, they came (RJ male teacher, school B). [012].

Another teacher in school K clearly expressed her anger on the very constraint of time in plasma supported English lessons as follows:

It was writing task given by the plasma teacher, where students attempt to write a letter of complaint to a given factory's manager on the environmental pollution his company was causing. The task was interesting but very time taking. Surprisingly, the entire task was expected to be completed with in 15 mts for grade 10 students. Let alone they, even I can't finish it. This time constraint should be considered. Otherwise it could be a point of failure to the whole exercise (RJ male teacher). [010].

On the other hand, a busy secondary teacher commented after a conversation:

I don't do it enough. As this is part of the reflection process, it's something that I'll need to a lot more (female teacher, school KW). [conv 20/008].

7.6.1 Journal Writing

Writing in journals is one way to engage in reflection (Lukinisky, 1990) and in the absence of any other audience, can become a form of conversation with self. However, the teachers in this study, unless for this particular research, the majority of them said that they didn't have such a culture. A well experienced teacher from school KW says:

I agree that learning journals would be one way that EFL teachers would document their journey through the process of plasma supported language teaching and learning. However, this is not the case with most of us. This is due to partly lack of awareness, .lack of devotion or time constraint. In any case they are not practiced, but would be good if practiced. (conv13/009).

However, in another school, one teacher described how she intended to model and encourage journal writing:

I've kept a reflective journal since I started teaching in the practicum class. I have been working with researchers, experienced teachers, and the leading teachers. I think that has developed my interest on keeping my classroom diary. So I am encouraging my fellow colleagues to keep professional journals, but they are not that much happy. I brought in mine in to show and I think that keeping a reflective journal is really important for teachers (male teacher, school A) [conv 14/025].

7.6.2 Sharing reflections

In spite of the very informal nature of teachers' conversations, there was little evidence of sharing reflections between teachers and their colleagues in this study. The prominent reason for

teachers not to share their reflection of their professional practices is lack of relaxed time and favorable atmosphere. Otherwise, all the teachers revealed that they had the awareness on the role sharing reflections plays on their professional development as could be learnt from this teacher's comment:

I think you have to really reflect on what you are doing and why you are doing it, to make it worth while for yourself and for the people that you are teaching. When you have made those connections and reflections for your self, it becomes real. Some one discusses it with you, a colleague talks to you about it and you have a real sense of moving in the same direction. Talk about success and failures and just different things in different ways, a real obvious common ground you have got. However, though I have the awareness, lack of time to share my knowledge with my colleagues and also favorable atmosphere are a real challenges to many of us (male teacher, school B). [conv12/003].

Another teacher in school KO shares a similar idea with the previous teacher.

Reflection is not a practice in our school unless on informal basis with intimate colleagues. If we discuss things that we want to cover, our success, our failure, problems that we may have encountered or that we might foresee, it would be a source of improving our practice. However, since that is not the case, our students are not benefiting. The reason for not reflecting is not lack of awareness, but lack of time and conducive conditions (male teacher) [IIN006/020].

The findings in the excerpts taken clearly show that sharing reflection as a pedagogical means of improving practice is over shadowed by time constraint and lack of conducive environment such as, a management that is committed to change, despite the teachers' awareness of the role of sharing reflection in quality education.

In this study also there were no instances of teachers reflecting on contents of the plasma lessons or artifacts as Ball and Cohen (1999) suggest, or of teachers using any possible way to document their own practice. Similarly, although Cochran-Smith and Lytle (2001) suggest that teachers' inquiry should also have a social purpose, connecting local knowledge to larger social, cultural and political issues, there was little evidence of this.

In this section and sub sections as a part of contextual analysis of the Plasma based instruction and teachers' role in improving practice through reflection, an examination of the mode of doing reflection and practicing teaching, or *procedures* of reflection, has been carried out. From all the evidence and argumentations, it can be concluded that the condition of plasma based language instruction procedure that the teachers are engaged in is characteristic of *routine practice/actions*, where teachers, without meaningful reflection, execute or fail to execute contents and procedures pre-set in the lesson and the school syllabi. This corresponds to Dewey's argumentations of routine action—that which is habitual, intuitive and commonsensical.

The data analysis revealed that the apparent mode of reflection, Routine Actions, is characteristic of *non-collaborative* relation as was observed above. This kind of relationship is believed to have been engendered by the *top-down* and *judgmental assessment* styles. This is possible because under such circumstances there can be no or little room for open and trustful discussion. Researchers have indicated that where there are no open discussions on what, how and to what end to reflect, a reflective practice to professionally grow becomes judgmental, and where there *are* these, however, constructive relations and hence effective reflection flourishes (Hailom 1993). Nonetheless, as indicated by data, the presence of less collaborative relationship and top-down and judgmental assessment, in succession, might have resulted in *prescriptive* and *post-event feedback*. The cumulative effect of all these was, logically, teachers' attraction towards *non-reflective implementation of syllabi*. The cycle of the routine practice appears that non-collaboration and non-reflection seem to have served as both causation and consequence to each other, giving rise to judgmental and prescriptive practice as well. This is possible according to circular causality theory (Dumont & Evens 1999).

Zeichner and Liston's (1996: 38) four procedures of reflective practice through which teachers might be helped to progress by learning from each other are essential. The first level is *factual*, where the teacher focuses on facts associated with procedural steps. The teachers are concerned with what has occurred in a teaching situation or what may occur in the future. The second is *prudential*, where the teacher focuses on the evaluation of teaching experiences and outcomes. The teachers examine what they might need to do or evaluate what has been accomplished. *Justificatory*, the third level, occurs when the teacher provides rationales for actions. The teachers ask the questions of why they did what they did, why they did it in that manner, and why they chose that action with those particular students. The final level, *critical*, occurs when the teacher focuses on the underlying assumptions of actions that may or may not have an impact on change. At this level, the teacher examines the goals, curriculum and materials, procedures, students, and context.

7.7 Teachers' learning from the plasma teacher

As has been indicated in the back ground section of this paper, one of the major reasons for the government to introduce plasma for instructional purposes is lack of well qualified teachers that can absorb the ever growing number of students. In this respect one of the recurrent themes that appeared in this study was the way EFL teachers perceive the plasma teacher in their endeavor of professional learning in their work places. It has been noted in this study that most EFL teachers are not well proficient in English, and they believe that they have a lot to learn from the plasma teacher. In one of the conversations held with teacher 001 of school B he explains what he learns from the plasma teacher " ... for one thing I believe that the plasma teacher, pedagogy wise, is better than myself. The other reason is, I can learn how to pronounce words properly...even for your surprise I am improving my listening skills."(cov11/1).The other teacher from school KO seconding this idea said " I know that the plasma teachers' English is polished, correct, and up to the standard...I feel I am always a learner in the plasma class with my students .However, my suggestion is that let the use of this technology start from the lower levels, like grade seven."(conv17/12).This suggestion is also supported by the student community. The students who participated in this study have unanimously agreed that learning English with plasma has got several advantages among which the language proficiency of the plasma teacher which is by

far and large better than their classroom teacher is the most prominent one. The students, however, are of the opinion like their teachers that it would be better if plasma supported instruction began in the lower grade levels.

7.8 Teachers' contribution to school- wide decision making

One would expect that in knowledge building and skill developing, schools take advantage of the classroom experience of teachers (and students) in their decision making processes. Teachers should become involved in the decision making about information technologies in schools (Rennick, 2002). As Fisher (2001) claims, there is enormous scope for students themselves to become involved in redesigning schools through their learning tasks and that teachers are key players in this approach. This study, however, largely indicates that there is not that much scope for teachers to be more involved.

7.8.1 Design decisions

EFL teachers were rarely involved in school wide decision making regarding the physical environment, the contents of the plasma lessons, and in areas where they claimed to be involved in decision making. Their arena was circumscribed and their behaviors often complained. Since they were not involved in curriculum decision within the guidelines provided in the plasma supported lessons, there were few indications that they felt able to act on the curriculum. Late in the study, a discussion with one very active participant revealed his view that most teachers saw the curriculum handed down by the system, rather than evolved with in the school community. This reflected the concern of Cheredichenko et al (2001) who claim that teachers lack their own discourse of learning, and may not construct curriculum, because the hierarchical language of the system prevails.

Although Peterson, McCarthy, and Elmore (1996) argue that it is improvements in teacher learning, not school structure, which will reform education. Teachers in this study have raised issues such as physical conditions and entrenched school arrangements that certainly appear to

diminish potential improvements. One principal who is also an English teacher spoke of the Ministry's responsibilities to change physical structures.

That's probably one of the big challenges for the Ministry of Education and the government: the fact that the classroom arrangements were done during earlier time where there was a chalk talk method. They really don't match the kind of teaching that we are now doing and that we will need to do in to the next ten to fifteen years. And yes, they are building new schools on better models but I still think they need to go further in changing the arrangement of the classroom desks as the fixed desks mostly become obstacles to facilitate group discussions and easy movements of students and teachers (male principal, school B).

Even virtually all the teachers couldn't take control of the decisions regarding their own classrooms as the desk arrangements are so fixed that they can't be moved.

As a teacher to assist students learn in groups, I feel I should take the role of facilitating this. But I can't do that, so my decision making role is fully blocked by the very rigid nature of the seating arrangement (male teacher, school B). [conv12/004].

All in all, from the discussions made above, it has become clear that EFL teachers are rarely involved in school wide decisions making regarding the physical environment and the contents of the plasma lessons. Even teachers' control of the decisions regarding their own classrooms is overshadowed by rigid arrangement of the desks and the time restriction imposed on them by the plasma transmission.

7.9 Teachers' development of theory from practice

For Dewey (1933) the investigation of practice and reflection on practice and inquiry is the deriving force for the generation of theory. On other hand, where the professional discourse is strongly influenced by system language (Cherednichenko etal, 2001), teachers are likely to

develop espoused theories that they articulate and theories in use that are demonstrated by their behavior (Argyris & Schon, 1974). Time for reflection can assist teachers in better articulating personal theories (Griffith & Tann, 1992). Nonaka and Takeuchi (2005) see an interactive relationship between theory and practice and Wenger (1998) further suggests that communities of practice are places where people develop, negotiate and share theories. In general a part from the learning theories reported in chapter 4, there was little evidence of teachers articulating a link between their practice and the continual development of their educational theories, indicating that these may be in the realm of tacit knowledge. While not articulating a personal theory, one participant felt that more attention should be given to understanding learning:

Teachers in positions of responsibility in schools and administrators need to think about the ways that students learn and the way the classroom teacher impacts on the way the students learn. If that means we have a careful discussion about why the need to teach English using plasma, I think it needs to be that basic (female teacher school A) [conv003/025].

Another secondary teacher expressed a view on management based on her experience:

One of our big arguments with plasma supported lessons is that the instruction should begin from lower levels like grade six or seven (female teacher, school KW) [conv16/008].

As there were no explicit conversation or journal prompts to reveal teachers' theory generation, the data were considered in detail to identify phrases such as I came to realize, I think, I find (after Cherednichenko et al, 2001; O'Rourke, 2002) or models which could be taken as indicators of theorizing. Teachers in this study alluded to their learning theories when talking about their practices although holistic or comprehensive theories based on practice were rarely stated explicitly. One principal raised a fundamental question;

Well I think you have to as a teacher and member of the society say "What can I do with plasma based instruction to give one effective teaching to my students? Is plasma based language teaching important as it currently stands?" (female principal, school A) [024].

In another school one teacher expressed her theory tentatively, indicating that it was not based in her practice, but emanated from outside:

I think the theory is that you only want to learn if you perceive it as being relevant to yourself (male teacher, school B). [cov 17/007].

Teachers in this study revealed a significant gap between espoused theories and theories in use. Those who articulate a belief in student autonomy, for example, tended to encourage this in practice. Although there were few detailed examples of teachers who returned a completed map of knowledge and skill building (Table 9.3; chapter 9) half claimed that they generated theories about learning from their practice. It seems, therefore, that these are in the realm of tacit knowledge, not shared in general discourse.

7.10 Discussion

In summary, and bearing in mind the basis of propositions from Bassey's (2001) in terms of clarity, representativeness and uniqueness of thought, and this chapter has found that in relation to improving practice it appears likely that EFL teachers have constraints in:

- encouraging each other in new ways of working and learning
- framing personal and social goals for their learning
- making time for sustained professional learning in the work place
- learning through dialogue and conversation
- freely sharing their knowledge
- reflecting on their practice and sharing their reflection
- contributing to school wide decision making
- developing theory from their practice

This chapter has focused on the professional learning that takes place, in EFL teacher's work places, either in the classroom or within the School: on Hoban's (1997) terms, inside in. Other forms or models of professional development are only mentioned passingly. This is not to say, however, that the teachers in this study are only inward looking. Teachers have taken on the need

for continual learning and they often encourage each other to try new ideas and new practices, sowing the seeds of a relationship of interdependence (Venezky & Davis, 2001). The findings of this chapter clearly show several ways in which knowledge building and skills development can occur where a school culture supports professional learning. They indicate that some structures, such as goals, plans and scheduled time, are useful, particularly where they are open enough to accommodate just in time learning opportunities. Like their students, teachers need a purpose for learning, and where this is evident, they are motivated. Through the statewide system performance management and professional development planning—a pressure mechanism (Fullan 1993) teachers are expected to do this, but it is at the school level where goals are realised, with the support of the leaders and other teachers. EFL teachers in this study document their goals, but are less likely to document their achievements; thus, missing an opportunity for knowledge and skill building. It seems that they still have a focus on inputs for their own learning, while they have moved to an outcome focus for their students. It would be difficult to manage the collective competencies of the staff if they are not known.

Teachers' concerns about lack of time are well known, but are not totally insurmountable. Where teachers act individually in the current role definitions, it is unlikely that they will be able to maintain high performance across all roles, and will feel inordinately pressed for time. The findings reveal instances where time is gained by opening up classrooms to teacher learning opportunities and collaboration and where teachers are creative in their management of time for professional learning, both formal and informal. However, the attempts to find time are constrained by the existing school culture, teacher's load, and time tabling and teachers' expectations of their roles.

Teachers also in this study reported that they learn through talking with other teachers formally and informally although a culture of debate is rare. The existence of shared local discourse means that teachers, particularly EFL teachers in technology supported classrooms (in our case plasma supported English Classrooms) can confidently engage in conversations about learning, but the findings indicate some barriers among EFL teachers to wider discussion and debate on the merits and demerits of plasma supported English lessons or using the satellite Television as a pedagogical tool. In the absence of shared discourse at a wider scale, teachers tend to use the

systems language, which can entrench ways of thinking and stifle creativity. Many of the EFL teachers realize the benefits of sharing their knowledge on the subject matter and in how to make effective use of the plasma lessons, both within the school and more widely in the profession, but even some of the most active knowledge builders (teachers) in this study expressed reservation.

Several findings do not that much relate to teachers' involvement in reflective practice, either individually or collectively (Particularly 7.3, 7.4, 7.6). Although reflection has become an often used term and many teachers basically believe in its importance, the majority of them don't practice it. Lack of ample time, fear of criticism and more prominently lack of school culture are believed to be some of the most salient reasons that affect reflection by teachers. Nevertheless, there is also an indication of findings that there are some teachers who believe that they are engaging in reflective practice, when, in Bourd's (1991) terms, they are merely thinking. Nevertheless, some teachers in this study had commenced the practice of reflections some through generic reflection (Zeichner & Liston 1996) and others either through journal writing or discussion groups based on the teaching team or with a group of like minded people. This assists teachers to share tacit knowledge (Nonaka & Takeuchi, 1995) and in spiral fashion to build theory from their practice the first phase of knowledge creation and skill development. Nonetheless, this appears to be a fairly private activity. If, as Nonaka and Takeuchi suggest tacit knowledge is even more important than explicit knowledge in terms of knowledge creation, teachers need to find ways to express this. The new partnerships developing between teachers in this study and researchers are crossing more entrenched boundaries and have the potential to create shared discourse, and to allow teachers to focus on their teaching roles while research partners gather data, reflect with them and document new knowledge.

In spite of a conversation prompt regarding Beare's (2002) notion of disaggregating roles, most teachers did not envisage change and become active in influencing school wide decision making.

This chapter has identified some of the ways in which EFL teachers improve their teaching practice within the realm of plasma supported English classrooms, linking the roles of designing the learning environment, managing people and resources, and mediating student learning

described in the previous chapters. It records aspects of school based professional development, and as such informs the study of EFL teachers' roles and professional learning within the realm of plasma based EFL pedagogy. In the next chapter the perceptions of EFL teachers about plasma supported English lessons and related issues will be considered in terms of their roles.

CHAPTER EIGHT: DATA ANALYSIS ON TEACHERS' PERCEPTIONS OF PLASMA SUPPORTED EFL LESSONS AND THEIR ROLES IN THEM

As one of the purposes of this study is to identify the attitudes of EFL teachers toward the use of plasma technology resources in language instruction, a questionnaire was used as a core data gathering tool composed of Likert scale items (The detail is given in chapter 3).

Table 8.1 below shows the number of questions in the questionnaire and the focus of each point.

Table 8.1 Distribution of questions in the questionnaire

Sections	Section I	Section II	Section III	Section IV	Section V
Question Types	Background Information	General beliefs of teachers towards plasma and plasma technology resources in language instruction	General perceptions of teachers on plasma supported English lessons	Teachers' perceptions of their roles in plasma based English lessons	Barriers which EFL teachers perceive when integrating plasma in their teaching

8.1 Data Analysis

All the items in the questionnaire were analyzed using the statistical packages for social sciences (Spss) version 10. For every item statistically analyzed frequencies and percentages were calculated. In order to find the significance of the distribution of answers for the Likert scale items, T-tests were calculated and confidence intervals for a population mean μ were established based on the following assumptions:

Population standard deviation (σ) unknown , $n < 30$, population distribution assumed normal. A($1-\alpha$)100% confidence interval (C.I) estimation for a population mean (μ) is constructed by using T-test interval estimation of $\bar{x} - t_{\alpha/2}S/\sqrt{n} < \mu < \bar{x} + t_{\alpha/2}S/\sqrt{n}$,where \bar{x} is sample mean, S is sample standard deviation, $t_{\alpha/2}$ is table value of T-distribution, n is the sample size.

To further validate the findings from the quantitative data, focused group discussions were held with seven teachers. The conversations were taped and transcribed by the researcher. The transcript data were first categorized according to their themes: teachers' beliefs about language teaching and learning, their attitudes to technology (plasma based English lessons), and their attitudes toward their classroom roles. Responses under three sections were analyzed on a cross-sectional basis (Mason, 1996). In other words the responses for questions under each section were compared among the twenty five participating teachers' transcriptions. Responses that reveal common patterns and issues were highlighted. Furthermore, non- crosssectional analysis of individual transcripts also revealed additional and unexpected patterns.

8.2 Analysis of Questionnaire Items

All the questionnaire items were analyzed using descriptive or inferential statistics. The statistical packages for social sciences (Spss) version 10 was used to compute T-tests and confidence interval at a statistical cut -off point of 0.5.

The results obtained from the analysis of questionnaire and interviews are presented in different sections. In the first section, analysis of the questions in the questionnaire is provided to show the attitudes of teachers on the plasma based language lessons. In the second section, analysis of teachers' beliefs of language learning in relation to plasma based language instructions, and in the third section will mainly focus on the perception of teachers toward their EFL classroom roles. The data from focused group interviews will be discussed on their own for clarity and simplicity of EFL teachers' perceptions toward plasma based English lessons.

Table 8.2 Questionnaire on teachers' perceptions about Plasma supported EFL instruction

NO	Questionnaire Items	SD(1)	D(2)	UD(3)	A(4)	SA(5)	Mean	SD	C.I
	Section II General beliefs of teachers towards plasma and plasma technology resources in language instructions								
1	I believe that Satellite Television (Plasma) supported English lessons are helpful for developing students, language proficiency.	0%	0%	0%	57%	43%	4.43	1.60	(3.77, 5.00)
2	Learning English language through satellite Television programmes (plasma) doesn't make any difference in the students' performance in the language.	29%	57%	14%	0%	0%	1.86	0.71	1.56, 2.41
3	I believe that students do have difficulty in understanding the language of the plasma teacher.	0%	14%	14%	57%	14%	3.71	1.22	3.21, 4.67
4	I believe that I can develop my teaching methodology themes in my use of satellite Television programme.	0%	0%	14%	86%	0%	3.86	1.55	3.22, 5.00
5	Teaching language using plasma makes me more efficient in my teaching.	0%	0%	0%	71%	29%	4.29	1.59	3.63, 5.00

6	Using satellite TV plasma for EFL classrooms makes completing tasks easier.	0%	14%	14%	71%	0%	3.57	1.30	3.03, 4.59
7	I perceive Satellite TV programmes as pedagogical tool.	0%	14%	14%	57%	14%	3.71	1.22	3.21, 4.67
8	Satellite TV (plasma) can be a good supplement to support teaching and learning.	0%	0%	0%	86%	14%	4.14	1.64	3.47, 5.00
9	I believe you can take risks in teaching English with satellite TV (plasma).	14%	14%	14%	29%	29%	3.43	0.95	3.04, 4.17
10	I am not the type to do well with ICT based teaching tools.	43%	43%	14%	0%	0%	1.71	0.64	1.45, 2.21
11	I am prepared to integrate instructional technology use in my English language	14%	0%	0%	43%	43%	2.00	0.68	1.72, 2.53
12	I believe that successful technology integration in EFL classrooms depends on my openness to change and the degree of my experience and practice in using the technology.	0%	14%	0%	57%	29%	4.00	1.37	3.44, 5.00
13	I believe that satellite TV (Plasma) based instruction is different from traditional classroom situations.	0%	14%	14%	14%	57%	1.86	0.65	1.59, 2.37

	Section III General perceptions of teachers on plasma supported English lessons								
14	I'm not positive about the contribution of Satellite TV (plasma) based etc lessons for I have lower expectation of the outcome.	14%	71%	0%	14%	0%	2.14	0.91	1.77, 2.85
15	Satellite Television (plasma) supported English lessons contribute a lot to the increase of the teachers' knowledge in the subject area	0%	14%	0%	71%	14%	3.86	1.41	3.28, 4.95
16	Satellite Television EFL lessons facilitate student learning	0%	14%	14%	29%	43%	4.00	1.27	3.47, 4.99
17	The pace of the lessons by the plasma teacher is fair to students.	0%	71%	14%	14%	0%	2.43	0.97	2.03, 3.18
18	Students find satellite TV programmes (the English lessons) too difficult to follow.	14%	14%	0%	57%	14%	3.43	1.11	2.97, 4.30
19	The English lessons that are presented on Satellite TV (plasma) are attractive and effective.	0%	0%	43%	43%	14%	3.71	1.22	3.21, 4.67
20	The English lessons that are	0%	29%	0%	43%	29%	2.57	0.77	3.36, 4.17

	transmitted using Satellite Television (plasma) don't have that much contribution for the teaching and learning process.								
	Section IV Teachers 'perceptions of their roles in plasma based English lessons								
21	The satellite Television lessons help the English language teacher to accomplish his facilitation role properly.	0%	0%	14%	57%	29%	4.14	1.43	3.56, 5.00
22	It's better to entirely replace plasma teacher with the classroom teacher for effectively and efficiently presenting the lesson.	43%	29%	14%	0%	14%	2.14	0.58	1.91, 2.59
23	The English lessons that are presented on Satellite Television create an interactive environment between and among students and teachers which is key to effective teaching and learning process.	0%	0%	14%	57%	29%	4.14	1.43	3.56, 5.00
24	The classroom interaction between and among learners and the teacher has sharply decreased as a result of satellite Television (plasma) based instruction.	14%	29%	29%	14%	14%	2.86	0.70	(2.57, 3.40)
25	I dislike teaching English as a								

	foreign Language with Satellite TV (Plasma) because of fear of losing control of the classroom.	29%	57%	0%	0%	14%	2.14	0.76	(1.83, 2.74)
26	I don't believe that satellite TV plasma supported lessons have enabled students to actively participate in their English language lessons	14%	57%	14%	14%	0%	2.29	0.74	(1.98, 2.86)
27	I feel that the plasma teacher has totally confiscated many of my English language classroom roles.	0%	71%	0%	14%	14%	2.71	1.04	(2.29, 3.52)
28	I am comfortable with satellite TV (plasma) based English lessons for I'm clear with my classroom roles.	14%	57%	14%	57%	14%	2.57	0.82	(2.23, 3.21)
	Section V Barriers which EFL teachers perceive when integrating plasma in their teaching								
29	In plasma based language instruction there is lack of time needed for preparation and implementation of technology	0%	0%	4%	16%	80%	4.76	0.52	(4.55,4.97)
30	Scarcity of qualified technicians in troubleshooting when there is technical fault is a serious challenge in plasma based EFL classes.	4%	4%	0%	44%	48%	4.28	0.98	(3.88,4.68)
31	Lack of sufficient	8%	4%	28%	28%	32%	3.72	1.21	(3.2,4.22)

	encouragement from the school administration in using the technology appropriately is a real challenge.								
32	I believe that there is a deficiency of knowledge and skills in technology integration.	4%	20%	4%	28%	44%	3.88	1.30	(3.34,4.42)
33	There is shortage of adequate material such as books to successfully make use of plasma.	4%	0%	16%	36%	44%	4.16	0.99	(3.75,4.57)
34	Lack of students desire for technology integration is a barrier in teaching English using plasma.	22%	9%	13%	30%	26%	3.30	1.52	(2.67,3.93)

Description:

SD: - Strongly Disagree(1)

D: - Disagree(2)

UD: - Undecided(3)

A: - Agree(4)

SA: - Strongly Agree(5)

8.2.1 General beliefs of teachers towards plasma and plasma technology resources in language instruction

As can be seen from section II of the questionnaire items in Table 8.2, responses to questions 1-14 revealed quite a positive attitude toward using plasma (Satellite TV) for EFL instruction. Question 1 asked whether teachers believe that Satellite Television (plasma) supported English lessons are helpful for developing students' language proficiency. The mean of the responses by the participants is 4.43 which is nearer to strongly agree. This result implies that teachers have a more positive attitude towards the use of plasma for instructional purposes. Such an attitude or a belief may result from confidence in teachers, in having the knowledge about the technology and about ways of integrating it into language instruction.

The responses to question number 2 from the participant teachers cluster around 1.86 closer to disagree. This result might be interpreted to mean that teachers have gone to accept whole heartedly that learning English language through technology, such as plasma, makes a difference in the students' performance in the language. Questions 3 and 5 asked teachers whether they believe that teaching English in technology based EFL classrooms helps them develop their teaching methodology and makes them more efficient in their teaching. Their responses to question 3 and 5 (which are on average 3.86 and 4.29) seem to be varying to some degree, are indicative of the fact that plasma based language instruction has contributed positively for their being efficient and methodologically effective. These results may suggest that teachers' strong belief on the use of technology in language classrooms is getting momentum not only for the sake of increasing the students' level of proficiency in the language, but also their own effectiveness and efficiency as language teachers.

The same trend can be observed in responses to question 6. The mean score 3.57 indicates a tendency of agreeing to the very question on the uses of Satellite TV (plasma) in EFL classrooms from the point of view of completing tasks easily. The other question related to teachers' beliefs of using the plasma technology for language learning, questions 7 and 8 investigated whether the respondents perceive Satellite TV programmes as a good pedagogical tools and something supplementary to support teaching and learning. The responses to these two questions, with a

mean score average of 3.71 and 4.14 which cluster to the option of agree implies that the teachers do basically believe in the significance of the technology to promote and even bring some changes in the classroom relationship between teachers and students.

It was also revealed in the responses of the teachers in the questionnaire that the teachers do have quite strong belief on their risk taking ability, their being a type of teacher doing well with ICT based teaching tools, and even their readiness to integrate instructional technology use in their language classrooms (see question number 8,9, 10 and 11). In this respect, as the mean score from the table to question 9 clusters around 3.43, which is nearer to agree, it can be inferred that the teachers do have a strong belief on plasma's contribution of making teachers take risks in teaching English.

It is also indicated by the teachers responses to question number 10 that they are teachers who can do well with ICT based teaching tools. The mean score of teachers to this question which is on "I 'am not the type to do well with ICT based teaching tools" is 1.71 indicating the clustering of responses between disagree and strongly disagree. This result may imply that the advent of computer technology innovation in the contemporary period might be creating a sound exposure to teachers. This idea is also further substantiated by teachers' responses to question number 12. The mean score which is 4.00 exactly shows the agreement of the majority of the teachers that the successful integration of the technology in EFL classrooms depends on their openness to change and the degree of their experience and practice in using the technology.

The last two questions related to beliefs of teachers about language learning using plasma, question 13 and 14 inquired whether the respondents believe that Satellite TV based language instructions are different from traditional classrooms, and whether they are positive about the contribution of Satellite TV (plasma) based lessons. The responses to these two questions reveal teachers' quite positive stance toward plasma based language instruction. As can be seen from the mean score which is 1.86 to question 13, the teachers don't almost agree with the idea that "Satellite TV (plasma) based instruction is different from traditional classroom situations." The implication of this could be that there are many changes that have come along with the introduction of plasma supported EFL instructions. One of these changes, as is indicated in the qualitative research findings of this study, could be in the kind of human relationships that do

exist in plasma supported EFL classrooms. The other one could be the emerging roles of teachers that are now coming into being which didn't exist previously. The teacher's over all belief on the positive contribution of Satellite TV lessons on improving the students' overall language proficiency is also clearly depicted from their response to question number 14. As can be seen from the Table, the vast majority of the teachers i.e 14% and 71% of the total respondents do strongly disagree or disagree with the statement "I'm not that much positive about the contribution of Satellite TV (plasma) based English lessons for I' have lower expectation of the out come"

All in all, from what has been discussed so far, it can be learnt that teachers do have a strong belief on using Satellite TV (plasma) as a pedagogical tool for teaching language. The implication is that teachers if given further training in these areas, their attitude can even be more polished to the degree of fully integrating ICT based instruction into their teaching.

The next section of the data analysis will present the results and findings from section three of the questionnaire which looked at EFL teachers' general perceptions/attitudes of their plasma supported English language classroom roles.

8.2.2 General perceptions of teachers on plasma supported English lessons

The questions in section III of the questionnaire aimed at investigating teachers' perceptions/attitudes towards plasma based English lessons. The section comprised 9 questions in total.

Questions from 15 to 23 in section two inquired into teachers' attitudes towards plasma supported English lessons. According to the data, most of the teachers seem to have positive attitudes towards plasma supported English lessons. When it comes to the way the lessons are presented, however, responses show variation.

As can be seen from Table 8.2, most of the teachers have positive attitudes towards plasma based language instruction and using plasma for language lessons as supported by the distribution of responses to questions 15 to 23. Also, as revealed by significant distribution of responses to

question number 15, most participants also have a positive attitude toward satellite TV (plasma) lessons for they facilitate student learning.

Question 17, on the other hand, is the first group of items that requested teachers' opinions about the very pace of the way the lessons presented on the plasma are fair to students' follow up. Although 14% of the teachers agree and 14% of them seem to be undecided whether they perceive the pace of the plasma supported English lessons as fair or not, 71% of the teachers disagree with the statement.

This implies that the pace of the way the plasma lessons are presented doesn't give both students and teachers an opportunity to interact each other on which the very tenet of language learning is based. With regard to question number 15 which inquires on whether Satellite Television (plasma) supported English lessons contribute a lot to the increase of the teachers' knowledge in the subject area 71% and 14% agree and strongly agree that they consider the plasma supported English lessons as having a lot of contribution to the increase of the teacher's knowledge in the subject area. Question 18 on the other hand, is the first group of items that requested teacher' opinions about how they perceive the level of difficulty of the English lessons presented by the plasma teacher to students' follow up.

Although 14% of the respondents strongly disagree and other 14% still disagree that they perceive the plasma lessons are too difficult to follow, the remaining 57% and 14% seem to agree and strongly agree to the statement that the plasma lessons are too difficult to follow.

This implies that the lessons become difficult for there is lack of sufficient time given to perform tasks and also allow longer period for the classroom teacher's assistance. With regard to the attractiveness and effectiveness of the plasma lessons (Question number 19), almost the majority i.e 43% and 14%, whose average mean score is 3.71, have responded saying that they agree and strongly agree with the idea. However, for this same question, 43% of the teachers seem undecided whether they perceive the plasma lessons to be attractive and effective or not. This may be interpreted to mean that there are quite a good deal of teachers who were not sure

whether they perceive the lessons positively or negatively, as they didn't have much knowledge on what plasma lessons are .

Concerning teachers' perception on the positive contributions of the plasma supported lessons for the teaching learning process, 43% and 29% of the respondents hold the view that they quite agree and strongly agree with the statement in that learning English with plasma supported lessons enhances learning on the part of the student and teaching on the part of the teacher.

In short, the findings in this section may be interpreted to mean that EFL teachers are generally positive on plasma supported English lessons, but do have some reservations on the way the lessons are designed and presented.

8.2.3 Teachers perceptions of their roles in plasma supported English classes

The aim of this section in the questionnaire was to reveal the participants' opinions about their teaching roles in plasma supported EFL classes. This section contained 8 questions in total.

The results presented in Table 8.2 reveal that almost the majority of the teachers don't feel that the introduction of plasma based language instruction has confiscated their class room roles. The general impressions of teachers about these issues seem to be positive.

If we look at question number 21 which asked whether the Satellite Television lessons help the English language teacher to accomplish his/her facilitation role properly or not, the average score 4.14 which is near to agree shows that the classroom teachers facilitation role has not by any means reduced. On the other hand, the teachers do not agree as could be seen from the mean score of 2.14, which clusters around disagree, to question number 22 to the idea that the plasma teacher should be replaced by the classroom teacher. Such a finding may hint that there is a strong belief on the part of the teachers on the importance of their existence to play their facilitation role and that plasma based instruction can not totally be a replacement to them, but it can be a supplement.

With regard to question 23, although 14% of the respondents seem to be generally undecided, 86% of the teachers whose mean score 4.14 out of 5.0 asserts generally the positive attitude of teachers towards the interactive nature of plasma based instruction. The finding suggests that the very natures of the tasks presented on the plasma are quite permissive of group or pair interaction which is basic in language pedagogy.

However, it is also depicted by quite a good deal of teachers (29%) in their responses that they seem to be undecided to the question on whether the classroom interaction between and among students and teachers has sharply decreased as a result of plasma based instruction. This may imply that the teachers' lack awareness of their classroom roles, as a result of which they are not able to say 'yes' or 'no'.

The responses to questions 25, 26, 27, and 28 revealed a significant positive inclination of teachers about their classroom roles in plasma based English classes.

The responses to question 25 from the participants cluster around 2.14 closer to disagree. This result might be interpreted to mean that the teachers have developed an awareness that the classroom teacher does always have an indispensable role which can't be fully substituted by using any technology as a pedagogical tool. This interpretation can also be strengthened by the responses of teachers to question number 26. This question asked teachers whether they feel that the plasma teacher has totally confiscated many of their English language classroom roles. Almost 71% of the respondents disagree with this statement. The implication is that many of the classroom teachers are fully aware of their roles and do not have the sense of losing their ownership. It is also the very conviction of the teachers that they are aware of their roles clearly and nothing has happened because of the introduction of the plasma technology that puts its own impact on their role awareness (See question number 28 and the mean average 2.57).

Equally important, as can be seen from the mean score of 2.29 to question number 26 on whether the teachers believe that Satellite TV supported lessons have enabled other students to actively participate in the English language lessons or not, there is a strong stance by the respondents that plasma supported lessons have not impeded group interaction.

To answer question on “What kinds of barriers do language teachers perceive when integrating plasma in their teaching?” results showed that teachers perceived many barriers that hinder their integration of technology in teaching. Results from the table show that teachers were somewhat moderate in their perceptions of the barriers that they encountered when employing technology in education. The overall mean scores ranged between 2.3 and 3.9. The most important barrier acknowledged by teachers was lack of time needed for preparation and implementation of technology. During the focus group interviews, many teachers indicated that they can utilize technology (plasma) more efficiently if time is taken into account when scheduling their teaching loads. In their study about factors that influence technology integration, Chanlin et al. (2006) reported that teachers stated that the integration of technology in their classes required much more time and effort than doing regular teaching without technology.

The least important barrier noted by teachers was ‘deficiency of knowledge and skills in technology integration’. Though the analysis of the questionnaire showed that teachers perceived that they possess the necessary competencies to integrate technology (plasma) in their classes, they admitted during the interview-conference that they still need more workshops and training in improving their own language proficiency and implementation of the plasma based instruction.

8.3 Analysis of the focus group discussion

In order to further supplement the data gathered through questionnaire, a focus group discussion was held among the entire twenty five grade 10 EFL teachers of the schools where the main study was conducted. There were all in all ten discussion questions presented for the participating teachers following Miles and Huberman (1997).

With regard to the first question on whether the teachers perceive plasma as an appropriate pedagogical tool for language learning or not, it could be said that all the participating teachers have got a positive outlook. As an instance, Teachers 001, 002 and 005 stated that they had no problem with teaching English using the plasma technology. Male teacher 001, as an instance,

said that learning English supported with technology can widen their horizon as it has the potential of creating a conducive situation to students to learn by sensing. In addition, he witnessed other teachers reflecting similar ideas in to the use of the technology in language classrooms. Female teacher 005 also has the same view to reflect.

Personally I feel great in teaching English using plasma as pedagogical tool. For me it is also a big school. However when I say this, it is not to say that I am all in all comfortable with it

I asked her and her colleagues to tell me as to what makes teaching English with plasma a bit uncomfortable. Teacher 005 laments as follows:

You see for one thing the pace of the lesson is a bit fast. So here let alone to my students even to my self it is difficult to catch up with the plasma teacher.

In the middle of the discussion, another teacher (male teacher 004) interfered and expressed his complaint as follows:

Ya ... It is just to add on what she said. The plasma teacher is too fast. Plus her pronunciation's a bit difficult to understand the content of the lesson.

Still another teacher (male teacher 002) stressed on an external variable, power break.

You see --- em when light goes off, everything will stop. Sometimes the plasma's fuse is stolen by some bad students. So you can't teach,

This was in fact observed practically during the observation session. For example, during (L007/001) the teacher had become highly frustrated for some body had taken the fuse away.

The other point of discussion was on whether the classroom setups enable teachers and students to perform their classroom roles properly. In this respect all the teachers do believe that the classroom setups are not convenient to promote student centered approach of language teaching.

A female teacher lamented this chronic problem as follows.

The fixed chairs as they are unmovable, grouping students becomes difficult. (Teacher 006).

Not only this, says male teacher 007,
Specially as the national examination is fast approaching, students do not like to attend the plasma class.

Their reason is that as grammar is not given due coverage in plasma supported lessons, students become slightly reluctant. As they say, this is due to the very fact that national exams are predominantly grammar focused.

The unstructured and complete observations of the EFL teachers' roles in plasma supported English classrooms gave clues to aspects of the teachers actions and the situation of their classrooms

The salient duty performed in the Plasma supported EFL classrooms by an English teacher was described by themselves as "playing the TV-lesson" (IIN11/005). Derogatory and sarcastic, "DJ" is the label they commonly use to refer to their own position. What this means is that the degree of their involvement is fundamentally reduced to mediating between the TV-teacher and pupils. One of the informants of this research worries corresponds to the teachers' concerns about their role: "After all, what do I assess the teacher's roles on? Everything is done by the TV-teacher?" (DN 002/6). In his reflective journal a teacher described reflected "according to the policy of today's school, the most essential tasks...is to follow the national guidance for the subject--English syllabus, text books and teacher guide, the plasma."

What the observation suggests is the role that the teachers play is characteristic of *non-reflective implementers of the TV-lessons* rather than inquirers. Jeylan , too, observed teachers' roles in the current Ethiopian teacher education and concluded that "this role can be carried out by any layperson" (Jeylan, 2007). During lesson broadcast the screen teacher commands the classroom

teacher to “divide the class into three groups” giving him 10 seconds count-down. During the five minute given to them just before the TV-lesson, they carry out the task of “introducing lesson.” For them, this means, in their words, “re-minding the past broadcast lesson”. In the five-minute after the TV-lesson, they summarize the lesson, meaning “recapitulating the points transmitted”.

Thus, this role to which they are limited to can be implicated as one of the main factors for the teachers’ inability to reconstruct the pedagogic skills of presenting and concluding meaningfully a lesson. These teachers need the skill of understanding their students’ pre-constructions and lived experiences and connecting these to issues, activities and notions in the new lesson. They need the ability to mediate between and among their students and their (students) pre-constructions (language skills, knowledge, and experience), on one hand, and their (students’) world, on the other. On the contrary, under the present condition they mediate a lesson to another lesson, each of which is presented by on screen teacher.

In short, from the discursions held, it could be learnt that basically teachers do have positive stance toward plasma based lessons. However, their reservations are in the areas such as, the way the lessons are presented. This means the pace of the lesson presented by the plasma teacher, the classroom constraint, the time constraint and the wash back effect of the national exams are some of the prominent problems cited by teachers as maybe drawbacks that need to be tackled to make plasma supported EFL lessons more effective. If such problems are addressed in time, it is the belief of the teachers that use of technology for instructional purposes would be effective.

8.4 Discussion

As a whole the study on perceptions of EFL teachers has given answers to all the questions raised in chapter 1.

With regard to the first question on teachers’ perceptions and attitudes towards the use of plasma in the teaching of English, the study has identified that basically teachers have positive stance toward the use of plasma for instructional purposes. They also believe that use of plasma for teaching English enhances students’ language learning. However, the teachers’ worry is mainly

on the way the technology has diminished their roles as teachers of English. Almost all the teachers are of the view that they are non-reflective implementers of the TV lessons rather than the inquirers; for the amount of time given to the classroom teachers is nominal that hardly allows them to enact their roles properly.

Though the students are not the major targets of this study, fifteen students were selected on the basis of purposive sampling technique to further validate the data from the teachers.

The focused group discussions held with these students have indicated that the students basically are interested in learning English on plasma. They feel that in most cases the plasma teacher is more proficient than their classroom teacher. However, the students have clearly stated that in the present condition they are not interested in the use of plasma for instructional purposes. As to the students, the very fast presentation of the plasma lesson in which they do not get relaxed time for pair and group work, for asking questions their classroom teacher and above all the wash back effect of the national exam where there is a huge discrepancy between the contents of plasma lessons which are mostly skill based and the national exam which is grammar based have made them reluctant toward plasma based English lessons.

As to the advantages and disadvantages of using plasma for the teaching of English, most teachers have stated the advantages and disadvantage as follows. To begin with, it is the strong conviction of the teachers that the plasma teacher's language proficiency is by far better than most classroom teachers. This according to the majority enables the students to learn the language by a teacher with a better competence. The other area which teachers have mentioned as an advantage of learning English using plasma is that technologies create virtual engagement and multi sensory (visual and auditory) so that students can not easily forget what they have learnt through viewing and hearing . As regards its disadvantages, all the teachers and even the fifteen students who participated in the study strongly argue that plasma technology has got inherently the following defects. The first one is plasma lessons can easily be interrupted with power break. On top of that once the lesson has gone unheard, there is no chance for the students to regain it. The possibility of the different plasma accessories such as the fuse, which can easily be abused, for instance, by certain malicious students, is also its other disadvantage. In addition,

the fact that teaching with plasma requires teachers to be technically skilled in troubleshooting when the problem arises is the other demerit of the technology.

Concerning the way plasma based English language instruction affects the classroom roles of English language teachers, as has been mentioned repeatedly in this study, teachers feel that their role has been, to some degree, eroded and confiscated by the plasma teacher. In fact, most of the teachers, relatively speaking, believe that they have retained their designing and managerial roles though these roles are still over shadowed by time constraints which they face. The study, mainly the classroom observations, have revealed that managing the technology itself is an emerging role of EFL teachers which doesn't appear in the traditional classes. Despite the fact remains so, the findings in this study have revealed that most EFL teachers lack the know how of troubleshooting when failures arise. Rather, it has been witnessed from the observation that some students have a better troubleshooting skill than their teachers.

In this chapter, an attempt has been made to draw data on teachers' perceptions toward the use of plasma for instructional purposes and the impact of the same on their classroom roles. In the next chapter the four roles will be brought together to provide a comprehensive description of teachers' professional practice and will be considered in terms of knowledge building and skills development.

CHAPTER NINE: LESSONS LEARNT, RECOMMENDATIONS, IMPLICATIONS FOR FURTHER RESEARCH AND CONCLUSIONS

9.1 Introduction

In this chapter, firstly a summary of the research process are presented. Next, the lessons that the researcher gained are discussed. Then, recommendations to policy makers, EFL teacher educators and other academics are presented based on the findings .Finally, highlights of areas for further research are provided followed by concluding remarks.

9.2 Summary of the research process

As an ethnographic study, this study has been re-framed asking reflective questions based on emergent issues throughout the study processes. The researcher entered the field with only practically confronted problem of teachers' complaints on their inability to effectively perform their roles in plasma supported EFL class rooms. The original intention was to extensively and broadly describe the problem and interpret it in the traditional qualitative research design. However, eventually, the study emerged to be a practitioner inquiry paradigm whose core components are to, firstly, understand properties and causation of the problem and then inquire into ways for maximizing conditions for effective use of the technology for instructional purposes. Moreover, instead of the traditional descriptive approach, the Constructivist Grounded Theory data interpretive framework was adopted to focus on rigorously uncovering the underlying patterns in the data. . With the fundamental methodological shift, the researcher focused on inquiring and contributing an innovative window of opportunity for studying the problem. That is somehow a good experience, an experience of constructing and re-constructing methodological tools and insights out of a research project grounded in experience.

As is the case in qualitative research, the findings of this study are unique to the particular researcher, participants, informants, practitioners and context of this study. The transferability of these re-constructed understandings for role performance and reflective practices is established

as the reader considers the findings in the contexts of specific situations of interest. Beyond everything, the researcher cannot claim infallibility of his findings. The researcher tried to enhance the quality of the research through various strategies, namely triangulation, being sensitive to transferability and communicative validity-checking trail (Chapter Three Section 3.7.). Yet, there is an assumption by the researcher that the qualitative paradigm, the ethnographic inquiry, the Grounded Theory Methods of data analysis, the participant observation strategies, and the quantitative data on teachers' perceptions all have, to a greater extent, enabled him to attune to, resonate with and understand the experiences of most of the participants in their context with the aim to cooperatively transform the situation of the problem.

9.3 Lessons Learnt

A number of lessons have been learnt from this study. *Substantive* and *methodological* categories of lessons have been learnt, each of which shall be discussed as follows.

9.3. 1. Substantive Lessons Learnt

(i) Within the context of the roles of teachers, the study has demonstrated that teachers' roles fall into four areas: *designing the learning environment*, *managing people and resources*, *mediating learning and improving practice*, and in this study they have been described in terms of their capacity for knowledge building. The detailed descriptions are intended to assist teachers, those intending to become teachers, and their teachers in pre-service institutions, to review teaching and plan for the future. They show that many teachers are attempting to create knowledge-building communities in spite of perceived organizational and system constraints. In the current study these roles were all based in the physical classroom, but they have the capacity to be developed in new time and space arrangements, and are therefore useful in considerations of the future of teachers and teaching. As discussed in Chapter 3, a study such as this with the intention of providing advice to teachers, schools and systems, should tackle the issue of what *could be*, so it was felt important to capture and report on single instances, because if an occurrence supporting knowledge building is found in one setting, it might be able to be implemented in another

(ii) From the research it has also been understood that teachers' designing role involves planning physical environments at the scale of both the classroom and the school, including the use of horizontal and vertical space, layout of furniture (fixed and movable). These and other design decisions are based on teachers' espoused learning theories, currently influenced by cognitive psychology (for example, using multiple intelligences) and social constructivism (for example, employing collaborative group work).

Generally, the influence of the teachers in this study was felt in the classroom rather than across the school, except where a teacher held a position in which input to decision-making was expected. The capacity of secondary teachers to influence design - even of the classrooms where they taught - was limited, as they moved from room to room throughout the week and as every thing is pre designed by the Ministry. A whole-school approach to design, in which all teachers' contributions of theory and practice were welcomed was rarely evident. Teachers' designing role also involves planning the curriculum within mandated statewide guidelines (which allow for a shared discourse) and making decisions regarding student activities that are based on consumption, (re) production and creation but this was not a practice that was frequently observed. Teachers using a constructivist approach focus more on designing open-ended tasks - requiring (re) production and creation as described in Chapter 2-which require multiple perspectives gained through student collaboration. Similarly, they design activities that cross the boundaries of the Key Learning Areas rather than confining themselves to specific disciplines. In this study, teachers didn't tend to collaborate with their colleagues in the school, but compared with the potential suggested in the literature (Fisher, 2001; Scardamalia & Bereiter, 1999), only involved students in designing the learning environment in relatively limited ways for the schools' environment itself was not appreciative of teachers' decisive roles over their classroom designs.

(iii) Managing people and resources, the second role identified in this study, takes place in the designed context. In this role, it was learnt that teachers focus on managing students, but other people such as teachers, technical support staff and outside experts are increasingly included in the human resources available. Teachers who espouse student autonomy as a goal involve students in management decisions such as organizing their tasks (through teacher-student

contacts or individual learning plans) and organizing their work groups and teams. Unlike historical views of teacher/whole class relationships, teachers orchestrate the work of students as individuals, small groups and teams, and only sometimes as a whole class.

Likewise, the equipment must be maintained to function properly when required, and only in some cases were there technical staff other than some students available to assist. Some teachers in this study also found that collaboration between teachers and with other staff and professionals in managing people and resources was important in increasing efficiency, building team work and sharing knowledge. Even where it was difficult to manage new uses of technology and external relationships, teachers saw it as part of authentic practice though its practicality was largely influenced by administrative and resource constraints including time.

(iv) Teachers' role in mediating learning also takes place in the designed context and is influenced both by the design and management decisions. It hinges on the teaching-and- learning process (Mercer & Fisher, 1998) which is clearly shared between teachers and students in language classrooms using technology making the classroom focus on learning rather than either teacher – or student-centeredness. Teachers, thus, help students to learn about learning while they engage in the work of the class, which is activity-based, leading to an expanded *pool of knowledge*. Teachers have an important part to play in identifying and addressing the prior experience of students and using their knowledge of learning theories (such as Vygotsky's zone of proximal development) to scaffold learning. They also engage continually in monitoring and assessing student learning, and giving feedback. In the mediating role, teachers encourage communication through talk (dialogue and conversation), face-to-face, between all types of people involved in the learning process. Teachers have particular expertise in talking with students, individually or in groups, to develop reflection, draw out learning, challenge and question processes and outcomes. Most in this study held the belief that social connectedness is important for learners, and this was manifested in their interactions with students and, in some cases, in situating learning opportunities in a real context

(v) Improving practice is the workplace learning role of teachers, and one in which they work together to improve professional practice through increasing personal and collective skills and

knowledge and trying new ways of school organization. Knowledge-building teachers and leaders encourage and support each other in this work, and in setting goals for development that benefit individuals, the school and the broader society. To achieve these goals, knowledge-building EFL teachers take control of the time available, such as changing school arrangements to allow for group reflection. It has been learnt from this study, however, this can rarely be done individually, as it requires commitment from leaders and other teachers.

(vi) Like students, teachers learn through open-ended exploration, often termed *play*, especially when exploring the potential of technology. They also learn through talking together, a process of sharing tacit and explicit knowledge and developing a local discourse in addition to the often-used discourse of the system. Teachers in this study tended to prefer harmonious discourse rather than the dialectic and debate, which like the *pearl in the oyster*, can have valuable outcomes for community knowledge. The findings of this study have also demonstrated that the historical isolation of teachers in their work is not still being replaced by a more collaborative approach to improving practice in this study. Most teachers in this study were not engaged in reflection-on-action and several did not write personal reflective journals in which they could review practice and, in some cases, anticipate future action. Knowledge-building teachers innovate by exploring new ways of making meaning. They document their experience in print and electronic repositories and present their new knowledge at workshops and conferences, often in conjunction with researchers. However, Many EFL teachers in this study did not use one or more of these ways of sharing innovative practice. Therefore, they were less likely to use their knowledge to contribute to decision-making in the school, or to articulate their developing theoretical knowledge based on their practice.

(vii) With regard to teachers' perceptions and attitudes towards the use of plasma in the teaching of English, the study has identified that basically teachers have positive stance toward the use of plasma for instructional purposes. They also believe that use of plasma for teaching English enhances students' language learning. However, the teachers' worry is mainly on the way the technology has diminished their roles as teachers of English. Almost all the teachers are of the view that they are non reflective implementers of the TV lessons rather than the inquirers, for the

amount of time given to the classroom teachers is nominal that hardly allows them to enact their roles very properly.

(viii) Though the students are not the major targets of this study, fifteen students were selected on the basis of purposive sampling technique to further validate the data from the teachers. The focused group discussions held with these students have indicated that the students basically do not dislike learning English on plasma. They feel that in most cases the plasma teacher is more proficient than their classroom teacher. However, the students have clearly stated that in the present condition they are not interested in the use of plasma for instructional purposes. As to the students, the very fast presentation of the plasma lesson in which they do not get time for pair and group work, for asking questions their classroom teacher and above all the very wash back effect of the national exam where there is a huge discrepancy between the contents of plasma lessons which are mostly skill based and the national exam which is grammar based have made them be reluctant toward plasma based English lessons.

(ix) As to the advantages and disadvantages of using plasma for the teaching of English, most teachers have stated the advantages and disadvantage as follows. To begin with, it is the strong conviction of the teachers that the plasma teacher's language proficiency is by far better than most classroom teachers. This, according to the majority, enables the students to learn the language from a teacher with a better competence. The other area which teachers have mentioned as an advantage of learning English using plasma is that technologies create virtual engagement and multi sensory (visual and auditory) so that students can not easily forget what they have learnt through viewing and hearing (Carey,1993,2002;CAN,2006). As regards its disadvantages, all the teachers and even the fifteen students who participated in the study strongly argue that plasma technology has got inherently the following defects. The first one is plasma lessons can easily be interrupted with power break. On top of that ,once the lesson has gone unheard, there is no chance for the students to regain it. The possibility of the different plasma accessories such as the fuse, which can easily be abused, for instance, by certain malicious students, is also its other disadvantage. In addition, the fact that teaching with plasma requires teachers to be technically skilled in troubleshooting when the problem arises is the other demerit of the technology.

(x) Concerning the way plasma based English language instruction affects the classroom roles of English language teachers, as has been mentioned repeatedly in this study, it has been learnt that teachers feel their role has been, to some degree, eroded and confiscated by the plasma teacher. The major role which teachers feel that it has been replaced by the plasma teacher is the actual instruction of the lesson. In fact, most of the teachers, relatively speaking, believe that they have retained their designing and managerial roles though these roles are still over shadowed by time constraints which they face. The study, mainly the classroom observations, has revealed that managing the technology itself is an emerging role of EFL teachers which does not appear in the traditional classes. Despite that, the findings in this study have revealed that most EFL teachers lack the know how of troubleshooting when failures arise. Rather, it has been witnessed from the observation that some students have a better troubleshooting skill than their teachers.

9.3.2 Methodological Lessons Learnt

In this study, the ethnographic methods benefited from some constructed situations. For example, the development plan/action strategy of reflective journaling and reflective discussions worked as both instrument for reflective practice and method of data generating. This was made possible because of the small size (twenty five) of the participant teachers.

Besides, there were some situations which improved the study but such situations were not repetitive enough to reanalyze. For instance, such constraints to reflection-in-action as power-cut, redundancies of the plasma lessons, and variations in class size, all emerged as both obstacles and opportunities for reflective re-construction of the situations for the research processes. They served as stimulus and objects for reflective journal keeping, narrating and group deliberations.

Studying and flourishing a culture of EFL teachers' roles as reflective implementers' of plasma supported lessons through reflection for/on/in action and, especially, reflection about practice, or reflection on reflection, is more effective in knowledge building when it is collaborative. That is to say effective role performance in plasma context requires coordinating multi-programs, cross-

disciplinary and multi-institutional study cultures rather than limited to, for instance, EFL teacher educators alone. For instance, sociologists, ICT experts, social psychologists and anthropologists can work together with EFL-educators, applied linguists both on methodological and substantive issues.

The conceptual model was refined on many occasions, as might be expected of this type of research. The model, as it currently appears, was developed through close observation of and reflection on, teachers' practices, in the context of the social theory of communities of practice (Wenger, 1998). While there are other ways to view the context, such as through the lens of teacher competency and performance, or from a critical ethnography stance, the choice of the model and approach was appropriate in terms of the literature underpinning this study and my prior views.

9.4. Recommendations

Based on the empirical findings, re-constructed understandings and experiences in this particular setting of this study, some key recommendations pertaining to the effective use of plasma for the teaching of English, the roles of teachers, curriculum designing and practical processing of professional learning are outlined from four angles.

9.4.1 System Responsibility

(i). This study has identified that the biggest challenge to the live televised-lesson, or customarily called *plasma is the constraints it imposes on teachers' reflection-for/in-action, action research and practitioner inquiry* '. All the teachers and the research informants concurred that, it made reflection for/in action irrelevant, for it gave teachers pre-determined contents and time, each of which they have no control over at all. It left teachers diagnosticians or, as an educational sociologist said, "gatekeepers" (Brook, 2006). It gave the teachers time stress and context dilemma and inflexibility. Furthermore, it made action research, for teachers, and the joint practitioner inquiry, for the researcher, impossible, each of which normally requires testing out an innovative action. This problem can be alleviated if the EFL-lessons package is recorded on,

for instance compact discs (CD) and distributed to teachers rather than it being transmitted from a single studio from the capital city. Another possibility might be making the lessons available online; however, observations indicate that although internet cables are observed the internet connection is either malfunctioning or is only available at, in one of the research informant's words, "snail's pace". The general recommendation given here corresponds to what Connelly and Clandinin (1986), prominent second language teacher education theorists, point to as necessary for us to prepare effective teachers. Teachers must actively participate in innovating, researching and designing second or foreign language teaching/learning curricula, syllabi and teaching/learning practices.

(ii) One of the major challenges the introduction of plasma for instructional purposes is posing to teachers is on their management of the technology itself. It has been noted in the course of this study that most teachers do not have the know-how of trouble shooting, even when minor problems happen such as the removal of a fuse. Thus, it is recommended that teachers be given some training on trouble shooting on the plasma and its accessories before they are assigned to teach with it.

(iii) The findings also indicate that reflection is less common than action among teachers and was often informal and undocumented, and at a low level (Zeichner & Liston, 1996). Some teachers established regular times for their private journal writing or occasional group reflection, and in some cases the school culture encouraged these practices through providing time and space, or mandating journal writing. These practices, along with teacher talk, are important, according to Wenger, for the development of self and also for learning about a wider world. However, there was little evidence of teachers reflecting together, or reflecting on artifacts such as student products, or in the social reconstructionist tradition: one that would lead to wide-reaching change in schooling, particularly through the designing role. Although reflection is encouraged as a means of improving practice (Darling-Hammond & McLaughlin, 1996), it could be that in their rush to be active and not to waste precious time, some teachers are missing opportunities to imagine new roles and to make new meanings of teaching. Similarly, although many teachers claimed to build theory from their practice, explicit evidence of theory developing from practice (rather than that taken and espoused from external sources) was very rare. In this respect, it is

recommended that the notion of constellations of communities can be applied to education systems, indicating that this study has implications for the state system of Ethiopia and more broadly for other organizations and corporations. If system decision-makers in education, in the Ethiopian context, want EFL teachers and schools to engage in knowledge building and innovation, they need to ensure that they are engaged in knowledge building through systemic structures and behaviors (Hargreaves, 2003). This requires a balance between system facilities of engagement, imagination and alignment, accompanied by trust in schools and teachers, to enable them to bring about their own transformation. The curriculum and standard frameworks are a case in point. The findings indicate that in some cases teachers feel constrained rather than supported by the extent of the system's accountability frameworks, and their discourse is often framed in system terms to the exclusion of personal theorizing and a local discourse of supporting engagement, alignment and imagination. However, as familiarity with the purpose and content of frameworks grows, they see them as useful tools to support practice, indicating that systems should provide relatively empty frameworks with a clear purpose, coupled with trust in teachers' capacity to flesh them out in conjunction with students.

(iv) One common reason unanimously emphasized by both students and teachers for their lack of interest in the learning and teaching of English using plasma is the very disparity of the contents of the plasma lessons whose focus is on the four macro skills of the language and the contents of the national exam whose focus is on grammar.. Thus, it is the system's responsibility to maintain the match between the contents of the plasma lessons with that of the contents of **The Ethiopian General Secondary Education Certificate Examination** to avoid the disparity between the two on the students' interests.

(v) A school is a constellation of communities connected both intentionally and by circumstance. This is conveyed in Figure 9.3, which adapts the singular hexagonal model of teachers' roles developed in Chapters 2 and 3 to show how communities of practice currently form constellations, depicted in A. The inner circle represents the teacher, and the hexagon is the classroom community of practice. The continuity of the constellation is then understood in terms of interactions among practices: boundary objects and brokering, as depicted in B. Boundary objects such as documents that make tacit knowledge explicit (Hargreaves, 1999) assist in

sharing knowledge across boundaries, and teacher-brokers are located nearer the periphery than the center of each community. Their links are indicated by arrows between communities. Some communities look further out and make links even in wider field.

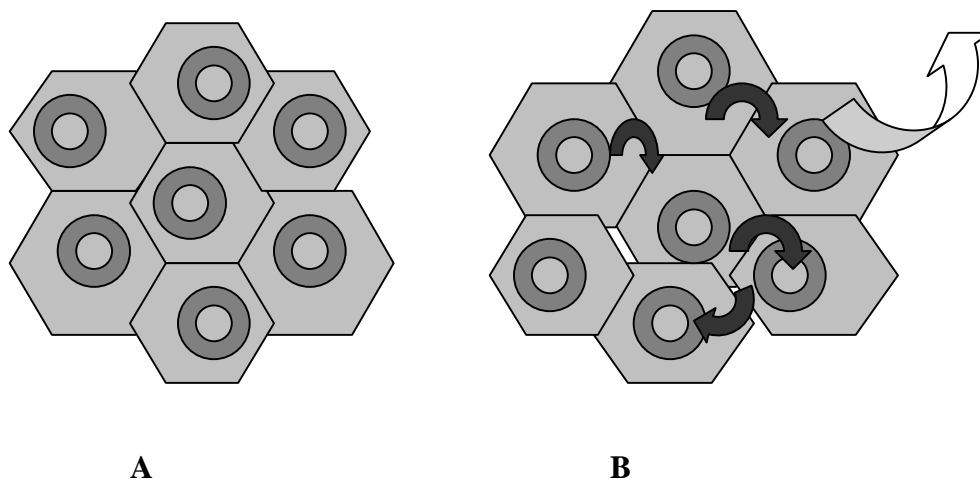


Figure 9.3 Islands of excellence and constellations of learning communities

This model can be developed further in light of emerging practice, particularly to include groups of teachers, rather than individuals, in the central ring: a model of collective competencies. The final part of this section illustrates a means of capturing current and emerging practice in schools.

Although not exhaustive, the findings showed a range of conditions for, and characteristics of, a more effective use of plasma for instructional purposes, which have been used to develop a framework document designed to promote discussion and to inform teacher professional learning and pre-service education. As foreshadowed, the findings establish some of the expectations for a zone of proximal development of teachers' learning in communities of practice. If teachers wish to develop communities of practice of teachers and learners, in classrooms and across schools, these characteristics can provide a way of mapping current practice and suggesting future action. Accordingly a document based on the findings in Table 9.3 was prepared and shared with participants at the end of 2011. The core of this document is presented as a list as in

Table 9.3 and the version sent out is found in Appendix K. It provides a framework that can be fleshed out locally by specific practices.

Table 9.3 Mapping EFL Teacher's Roles in plasma delivered EFL class rooms

1. EFL teachers should have shared Knowledge in plasma delivered lessons in participating in curriculum planning.
2. EFL teachers should design the classrooms/ learning spaces to support their philosophy of learning.
3. EFL teachers should involve students in planning their curriculum.
4. EFL teachers should design and write up purposeful tasks which encourage student collaboration.
5. EFL teachers should find curriculum and standards frameworks useful rather than a constraint.
6. EFL teachers should be given an opportunity to link across Key Learning Areas when planning curriculum.
7. EFL teachers should plan lessons with teachers in their own school and other schools.
8. EFL teachers should use technology to assist in their own lesson planning.
9. EFL teachers should plan for students to use open-ended tasks such as free and guided writing.
10. EFL teachers should encourage self-management in their students.
11. EFL teacher should share responsibility for student management and model collaborative leadership.
12. EFL teachers should model and demonstrate the use of technology to students.
13. EFL teachers should ensure that students collaborate when using technology.
14. EFL teachers should motivate their students intrinsically through experiencing achievement rather than through extrinsic rewards.
15. EFL teachers should encourage students to move around the school whenever their learning requires.
16. EFL teachers should not be constrained by the length of class sessions.
17. EFL teachers should encourage students to link with adults who support their learning eg.

experts, community members, relatives, other teachers.

18. EFL teachers should encourage students to use the technology at whatever time they need
19. EFL teachers should cope with and solve equipment problems when it happens!
20. EFL teachers should believe that learning takes place when students work together to make sense of their world.
21. EFL teachers should model good teaching and should be often in each other's classrooms.
22. EFL teachers should build on students' talents and past experience.
23. EFL teachers should actively support students in learning how to learn.
24. EFL teachers should engage in dialogue with students both face-to-face and using technology eg. Email and discussion groups.
25. EFL teachers should focus on open-ended and inquiry activities with students.
26. EFL teachers should vary the amount of structure for different students.
27. EFL teachers should engage in reflection with students about their learning.
28. EFL teachers should constantly monitor learning through teacher and student assessment, including self-assessment.
29. EFL teachers should believe all teachers are learners.
30. EFL teachers should set personal and group goals for their professional learning.
31. EFL teachers should enjoy learning about new ideas and new ways of working.
32. EFL teachers should share out knowledge with many other teachers within and beyond their school eg. Through presentations, publications, web sites.
33. EFL teachers should reflect together on their goals, their practice and on relevant data.
34. EFL teachers should modify their practice as a result of reflection.
35. EFL teachers should develop theories about learning from their practical experience.
36. EFL teachers should use both their experience and data to contribute to making decisions in their school.

³As noted in chapter 3, 80% the participants returned completed maps.

(vi) Learning opportunities need to be situated in the sense that they are teacher driven (Clark, 2001) – although not necessarily workplace based- and connected with broad social purpose. Professional development strategies that focus on providing emptiness – space for reflection, collaboration, conversation and debate – will support an emphasis on creation rather than consumption of knowledge. This has implications for those currently responsible for teacher learning in schools, as it places the focus clearly on school communities providing for their needs, and would affect the market for external professional development providers. Teachers at present value face-to-face encounters. Therefore, any support for teacher learning needs to be based on an open-ended, constructivist approach which values teachers’ prior experience and multiple perspectives. Teachers will use this support where they see a purpose for it and they have access to the required infrastructure.

(vii) Reflection should continue to be promoted as a means of professional learning. However, a wider range of forms of reflection can be used, taking into account its purposes and people’s learning styles. In line with the implications of emerging roles, social reconstruction (rather than individual navel-gazing) should be highlighted as a purpose of reflection (Cochran-Smith & Lytle, 2001). The forms of reflection can include and value oral tradition rather than reifying only that which can be printed, so that providing real opportunities for teachers to talk together can be effective. Technology can support this through audio and videotaping and video and teleconferencing, while tools such as the framework in Table 9.3 can guide reflection towards large-scale issues and point to development needs. Teachers themselves need to reflect on, and talk about emerging roles and role configurations, and this should be a focus of policy at school and system level.

9.4.2 School responsibility

While the emphasis on building skills and confidence within the local school community is laudable, it can limit knowledge building by reducing available perspectives and constantly reinventing the wheel. Local communities of practice need to be involved in designing their own learning, but not to the exclusion of other points of view. Hence, communities of practice must

cross boundaries and learn the language of other groups in order to share their knowledge, as well as bringing a diversity of perspectives into the community. The current impetus for government schools in Ethiopia to collaborate as clusters of schools has the potential to enhance this.

9.4.3 Teacher responsibility

If teachers are to develop classroom communities of practice, they will need to be very familiar with current frameworks and tools, since it is only then that they can use them as springboards for practice and as empty structures waiting to be filled with authentic activities. They will also need to become more aware of the continuum of language tasks from consumption, through (re) production to creation in order to provide opportunities for all three modes, but particularly creation. They need to involve students more in designing, managing and mediating learning, thus allowing them to move from the periphery to the centre in terms of expertise in learning processes. Student input can be used to improve the middle years experience, and where arrangements in schools are reviewed, as Hill and Russell (1999) argue, students can contribute to identifying appropriate organizational changes that support knowledge building as described in this study. These strategies would change the usual teacher-student relationships, and therefore could not be implemented without the cooperation of students.

9.4.4 Practitioner-researcher links

Collaborative partnerships whereby classroom communities work together, the teacher and researcher communities work together have the potential to generate broader social transformation. Teachers in this study have shown that where there is a culture of learning from each other, they can share ideas and practices. An intertwining relationship would focus on teachers as research partners with external researchers. The finding would assist to meet Hargreaves's (1999) aim of supporting teachers with research skills, without taking their attention away from teaching practices.

While some of the implications appear minor, they require cultural change, and in the first instance, the capacity to take risks. But since learning involves taking some risks, it is high time that teachers were freed as professionals to join the ranks of the *interacting* rather than being viewed as passive participants: the merely *interacted* (Castells, 1999).

9.5 Implications for Further Research

A number of future focal points for action for both the researcher and other practitioners have emerged from the present study. By considering the context of the four schools where this research has been conducted and similar plasma supported EFL context, the following major areas of further research are recommended as a point of departure:

(i) This research is indicative of the fact that under any level of constraining conditions, there is always space for maneuver if we inquire into the conditions. Nevertheless, sometimes paradoxes were observed. One of the interesting unobtrusive observations was that, the EFL teachers experience theory-practice inconsistency. That means, they for instance, in principle knew that prescriptive feedback, judgmental assessment and lack of reflection in/on/for action are all “unproductive”, in their words, but still they practically did practice all these. What is more fascinating is that they knew also that there is always a window of opportunity, however little, to transform their practice conditions, for instance, through longer participant observation of lessons and organizing post-lesson group discussions. What is the cause for such a practice-theory inconsistency? How can it be improved? Studies should reveal the deeper properties, patterns, causations of this phenomenon and ways for overcoming it.

(ii) Another emergent problematic category was the disintegrated or non-cooperative interpersonal (e.g., school teachers and school administrators) and inter-institutional (e.g., school-university, school-school) relationships. This might be indicative of what Schön (1983; 1991) calls *culture of hierarchies of knowledge*, which was (and may be is) rampant in Western universities, too. Nevertheless, further studies and actions are necessary to change this rather to a collaborative community of reflective practitioners.

(iii) This study has indicated that (a) describing of a phenomenon or what is going on in plasma supported EFL lessons here and now, (b) surveying of perceptions or attitudes towards the phenomenon, and/or (c) interpretation of these in a monological and non-participative ways miss or are incomplete description of the reality. For instance, had it not been participative, this study might not have discovered that the core factors that sustained the inability of teachers to perform their roles is the prescribed nature of the plasma based instruction which hardly gives space for teachers' adequate role performance. Moreover, initially the participant teachers were unconditionally appreciative of the condition under which they were practicing, but later after participant observations and dialogic discussions they began to expose their true self. [See, for instance, that of Jeylan's 2006 findings that the problem lies just in teachers' poor English proficiency]. Furthermore, it has been learned that description and interpretation lack *action and explanation*. It is one thing to describe and interpret and report, it is another thing to take action and explain in order to contribute to changing the situation of the problem. Exploring alternatives, by intervening and taking actions, is what EFL teacher training across Ethiopian teacher education institutions, seriously needs. Explanation, in this sense, involves causal analysis—disentangling the generative factors for appearance of the phenomenon. Experience in this study has indicated that teachers, usually and without help, are unaware of the causal dynamics for how they behave (what they say, act, or feel) and why they selected to do so (the way they say, act, or feel).

This means that respondents or interviewees are reflective, concept-bearing and concept-inventing humans. In other words, as experienced by the researcher, they can close themselves, for instance, if we do not approach them in dialogic and participative ways. Thus, the researcher calls upon other practitioners and researchers to unleash further research, reflections and discourses on the relations of the research, the researched, the participants and the context, especially, in the Ethiopian context. The researcher's experience shows that the vast majority, if not all, of graduate theses that the researcher came across are descriptive and/or interpretive studies. By promoting reflections on research and paradigms of research, the prevalent compartmentalization and gaps between theory and practice, action and reflection, teachers and educators and teaching and training will narrow.

(iv). By way of naturalistic observations in the four schools, the researcher unintentionally observed that almost the vast majority of pupils failed because, according to the school teacher, they “lacked a language for discussing even the very basic local issues, materials, and furniture.” This might well connect to the nature of reflection skills difficulty that this study identified. Although it is possible to predict this problem from the findings of this study, for instance arguing that their situation might be characteristic of disconnection among reflection/discussion, EFL language and the context, this only describes the situation rather than critically explaining. Therefore, what exactly this problem means for EFL teacher educators and their practices and how it can be critically and empirically explained remains to be examined. An insight to this might help us gain further insights into ways for connecting university-school practices.

(v.) This study has indicated that studying the roles of teachers alone is far less than promising effective learning on the part of the students with out making an extensive inquiry into the roles of students and their perceptions on the use of plasma for instructional purposes. In this respect, for example, the conversations held with students for supplementing the teachers’ responses have revealed interesting experiences of the students which if explored well can have the potential of producing a complete picture on the use of plasma for teaching purposes and their roles in it.. Research on these issues plays a vital role in improving the practices and systems of EFL teaching using plasma in the country.

(vi) Teachers, researchers and teacher educators form a triad, each focusing on their specialty, but acting in collaboration. Further research in partnership would capture both the development of these partnerships and the ensuing knowledge, in projects that test the generalisability of the findings of this study in other types of classrooms such as science, mathematics, social sciences, with other age groups and in other combinations of physical and virtual environments. School-based action research can be used to test the potential for disaggregating of roles among teachers in schools. This could be embedded in curriculum projects implementing new technologies, rather than added on to teachers’ regular work. The tools developed through this study and givenas recommendations in Table 9.3 could be used as a basis for reflective practice by teachers in conjunction with researchers, while further documentation projects where researchers work with teachers to capture their perspectives and practices for sharing more widely would also be valuable.

9.6 Concluding Remarks

A final remark for the researcher is that, he came to this research with an enthusiasm of better understanding EFL teachers' classroom lives, mainly their class room roles in plasma supported EFL classes. What was equally important for the researcher was to identify the perceptions of teachers on the use of plasma for pedagogical purposes of EFL teachers and given the identified conditions of the problem, what could be done to improve the situation. In order to get complete picture of the problems at hand, the study has mainly concentrated on describing classroom activity from the teachers' perspective and as much as possible, through teachers' voices. As such, it provides a contribution to the current state of knowledge about teachers using technology in relation to classroom life. The researcher has emerged from this research with a strong body of evidences that support the notion that their inability to perform their own roles properly as teachers and learners are most teachers' lack of proficiency in the language it self(see 4.2,chapter 4), teachers' lack of the conditions of reflection mechanisms that trigger re-construction of their own actions and assumptions through systematic reflection for/in/on/about their practices, lack of time , be it in class or out of class to enact their own roles in an intelligent way and lack of technical know how in managing the technology itself. The research has enabled the researcher to become a more informed practitioner in the process in his professional ambition of training EFL teachers who in the future can teach English using technology in general and plasma in particular..

Furthermore, although not exhaustive, the findings have showed the researcher a range of conditions for, and characteristics of, knowledge building, which have been used to develop a framework document designed to promote discussion and to inform teacher professional learning and pre-service education., none of which the researcher was aware about previously.

Community of practice is a term that has recently crept into educational discourse, but it is not always described in detail. As my study proceeded, I discovered through reading, observation and conversation that the notion of community of practice gave insight into the findings, while the findings could flesh out the concept. I considered Wenger's theory helpful as it provided an architecture that was appropriate for housing the substance of many findings. To do this I

considered students and teachers as part of the community of knowledge builders, but focused on the teachers' points of view, as the resources devoted to the inclusion of student voices would have meant a reduction in the depth of teacher data.

This study has clearly not reified technology, but has seen it as part of the emerging context for knowledge building. People are the important players in a social theory and the role of technology is to support them in their endeavors. The study has shown several aspects of this enabling role.

Finally, in reflecting on my personal learning process over the past four years, I can honestly say that returning to school settings for this study has been a powerful learning experience, underpinning my hope for the future. I was reminded that teachers want to make a difference in student lives and are keen to explore how best to do so. I valued the sense of partnership as we reflected together on their practice, crossing the discourse and cultural boundaries between researchers and practitioners. As a language teacher of over fifteen years, I came to reflect on my own beliefs and my teaching in a new light. In fact I felt my passion for teaching rekindled and came to understand the meaning of Eliot's words: "to arrive and know the place for the first time" (Eliot, 1963). This I attribute to the benefits obtained through engaging in intertwined action and reflection with others. As a result, I believe that innovation and knowledge building will depend on educators and learners from all settings working in a more holistic way, engaging in both action/exploration and reflection, in building theory from practice, and sharing both their explicit and tacit knowledge.

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Appendix A: Pilot Report

Table A.1 Demography of teachers observed

Teacher	Age range	Years of teaching	Gender	Number of observation
001	31-35	5-8	Male	3
002	26-30	5-8	Male	3
003	45 ⁺	17 ⁺	Male	3
004	36-40	13-16	Male	2
005	20-25	1-4	Female	3
006	20-25	1-4	Female	3
007	45 ⁺	17 ⁺	Male	1

The age range generally reflects the Ethiopian teaching service, which has an average age of nearly 32.8 years and few teachers in their 20's. The years of experience teaching generally match with age, indicating that teaching has been the main career. Eighteen observations were undertaken in the teachers' classrooms during the one month's time. Some teachers were observed more than once depending on their availability. In each case there was a plasma supported English lesson going on in the classroom. As I moved about the classroom I made handwritten notes, including verbatim quotes. The particular areas of interest were teacher and student behaviors including use of the technology and the extent of teacher's talk to the whole class, groups and individuals. I rarely interacted with teachers or students unless it was initiated by others. Following the observation, I wrote up the notes in detail, coded the documents manually using different coding strategies discussed in chapter three and classified the data to show the range of current teacher roles.

Findings

The main working relationships observed were between teachers and students, and students with students.

The following Vignette from a secondary classroom shows the types of classroom activity observed during the study.

A Secondary Classroom (School B, Teacher 001) Role

The class of eighteen male and eighteen female 10th grade students have entered their plasma based English classroom.

It is the 3rd class of the day scheduled to last for 45 mts.

In the classroom are 45 fixed benches arranged in 3 rows.

The plasma is situated parallel to the door at the left hand corner in the front position where it could be visible to all the participants. The room is painted half white and half lemon and is fairly light. There is a blackboard at the front of the room and a table where the classroom teacher puts his teaching aids.

As quite a good deal of students don't have their own textbooks, the teacher is assigning them to those who had their books.

The teacher has previously written instructions for the class, which is on pollution on the black board. It is a listening task

As could be learnt from the teacher's daily lesson plan that the topic of the day's lesson is pollution whose main content is listening comprehension (listening to a text and summarizing the passage). The specific objectives of the lesson are read as "By the end of the lesson, the students should be able

Planning location

Designing layout

Managing people

Planning

Curriculum

Planning

to a) listen to a text and summarize the passage by choosing the topic from a set of 3(4) choices; (b) listen to specific information

Before the plasma lesson begins, the teacher revises the previous lessons through question and answer method.

Managing
Content

At 10:17 am he speaks to the whole class as a whole “Hello! students our today’s topic is pollution-lesson 8 listening. Please open your books on page 139” He tells to the students to listen to the listening text to be presented by the plasma teacher and answer the questions of the summary of the passage from a set of multiple choice items in their book on page 139. The students listen quietly as the teacher continues .

Managing
People

“I will now turn the plasma oh! the fuse is taken away. So I should bring it from another class” Here it is now--- ”
(the teacher is of course a bit nervous)

Managing
Technology

These instructions take 5 minutes after which the students begin listening to the passage read out by the plasma teacher. In between 3-5 minutes break is given in which the classroom teacher is trying to implement the instructions given by the plasma teacher which calls for group or pair discussion to come up with the most appropriate answer. While students are in pair and group discussion teacher moves around the room observing the students and engaging in conversation with them a little.

Managing
People

Monitoring

At 10:43 am the teacher says to no one in particular “Now the stupid power failure has happened” He takes some measures. He checks it from the main power line of the school and finds

Managing
Technology

out that the power break is from the main electric switch board of the school which he could manage it with in five minutes.

The plasma teacher continues her reading of the listening passage and in the middle asks the students to choose the most appropriate summary from the alternatives provided. Here the classroom teacher encourages the students to give their answers.

Managing people
and content

A female student forwards a question to the teacher as to what she should do to summarize larger listening texts- i.e what strategies. She should mainly employ, especially in listening to texts read by foreigners with a bit speedy pace. The teacher (though I observed the question was a bit tougher for him to address critically) he suggests something so that others will also be able to do the same . While this discussion is occurring, the teacher is packing simultaneously his property and switching off the plasma to leave for his next class.

Coaching

From the transcripts above, the observed behaviors of teachers were broadly categorized in light of the literature as managing people and technology, mediating (which included demonstrating, coaching, instructing, monitoring and assessing and reflecting) and improving of the practice of learning. Designing was also included because many teachers referred in class to their prior or future planning and showed evidence of this during observations. Examples of teacher behaviors are shown in Table 4.2 with the evidence taken directly from observation notes and teacher comments. The evidence from specific teachers is labeled with their 3 –digit identification number.

Table A.2 Teacher's observed classroom behaviors

Teacher Classroom role	Examples	Observed	Evidence
Designing	-Preparing lesson plans. -Participating in session with other teachers to plan topics and activities - brain storming with students	Teacher 1, 4, 6	Teacher tells me it took him an hours to work out how to out line his role in the lesson plan and how to design the seating arrangement of students (Male secondary teacher) (001)
Designing	Teachers give general guidelines, direct students to previously learnt lessons, highlight on what is expected of the students in the day's lesson	Teacher 1, 2, 3, 5, 6	Teacher explains to me the students established their own questions to deal with a writing task after brain storm, and gave their proposals to her and negotiated on it (Female secondary teacher 005)
Designing	Teachers give general guidelines, direct students to previously learnt lessons, highlight on what is expected of the students in the day's lesson	1, 2, 3, 5, 6	"Have a look on your book on page 139. There are assignment tasks (Male secondary teacher 003)

Managing People	Teachers allocate access to books to those students with out books by forming groups -- _organize pairs with one relatively talented and one a bit laggard; discipline whole class or individuals, motivate and dispense rewards	Teacher 1, 2, 3, 4, 5, 6	“Now where are many of the students today?” (Most of them came late in the morning and banned by the school for their being late) (Male secondary teacher. [001]
Managing Technology	Teachers turn plasmas and peripherals on and off; attempt to rectify to some degree hardware and software problems, etc.	Teacher 1, 2	Power has gone I think, let me check from the main line. He checked and found out the problem and got it solved (Male secondary teacher 001)
Mediating (demonstrating)	Teachers explain the procedures of performing a given task in addition to what the plasma teacher does	1, 2, 3, 4, 5, 6	Teacher goes to two girls who have selected a topic to write their paragraph on from the corpus data given and explained the process which they need to follow (female secondary teacher 006)
Mediating (Coaching)	Teachers work one on one or with small group to guide students in	Teacher 1, 4	Teacher spends time in center of the room “conferencing” with

	<p>completing a given task; encourage students to consider different aspects, use open ended questions to lead students, encourage students to use graphics to read and rewrite information.</p>		<p>groups of about 4 students. Uses open ended questions with students and often positive responses eg” That is a great suggestion” Male Secondary Teacher [001]</p>
<p>Mediating (Instructing)</p>	<p>Teacher explains to students how to do certain listening or writing etc tasks in pairs and in groups.</p>	<p>Teacher 2, 5, 7</p>	<p>“Now be in pair and write an outline 1st for your paragraph on a title____”(female teacher) [005]. Teacher gives instructions about the plasma lesson, suggests students 1st to listen critically to what the plasma teacher says and instructs them to do silently (Male teacher. [002].</p>
<p>Mediating (monitoring and assessing).</p>	<p>Teachers move around room keeping track of student progress, keep students on task; give feed back; comment on the, spelling, grammar and contents of students works; allocate marks and grades to</p>	<p>Teacher 1, 2, 3, 4, 6</p>	<p>Teacher makes notes about students performance and asks students to present what they have done to the class so that others can learn about them (Female teacher) [006] Students are presenting what they have done on a</p>

	presentations and other tasks		<p>writing task through their group representatives.</p> <p>Teacher assesses the presentation out of 5 (male teacher). [002]</p> <p>Teacher assesses individual and teamwork assignments given by the plasma teacher and announces the result after each group's demonstration (Male teacher) [004]</p>
Mediating (reflecting with students)	Some teachers use different methods to encourage questioning among students, encourage individual reflection at the end of each session.	Teacher 1 and 2	Teacher asks as to what the students felt on the lesson, how the groups worked; as to what should be improved and what is moving in a good way (Male teacher) [001]
Improving practice	Teachers acknowledge a lack of knowledge and seek new information in new ways; reflect on one's own planning and management and student responses	Teacher 1, 2, 5	<p>Teacher says he has learnt troubleshooting upon failure of the satellite TV channeled programme from students (male teacher). [002]</p> <p>Teacher says "I don't know how it's done" so a student shows me (Female teacher). [005].</p>

After the initial observations, all teachers from the school were invited to participate in a semi-structured conversation around plasma supported English lessons: Teachers and students beliefs and attitudes, which is found in Appendix A: Data collection tools. The areas for discussion included the ideal learning environment, student motivation, teacher control and enjoyment of technology and role performance. All the 7 teachers who were observed, participated in the conversation.

Table A.3 Conversation dates and participants

Date	Name of the school	Participants
Tuesday April 7, 2009	Dej Balcha Secondary School	Teacher 1, 2
Wednesday April 8, 2009	Dej Balcha Secondary School	Teacher 5, 6
Monday April 13, 2009	Dej Balcha Secondary School	Teacher 4, 3, 2
Tuesday April 21,2009	Dej Balcha Secondary School	Teacher 1, 6, 3
Thursday April 23, 2009	Dej Balcha Secondary School	Teacher 1, 5, 6
Monday April 27, 2009	Dej Balcha Secondary School	Teacher 2, 4, 5
Tuesday April 28, 2009	Dej Balcha Secondary School	Teacher 7,3, 4

In addition to conversations, four teachers (Teacher 001, 005, 006 and 002) provided journals documenting their reflections. These had been written during 2008 for professional development purposes with in the school, and were offered to me as data. These data, together with the conversations revealed a great deal of evidence of teachers' and students beliefs or espoused theories, and at this stage it became clear that many teachers felt strongly that they have as a

whole positive stance toward plasma supported lessons; however, the very disparity between the contents of the plasma lessons and that of national exam should, according to both the students and teachers, be avoided. The following excerpt from one of the teachers elaborates the idea as follows;

Most of the time the plasma lessons focus on the four macro skills of the language. However, the students like to learn grammar and want the teacher to focus on grammar (male teacher) [002]

Many of the students feel that they benefit less from the plasma lesson. It is benefit based. They believe that it has no value for them in relation to the national exams in which grammar related questions are the most prominent ones (female teacher) [005].

This idea is also further substantiated by the following two excerpts taken from two students.

As plasma supported lessons merely focus on listening and offer skills which don't appear in national exams, our interest is to learn grammar. So we prefer the non plasma class (Male students 001, 005, 007 Female students 011, 012)

On top of this, the data together with the conversations revealed a great deal of evidence of teachers beliefs or espoused theories, and at this stage it became also clear that many teachers felt strongly that they were facilitators and learners that they were comfortable with this role, as the following excerpt shows:

In plasma supported English classrooms the teacher is expected to have a role of facilitator --- for example grouping students based on their interest or their performance... explaining the questions of the plasma teacher to the students if it's not clear to them (male teacher) [002].

I think it has to do with the fact that students not only are learners, but also teachers. They can teach the teachers even things like trouble shooting. They can teach the teachers and that is the onus of responsibility and I feel like I'm involved as much as any --- They know as much if not more than I do. So, it's not so much me teaching them. It is just a sharing of information and knowledge usually as need arises if it's working (male teacher) [001].

The classification of the three roles of teachers (Table A.4) was found to be useful and appropriate, while the teacher as learner was seen to be a role in relation to all others.

Table A.4 The main roles of teachers in technology supported English lessons

Designing Learning environments	Managing people And resources	Mediating student learning
Planning the curriculum Designing the physical And virtual spaces	Managing technology Managing content Managing people	Instructions Demonstrating Coaching Reflecting Monitoring and Assessing

The pilot study indicated that the ethnographic approach and the methods of observation and conversation appeared likely to yield useful data. Here after the details of the analysis of some of the data gathered through the major research tools shall be presented.

Appendix B: Conversation on teachers' roles 2011 (Video and Audio taped)

24 October, 2011

Dear Teacher

Thank you for your participation in the pilot research in 2009. I have some preliminary material that I would be happy to share and discuss with you. My major need at this stage is to observe more classes in action.

I would now like to arrange a visit to your school before the end of semester I .

The purpose will be to observe you and your classroom interaction in Plasma supported English lessons.

I will be making notes and doing some videotaping. To enable this to occur, the consent forms which were sent to you recently need to be signed by you and by any students in the class to be observed.

Immediately following the class, I would like to spend some time (perhaps 20 minutes or so) looking at video snippets and reflecting on the class with you. I would like to audiotape this reflection. This would mean the class has to be before a break or some of your preparation time.

Please contact me soon for more information and to arrange a suitable time.

Yours faithfully

Getachew Baye

Please bring this sheet to the conversation with Getachew Baye.

Name _____

School _____

Gender (Please circle) M/F	Age range: 18-24 25-29 30-39 40-40 50-59 above 60
How long have you been teaching?	Current teaching responsibilities:

Teachers' roles in Satellite TV (Plasma) based EFL classrooms conversation schedule.

Headley Beare (2004) predicts that with greater use of technological facilities (in our case plasma) in schools, the role of the teacher will change dramatically. He suggests that the familiar functions will be broken up and rearranged in to new bundles of activities.

According to recent literature on roles of teachers in technology supported/ lessons, it seems that teachers are involved in three major roles:

- Designing the learning environment, including the physical layout; the curriculum resources.
- Leading and managing people and resources; and
- Mediating students learning

You are also actively involved in your own learning

I am Interested in finding out from you:

- What emphasis teachers put on each of these roles in classrooms using the plasma technology in their English language classrooms? (what do you think should be done and what you can actually do?).
- Any changes which are occurring, or will in the future?
- Which tasks all teachers need to do and which could be shared or discarded?
- What resources and activities which have been valuable for your learning? Of course you are welcome to raise other issues too.

Thank you

Getachew Baye.

<p>1. Beliefs about Language teaching and learning in plasma supported English lessons</p>	
<p>○ Describe your ideal student Language learning environment.</p>	
<p>○ Do you believe all students want to learn English with plasma technology? ○</p>	
<p>○ To what extent should the teacher control the learning of students in satellite TV (Plasma) based instruction?</p>	
<p>○ How important is it to encourage autonomous learning in students in plasma supported EFL classrooms?</p>	
<p>○ How do you address the individual styles of students in plasma supported EFL classrooms?</p>	

<p>2. Attitude to technology (please write brief responses as notes for the conversation).</p>	
<p>○ Do you believe that technology can improve the quality of teaching and learning? How?</p>	
<p>○ To what extent do you enjoy working with the plasma technology in the classroom? Why?</p>	

○ How has using technology changed your students' learning?	
○ How important is it for you to learn new skills and new uses for technology?	

1. Beliefs about language teaching and learning	
• Describe your ideal English language learning environment	
• To what extent do you believe that the teacher should control the learning of the students in EFL classroom?	
• To what extent do you think that plasma supported instruction plays a positive role in developing your English language ability?	
• How important do you think it is for a teacher to have a facilitator role in plasma based language classrooms?	

Attitudes to technology (Plasma based English lessons?)

<ul style="list-style-type: none">• Do you believe that plasma based language instruction can improve the quality of teaching and learning?	
<ul style="list-style-type: none">• To what extent do you enjoy working with plasma in your English language classroom? Why?	
<ul style="list-style-type: none">• How has plasma based instruction changed your students language proficiency.	
How important is it for you to learn new pedagogic skill and new modes of Language learning with his technology?	

Appendix C: Reflective Journaling Instruments

A. Dilemma Analysis Instrument (adopted from Talanquer, etal 2007)

Instructions

Identify a particular challenge or dilemma related to your teaching experience in plasma supported English classrooms. It might be a sticky situation that caught your attention ,made you confused and forced you to make a decision. Carefully build your analysis of the situation addressing the following questions.

1. What was the problem / dilemma?
2. Why was it important or relevant to you?
3. How did the dilemma emerge? How did it develop?
4. How did you try to solve the problem? What was the rational for your decision?
5. How did the dilemma or problem influence your beliefs about teaching or learning?
6. What would you do the next time?

B. Critical Incidents Journal

I. High points of practice

Think back over the past week. Choose an incident that made you say to yourself “This is what teaching is really all about or” “This is a great day in my life as an English Language Teacher using plasma” Write some notes about this incident. Make sure that you write down where and when the event happened, who was involved, and what it was that made the event so significant.

II. Low (negative) points of practice

Think back over the past week. Choose the event that caused you the greatest distress in your practice as an English language teacher in technology supported lessons such as plasma, i.e the kind of event that made you regret or question your joining of the teaching profession or the event that you spent the most time worrying about. Write some notes about this incident of where, why, and when this event happened, who was involved and what it was about the event that was so distressing to you.

Appendix D: Different Code Book Samples Used in Gathering Data

Code book layout Code No _____ Name of the observed/interviewed _____ Date: _____ Time (in GMT): _____ Region: _____ Specific place: _____	
Field note	M e m o i n g

Appendix E: Types of field Note taking code books

<i>Code book Code No</i>	<i>Code book type</i>	<i>Code Name</i>
01	Cognitive mapping	CM
02	Theoretical Notes	ThN
03	Methodological Notes	MN
04	Coded Notes	CN
05	Lesson observation	LO
06	Descriptive Notes	DN
07	Conversation Notes (with teacher)	CNT
08	Conversation Notes (with students)	CNS
09	Teacher's Reflective Journal	TRJ

Appendix F: Methodological Notes 4/004

A. Methodological Note MN

Code No. MN 004

Name of the observed/ Interviewd T001

Gender: Male

Date 27-05-2009

Region: Addis Ababa, Specific place. Balcha Abanefso Senior Sec. School.

Appendix G: Theoretical Notes (Sample)

A: Theoretical Note Th N007/14

Time: (in GMT): 9:00

Code No: Th N009

Specific place: Balcha Abanefso Sanior

Date: 16/04/2009

Secondary School

Region: Addis Ababa

After a lesson observation (LO 007) and lesson reflection on what went on in the classroom with the teacher, I understood that teacher 002 had a total trouble of effectively implementing the lesson for the majority of the students were time and again nagging him to teach them grammar. This was so because the national exam was fast approaching.

B. Theoretical Note Th N001.

Code No: Th N001

Date 14-04-2009

Time (in GMT):2:30

Region: Addis Ababa

Specific school: Balcha Abanefso Senior Secondary School.

“I have to drop my initial conception of gathering data through structured interview to free flowing conversation, because I have realized that highly structured interview has not been able to yield useful and detailed data. Besides, the research auditors in the pilot session have seen this as a major drawback of yielding strong data in the due course of the pilot study.

Appendix H: Catalogue of Field Data/sample

LO = Lesson observation; CT – Conversation with teachers

CS – Conversation with students; St- Student; St = All

Of St: Too 1 = teacher; T = All of T: 001 School = Sc; BASSC=

Balcha Abeanefso Senior Secondary School

<i>Code</i>	<i>D/I</i>	<i>Specific</i>	<i>Date</i>	<i>Time (in GMT)</i>
		<i>Place</i>		
DN 001	T001	BASSC	7-4-2009	10:30 - 12:00
DN 002	All T's	BASSC	8-4-2009	10:30 - 12:00
DN 003	T002	BASSC	8-4-2009	10:30 - 12:00
DN 004	T003	BASSC	9-4-2009	4:00 - 5:30
DN 005	T007	BASSC	11-4-2009	4:00 - 5:30
DN 006	T004	BASSC	21-4-2009	3:30 - 4:30
DN 007	T005	BASSC	22-4-2009	1:30 - 2:30
DN 008	T006	BASSC	24-4-2009	4:00 - 5:30

L0001	T001	BASSC	10-4-2009	10:30 -11:15
L0002	T001	BASSC	11-4-2009	2:00 - 2:45
L0003	T002	BASSC	14-4-2009	8:30 - 3:15
L0004	T003	BASSC	14-4-2009	10:30 - 11:15
L0005	T004	BASSC	15-4-2009	10:30 - 11:15
L0006	T002	BASSC	15-4-2009	11:30 - 12:15
L0007	T001	BASSC	16-4-2009	8:30 - 9:15
L0008	T005	BASSC	16-4-2009	9:30 - 10:15
L0009	T006	BASSC	17-4-2009	9:30 - 10:15
L00010	T001	BASSC	17-4-2009	10:30 - 11:15
L00010	T002	BASSC	17-4-2009	2:00 - 2:45
L00011	T003	BASSC	20-4-2009	9:30 - 10:15
L00012	T004	BASSC	20-4-2009	10:30 - 11:15

L00013	T002	BASSC	20-4-2009	8:30 - 3:15
L0014	T005	BASSC	23-4-2009	8:30 - 9:15
L0015	T006	BASSC	24-4-2009	9:30 - 10:15
L0016	T001	BASSC	24-4-2009	10:30 -11:15
L0017	T002	BASSC	24-4-2009	2:00 - 2:415
L0018	T003	BASSC	29-4-2009	9:30 - 10:15
L0019	T004	BASSC	29-4-2009	10:30 - 11:15
L0020	T002	BASSC	29-4-2009	8:30 - 9:15
CT001	T001,T002	BASSC	7-4-2009	10:15 - 10:30
CT002	T005,T006	BASSC	8-4-2009	5:00 - 5:35
CT003	All T's	BASSC	13-4-2009	10:30 - 12:30
CT004	T003,T006	BASSC	21-4-2009	10:30 - 12:30
CT005	T001,T005	BASSC	23-4-2009	10:30 - 11:20
CT006	T004,T002	BASSC	27-4-2009	3:00 - 4:10

Appendix I: Corpus Data Matrix (Some)

DOMAIN	CODE No.	INDICATORS
Classroom actions	L00 18/7	<p>“.... Classroom teacher writes on the board the days lesson is on the reading passage on page 125 entitled Air Pollution.</p> <p>The plasma teacher warns the students, “Remember your answers [to comprehension questions] should have the....”</p> <p>“The classroom teacher stands in front of the students. Students watch lesson. The class is silent. The TV teacher – Leigh- Jones, tells the teacher to supervise what the students are doing</p>
Planning of lessons	<p>Conv 11/1</p> <p>Conv No11/1</p> <p>DN 007/6</p>	<p>“..... No we don’t have to design lessons. We just use the students textbook and Teachers’ Guide our selves”</p> <p>“.... Could have designed implemented my own tasks, but can’t be put to use due to the plasma....”</p> <p>“Teacher activity – ‘pre plasma, Advising students take notes depending on the plasma lesson; Reading that note for the students; while plasma; checking the students whether they are following the lesson effectively or not. Post- plasma summarizing the lesson in short.</p>
Teachers’ understandings of their roles as designers of the learning environment	<p>Conv 010/5</p> <p>Conv 010/2</p>	<p>“.... The teacher is a facilitator. He /she groups students based on their interest of their performance.....”</p> <p>‘..... I mostly find it difficult to have a conducive environment to facilitate collaborative learning..... and as a teacher that is a simple geographical thing that we need to be aware of.....”</p> <p>“The classes in which I teach have fixed chairs which make collaborative learning a very difficult task.”</p>

	Con 004/6	
Teachers' awareness of the purpose for technology use	TRJ-006	".... I understand that plasma is a good pedagogical tool.... for instance while we are teaching about pollution, if there is no plasma through which students can see clearly what Pollution is, I can't tell them simply its meaning"
	Conv 009/7	"..... If there were the culture of using and developing collaborative planning models they would provide a real life, routine, engaging.....to utilize the technology....."
	Conv 009/6	".... As there are no clear guide lines given either in the curriculum or in the syllabus,.....on how I can effectively use the plasma based lessons I don't feel some times satisfied in my practice.... though I know plasma supported lessons could have positive contribution....."
Teachers' involvement of students in curriculum planning	Con v 014/4 TRJ-001	"..... Although I know I should discuss the very goal of the lesson with my students..... as the satellite TV lesson is channeled from a center whether I like the contest or my students dislike it, I have no option except facilitating things in my scope....." "Today April 27, 2009) my students asked me to teach them grammar. Their interest was due to the fast approaching National Exam.... but I had no any right to cancel the plasma lesson and teach them what they asked me....."
Classroom events	L008/2	"..... Students watch satellite TV lesson... some students were totally scribbling some thing else while others were sleeping down their arms pillowing it. Still others were gossiping." The teacher stands in front of the students and says listen carefully to what the plasma teacher says....." he echoes the plasma teacher's statements time and again.

	DN 001/1	The teacher came to the class, but the fuse of the plasma had been taken away. The teacher got angry and told me and my research assistant that this was done deliberately to distort his image in the eye of others.” He brought the fuse from another class, but after the 10 th minute power break prevailed and we left the room.
Teachers’ role on students’ self management	Con v 019/2	“.... Most of the time I encourage my students to be motivated, self requesting building in that responsibility for self time management and the contracts that is what I’m about....”
	IIS 001/5 Conv 007/6 Conv 013/5 Most of the time our teacher allows us to discuss a given task among ourselves, directing ourselves..... However, one obstacle to this end is the time given for such activities is so much limited.....” “..... I try to get them(my students) talk to each other (though the fixed chairs are real obstacles) and find out who has got a common interest to work with alike mind. “..... When students are given a certain task to perform in group I could say mostly they do it in a self regulated manner....”
Managing with Technology	Conv 019/2 L0015/2	“I think the aspect of control is interesting because I find in plasma based English lesson if something goes wrong I am not in control. “..... While the plasma transmission was on air, abruptly the transmission got interrupted due to some technical faults. Immediately, the teacher had to call the IT technician. However. a certain student with a technical know how solved the problem and

		the transmission was regained.....”
Interest for learning English with satellite Television	Conv 003/3	“..... As many of the students do have listening deficiency, they can’t cope up with the pace of the plasma teacher. As a result they always become reluctant to pay their full attention....”
	Conv 003/2	“..... Most of the high achieving students are highly motivated to learn English with the plasma but the medium ones don’t.....”
	IISN 007/15	“We feel that plasma supported English lessons are good..... even the plasma teacher is a more experienced and better qualified one than our classroom teacher.... The problem is we can’t rely on the plasma lessons as what appears in our national exam is grammar not the other skills....”

Appendix J: Quotations used by participant and chapter

In the data analysis as explained in (3.10 p 106), quotes were selected on the basis of their clarity, representativeness of a position in the literature, representativeness of observed teachers' culture, and in some cases, uniqueness of thought or action (Bassey, 2001). After the choice had been made, I analysed the selection according to teacher and school identification. This revealed some interesting, but unsurprising patterns. A summary of the selections by chapter is shown in Table A.4.2 below

Table A.4.2 Quotations used by participant and chapter

	Ch4	Ch5	Ch6	Ch7	Ch8	Total
001	3	3	7	2	0	15
002	3	7	2	0	1	13
003	3	3	1	2	0	9
004	2	2	1	4	1	10
005	3	5	5	1	2	16
006	1	1	2	2	1	7
007	2	4	3	3	1	13
008	2	0	1	0		3
009	3	0	3	3		9
010	1	0	1	2		4
011	2	0	2	0		4
012	0	1	1	2		4
013	1	0	3	1		5
014	0	0	0	0		0
015	0	1	0	1		2
016	1	0	0	3		4
017	1	0	2	1		4
018	1	0	1	0		2

019	3	0	0	1	3	
020	0	0	2	0	4	
021	0	0	0	2	0	
022	0	1	1	1	4	
023	0	0	2	2	4	
024	1	0	0	2	3	
025	1	0	0	5	5	
Total	34	28	40	40	6	148

The data in the table reflect, to some extent, the relationship developed with particular teacher and schools. For example, Teacher 005 of school B gave many comments on a range of topics during visits, on email, and through journal writing over the complete period. On the other hand, Teacher 014 of school Ko and Teacher 21 of school A, participated in only one group conversation and were not observed. Due to the non interventionist nature of the study, teachers and schools drove much of the contact, and the level of involvement differed. However, all played a part in building up the picture of communities of practice discussed in this study.

Appendix K: A Map of Knowledge Building

A DIY map of knowledge building

Please score each item from 1-3, shading in the appropriate column. If the item is not part of your

personal practice, please use N/A.

N/A = does not apply to me/us

1 = only applies to me
individually

2 = applies to my team & some other groups in this school

3 = is part of our school culture

Your name School

Item N/A 1 2 3

S.No	Item	1	2	3	N/A
1	A shared knowledge of how people learn influences our curriculum planning				
2	We design the classrooms/learning spaces to support our philosophy of learning				
3	We document our planning models and processes (how we plan)				
4	We involve students in planning their curriculum				
5	We design and write up purposeful tasks which encourage student collaboration				
6	We find curriculum and standards frameworks useful rather than a constraint				
7	We link across Key Learning Areas when planning curriculum				
8	We use a range of tools in our planning eg. Multiple Intelligences,				
9	We plan with teachers in our own school and other schools				
10	We use technology to assist us in our planning				
11	We plan for students to do open-ended tasks, such as free writing .				
12	We encourage self-management in our students				

13	We share responsibility for student management and model collaborative leadership				
14	We model and demonstrate the use of technology to students				
15	We ensure that students collaborate when using technology				
16	We motivate our students intrinsically through experiencing achievement rather than through extrinsic rewards				
17	We encourage students to move around the school whenever their learning requires				
18	We are not constrained by the length of class sessions				
19	We encourage students to link with adults who support their learning eg. experts, community members, relatives, other teachers				
20	We encourage students to use the technology at whatever time they need				
21	We can cope with and solve equipment problems: it happens!				
22	We believe that learning takes place when students work together to make sense of their world				
23	We model good teaching and are often in each other's classrooms				
24	We build on students' talents and past experience				
25	We actively support students in learning how to learn				
26	We engage in dialogue with students both face-to-face and using technology eg. email and discussion groups				
27	We focus on open-ended and inquiry activities with students				
28	We vary the amount of structure for different students				
29	We engage in reflection with students about their learning				
30	We constantly monitor learning through teacher and student assessment, including self-assessment				
31	We believe all teachers are learners				
32	We set personal and group goals for our professional learning				
33	We enjoy learning about new ideas and new ways of working				
34	We share our knowledge with many other teachers within and				

	beyond this school eg. through presentations, publications, web sites				
35	We reflect together on our goals, our practice and on relevant data				
36	We modify our practice as a result of reflection				
37	We develop theories about learning from our practical experience				
38	We use both our experience and data to contribute to making decisions in this school				

DECLARATION

This thesis is my original work and has not been presented for a degree in any other university and that all materials used for the thesis have been duly acknowledged.

Name: Getacchew Baye Kebede

Signature _____

Date _____