ADDIS ABABA UNIVERSITY

OFFICE OF GRADUATE STUDIES AND RESEARCH

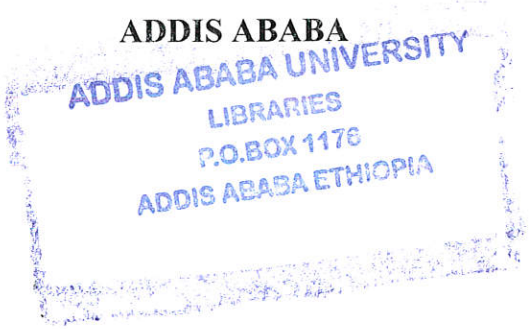
PERCEPTION TOWARDS INSTRUCTIONAL TASK ASSIGNMENTS AND ITS APPLICATION IN GRADE 11 PHYSICS TEACHING IN HORRO -GUDURU WOLLEGA ZONE

BY

TAKELE WAKJIRA

JULY, 2008

ADDIS ABABA



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A Thesis Submitted To the office of Graduate Studies and research of Addis Ababa University in Partial Fulfillment of the Requirements for Masters Degree in Curriculum and Teachers Professional Development Studies

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Acronyms and Abbreviations

CRC	-	Cluster Resource Center
CSA	-	Central Statistics Authority
ETP	-	Education and Training Policy
ICDR	-	Institute for Curriculum Development and Research
ITA	-	Instructional Task Assignments
MOE	-	Ministry of Education
NGOs	-	Non- Governmental Organizations
TESO	-	Teacher Education System Overhaul
TGE	-	Transitional Government of Ethiopia
TTI	-	Teacher Training Institute
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNICEF	-	United Nations Children's Fund

Abstract

The purpose of this study was to assess the perception towards ITA and its application in grade11 Physics teaching in selected preparatory schools of Horro –Guduru Wollega Zone. It was also to investigate factors that may influence the application of instructional task assignments in the preparatory schools under study. Out of four preparatory schools in the zone, two (Amuru and Shambu) were taken as samples Teachers, students, principals and supervisors were included in the study. The schools and the subject were selected through purposive sampling technique. Systematic sampling procedure was employed to select students while teachers, school principals and supervisors were selected by purposive sampling technique. A method used was descriptive survey method .Two basic research questions about the perception towards ITA and its application and the factors affecting the application of instructional task assignments were treated. Questionnaire, interviews and classroom observations were used as data collecting instruments. The study demonstrated that the perception and students and teachers towards ITA was unfavorable. The results of the study revealed that students' interest and participation in doing instructional task assignments in Physics teaching was found to be low. It was also disclosed that the application of instructional task assignment in Physics teaching was low. Accordingly, class works, home works and group works are used some times while laboratory and project works are non existent. Concerning the factors affecting the application of instructional task assignments, teacher-related, student-related and school-related factors were identified. Finally, some possible recommendations are made based on the findings of the study so as to see favorable perception of students and teachers and effective implementations of instructional task assignments in teaching physics.

CHAPTER ONE
INTRODUCTION

1.1. Background of the Study

Education is a process by which man transmits his experiences, new findings and values accumulated over the years through generations. As stated in Education and Training Policy (1994:1), education enables individuals and society to make all-rounded participation in the development process by acquiring knowledge, skills and attitudes. One of the aims of education is to strengthen the individuals and society's problem solving capacity, ability and culture starting from basic education and at all levels (Ibid:1). This shows that education is a major tool for social, economic and political development of a society. It is central to the improvement of living standard through sustainable growth and development.

To play these vital roles, students should be given the opportunity to develop or practice problem solving skills in schools. This obviously requires interactive situation and the application of problem solving strategies and other independent learning approaches. To this end, a major paradigm shift in teaching methods and strategies are expected. That is to bring about the implementation of modern instructional strategies which are generally known as student-centered strategies. Some of these modern instructional strategies include problem-based learning; the inquiry method, the discovery method, that involve instructional tasks like project works, class works, home works, group works and laboratory works.

According to Plass (1998:3) much of learning is task based and involves activities which have clear learning objectives and leads to an outcome, such as the solution of problems. That means, tasks represent samples of the students activities that students may be asked to do to support the specified learning objectives. Supporting this idea, Cole (1994:254) stated that appropriate learning activities extend student knowledge and understanding of relevant subject matter. They provide students with useful learning experiences and opportunities to consolidate their learning. When completing assigned tasks, students are required to focus their attention on particular aspects of subject matter or use various operations or techniques that they have learned. However, it is not enough for students to acquire specific knowledge and skills, they also need to be able to apply the acquired knowledge to solve problems of similar kind and utilize it in

unraveling life problems. Teachers assign work tasks to allow students to generalize and transfer acquired learning to new and different contexts.

In relation to the development of such skills and knowledge, scholars like Arends (1997) and Bruner (1990) emphasized constructivist model of learning that always considers student as an active agent in the process of meaningful learning. According to these scholars, learner construct learning from experience and interaction with others and the teachers' role is to provide meaningful experiences for students. This means that in constructivist approach learners are the center of the learning process. They play key role in creating or constructing knowledge. It is the approach in which people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences.

This description of learning represents the nature of learner-centered approach. In other words, when the learner is given the chance to actively engage in the learning process, learning becomes more meaningful and relevant to the learner. According to Mc Combs and Whisler (1997:9) as cited by Yalew (2004:20) learner-centered approach is a perspective that couples a focus on individual learners (their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs) with a focus on learning (the best available knowledge about learning) and how it occurs and about teaching practice that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners.

This means, teachers are expected to motivate learners and help every student in their classrooms to perform as much as possible. In such a situation, learners feel that they are part of the school system and hence actively participate in the educational process. That is why Silberman (1996) stated that active learning approach is a learner-centered method that gives due emphasis to the learner to be an actor in learning and searching-solutions rather than to be dependent only on the teacher.

An active learning environment requires students and teacher to commit to a dynamic partnership in which both share a vision of responsibility for instruction. In relation to this, ICDR (1996:71) stated that, in active learning, student not only receive information from lectures and

books, but they also collect information, record it systematically, discuss it, analyze it, draw conclusions from it and communicate about it. Thus, the emphasis in teaching has shifted from transmission of facts or information to teaching learners how to learn, how to find information for them. That means constructivism places the learner in the center of the learning process.

Temechegn (2002) stated that whether or not a given activity is learner-centered depends largely on who is in charge, who decides what should be learned; who should learn it; what methods and resources should be used and how the success of the effort should be measured. To him, to the extent that the learner makes those decisions, the approach is generally considered as learner-centered method, for it promotes active involvement of the learners.

However, the implementation of such learner centered approach essentially requires the collaboration of different bodies. Teachers, for instance, are the final decision makers in the actual learning. Students' awareness, interaction, perception and reaction are also vital.

Even though different research works have been done about the implementation and status of active learning strategies in the country, to the knowledge of the researcher the perception of students towards those instructional strategies is not adequately studied so far. Thus, it is the intention of this study to assess the students' perception and the applications of instructional task assignments and to investigate the factors that may influence the applications of the instructional task assignments.

1.2. Statement of the Problem

As indicated in the Ethiopian Education and Training Policy document, the previous curriculum design and instructional process suffered from old and traditional approach (TGE, 1994). The curriculum organization emphasized academic knowledge and instructional methods which initiated memorization and simple recall of facts by learners. In response to these problems, the policy envisaged the development of problem-solving capacity and culture in the content of education, curriculum structure and approach, which focus on the acquisition of scientific knowledge and practicum.

Today, many countries including Ethiopia, are trying to promote the development of the new instructional approach known as active learning method. The curriculum reform initiated in Ethiopia after the adoption of the Education and Training Policy (1994) has led to the extensive changes in education. One of the changes is the paradigm shift in the mode of teaching and learning which involves the shift from rote learning to participatory active learning and a shift from a liner curriculum to an integrated one in the lower grades (Leu, 1998:1). This change has brought a major paradigm shift in our thinking about education, and in the meaning of knowledge and learning.

To elaborate more precisely, the major changes or paradigm shifts in the curriculum reform of Ethiopian embrace the shift from the traditional, passive and rote learning to the new model of participatory, active learning approach. It is a shift from learning through memorization or repeating of information to learning through discovery, analysis, evaluation, problem-solving, etc, to create new knowledge and understanding (Ibid).

The intension of the reform is to practice the new active learning instructional methods like gapped lecture, discovery learning, group discussion, debate, problem-solving, field trip, panel discussion, group works, project works, etc in schools. However, the implementation of these instructional techniques requires the collaborations of people and materials. That means, the implementation of such new instructional methods depends upon the perception of teachers, students, school management, supervisors, curriculum experts and community at large including parents.

In addition to this, as stated in ETP (1994:7) one of the basic objectives of education is to develop the physical, mental and problem-solving capacity of individuals by expanding basic education for all. Based on this objective, active learning is getting acceptance and there is a tendency to change traditional method (teacher-centered) of teaching to modern method (student-centered) of teaching which emphasize active learning.

From the foregoing discussions and from different findings, it is evident that the student-centered approach (active learning) is widely accepted in the world as well as in Ethiopia. However, the

researcher of this study is doubtful whether or not the underlying ideas or the paradigm shift in the methods of instruction is implemented as intended may be due to different resistances like teachers, students, school management, parents, community and unfavorable classroom set up. Among these, this study is emphasized the student's and teachers' perception towards instructional task assignments like home works, class works, project works, group works, and laboratory works and their applications in physics teaching. This problem is raised from the researcher's long years of teaching experiences and students' and teachers' perception towards learning activities in particular and towards education as a whole.

1.3 Objectives of the Study

The following are the objectives of the study.

- To assess the perception of students and teachers towards the application of instructional task assignments in physics teaching.
- To investigate the factors that may influence the application of instructional task assignments.

To this end, the study attempts to investigate and seek answer to the following basic research questions.

1. What are the perceptions of students and teachers towards instructional task assignments and their applications in Physics teaching?
2. What are the factors that may influence the application of instructional task assignments?
    - What are student-related factors that may influence the application of instructional task assignments?
    - What are teacher-related factors that may influence the application of instructional task assignments?
    - What are the school-related factors that may influence the application of instructional task assignments?

1.4 Significance of the Study

Active learning is a burning issue in the Ethiopian educational system. Methods that promote students problem solving capacity are at the center of the policy. It is believed that students should be engaged in active learning approach so as to make the learning teaching process productive and fruitful. Thus, this study attempts to assess the students' perception and the applications of instructional task assignments and the factors which may influence the application of instructional task assignments. Accordingly, the result of this study may have the following significance.

- It enables teachers and other practitioners to gain valuable information about the students' and teachers' perceptions and the applications of instructional task assignments.
- It would help teachers to be aware of possible factors that may influence the applications of instructional task assignments.
- It may help curriculum developers and school management to create conducive learning environment for the students in developing positive perception towards work tasks.
- It may serve as a stepping- stone for other researchers to conduct further study in this area.

1.5 Delimitation of the Study

To carry out any research work it is necessary to delimit the scope of the study to manageable size. Thus, geographically, the study was delimited to Horro – Guduru Wollega Zone, which is one of the administrative zones of Oromia Regional state. There are four preparatory schools in the zone. Even though the researcher believes that it would have been better to conduct the study in a wider range, it is difficult to run research work in all the preparatory schools of the zone due to financial and time constraints. Hence, the scope of the study was delimited to two preparatory schools, which encompass 50% of the preparatory schools in the zone. These are Shambu preparatory school in Shambu Woreda, Shambu town and Amuru preparatory school in Amuru Woreda, Oborra town. To manage the research work more effectively, the study was further delimited to grade 11 Physics teaching in both preparatory schools. The reason why the researcher selected the zone was that the researcher knows the zone and education personnel in the zone very well. Knowing the zone created conducive environment for the researcher to gather data from teachers, students, school principals and supervisors of respective preparatory

schools. Preparatory schools were selected because the researcher believes that preparatory students can read and understand the questionnaire which keeps the clarity of the research work. The subject Physics was selected because of the interest and long years of researchers' experience in teaching Physics, as well as the researcher knows the problem of teaching Physics. Further more, the study was delimited to perception of students and teachers towards the application of instructional task assignments. On the top of this, it was delimited to student-related, teacher-related and school-related factors that may influence the application of instructional task assignments in Physics teaching among all the other factors.

1.6. Limitations of the Study

It is difficult to mention all the constraints that were encountered the researcher in the course of the study. However, to state some of the problems, the researcher faced critical shortage of time during the entire period of his research work, since he is a full time worker. On the top of this, unwillingness of some of the teachers to be observed in the classroom while teaching was the other problem. In addition, some of the teachers were not cooperative to complete the questionnaires on time. Despite all these limitations, the study was successfully managed and completed.

1.7. Operational Definitions of Terms

Active learning: Is a kind of learning in which students are given a considerable autonomy and control of the direction of the learning activities through small group work, problem solving, and investigational work and so on.

Approach: A set of assumptions dealing with the nature of teaching and learning.

Attitudes: Are learner dispositions that influence the choice of personal action towards instructional methods.

Behaviorism: A deterministic, stimulus-response theory of psychology which forms the basis for behavior modification and many common teaching methods. It is concerned only with observable behavior, not with internal process.

Constructivism: The theory that new knowledge is an active product of the learner integration

new information and perceptions with prior knowledge. It is in which learners construct meaning in a given context.

Cooperative Learning: Students working in small groups

Higher Order Thinking Skills: Abstract reasoning, critical thinking and problem solving abilities.

Implementation: Refers to how teaching learning activities put into practice both by teachers and students.

Intrinsic Motivation: The desire to satisfy natural needs and interests which includes a desire to understand and make sense of the world.

Instruction: Refers to any deliberation in the teaching learning process which is intended to promote the learning of students in a formal settings.

Instructional Task Assignments: Are student centered activities which has clear learning objectives and leads to an outcome, such as the solution of problems.

Learner-Centered Instruction: Teaching and learning focused the students' experience, needs, interest and abilities.

Learning Experience: Refers to the interaction between the learner and the external conditions in the environment to which the learner react.

Method: An over all plan in the systematic presentation of knowledge based upon a selected approach.

Passive-Learning: Learning in which the learner has a purely passive role, receiving information from the teacher or from materials without taking active part in teaching-learning process.

Perception: Refers to the process of understanding and viewing of instructional task assignments.

Spatial Dynamics: An instructional strategy that teachers use to capture the students interest by allowing them to participate in learning.

Strategies: Represent samples of the teaching processes which can be used to support the program goals and objectives.

Teacher-Centered Instruction: A refers to the traditional method where the teacher is the center of all instructional activities.

1.8. Organization of the Study

The study consisted of five chapters. The first chapter deals with the introductory part of the study that comprises background of the study, statement of the problem, objective of the study including basic questions to be answered, significances, delimitations and limitations of the study, as well as operational definitions of some important terms. The second chapter focuses on the review of related literature that provides a conceptual frame work for the study. The third chapter treats the design and methodology employed to conduct the study. The forth chapter provides data presentation, analysis and discussions. Finally, chapter five presents brief summary of the findings and conclusions followed by possible recommendations.

CHAPTER TWO

REVIEW OF RELATD LITERATURE

This chapter deals with review of related literature related to the problem under study. It presents about major theories of learning, instructional approaches, namely, teacher-centered method of instruction, and learner-centered method of instruction and, active learning approaches under learner-centered method of instruction. Finally, active learning in Ethiopian context, research findings on active learning and factors influencing the implementation of active learning will be discussed.

2.1 Major Theories of Learning

Theory of learning is usually the result of long years of study and research by a number of scholars. Different scholars have formulated different theories of learning that explain the process of learning from different perspectives. Thus, it is really difficult to give a single theory which satisfies all interested persons. Regarding to this, the issue is that, what are research findings and views of scholars about current theories of learning? What are the existing principles and what about the Ethiopian context? There are different theories of learning and philosophy of education that laid the foundation for modern teaching and learning theory. However, according to Glasgaw and Seels (1998), as cited by Amenu (2005:1), there are three major theories of learning, namely behaviorism, Cognitive and constructivism, which view learning in different perspectives. The essential features of these theories of learning will be discussed here under.

2.1.1 Behavioral Views of Learning

Behaviorally learning is explained as a result of Stimulus – Response (S-R) associations. According to this theory, as underlined by Torstein (1994:3340), learning was conceptualized as something that occurs from the outside-in: environmental stimuli impinge on an individual who makes a response, and the consequences of the response (i.e., reinforcement) determine that probability of the response occurring again when the same or a similar situation is encountered. In addition to this, the American known behaviorist, Watson (1935) in Klein (1987:6) explained that our thoughts are merely feedback from our muscular responses to environmental stimuli. Extending his explanation, Watson said that learning occurs when a particular response is desired

and a stimulus found to produce it and it was the question of strengthening the stimulus – response bond. Conditioning, therefore, became important and habit forming was considered to be significant. Here, there is a much concern for reinforcement, association and habit formation as mechanism of learning.

Another proponent of behaviorism, Skinner (1983) in Derebssa (2004:62), placed great importance on operant conditioning where an operant is a series of action, which a learner completes. Through reinforcement of learning, said (Skinner), the learning quality becomes greater. Thus, behaviorists place their focus on the task and the stimulus-response model. They advocate a mechanistic view of learning process in which a stimulus automatically elicits behavior and learning consists of an environmental stimulus developing the ability to elicit a specific response.

Behaviorism is based on observable changes in behavior. According to Good and Brophy (1990) in Oli (2006:1), behaviorists view learning as the result of external influences in the form of reward and punishment. They emphasize external instructional manipulations that affect the learners' behavior. The theory of behaviorism concentrates on the study of overt behavior which can be observed and measured. It views the mind as a **"black box"** in the sense that response to stimulus can be observed quantitatively, totally ignoring the possibility of thought occurring in the mind. Students are viewed as empty receptacles responding passively to stimuli (external influence) from the teacher and classroom environment.

On the other hand, learning theory of behaviorism put emphasis on active teaching than active learning. The teacher is actively devising techniques to alter the learners' behavior because for behaviorists the change in behavior is the evidence of learning. According to behaviorists, learning has been defined as, Torstein (1994:3340), a change in behavior or performance resulting from experience and practice (Torstein 1994:3340). Although a concern for change in behavior is still evident, the emphasis has shifted to the restructuring of knowledge and change in understanding rather than "memorization" has became the prevailing metaphor.

In short, behaviorists view learning as accumulation of responses through selective reinforcement and views teachers as controllers of stimuli (external environment) and shaper of students' behavior through enforcement, while learners are viewed as passive recipient of stimuli from external environment. In this assumption, learning is passive. The role of the teacher is to control the environment through stimuli in which students are responding passively to stimuli and learning is the result of conditioned response.

2.1.2. Cognitive Views of Learning

Cognitive theorists believe that learning is the result of our attempts to make sense of the world. According to Good and Brophy (1990), they view learning as the result of active internal process involving the acquisition or recognition of the cognitive structure through which humans' process and store information. They explain the ways we think about situations, along with our knowledge, expectations, feelings and interactions with others, influence how and what we learn. Cognitive view of learning sees people as active learners who initiate experiences, seek out information to solve problems and recognize what they already know to achieve new insights. That means, instead of being passively influenced by environmental events, people actively choose practice, pay attention, ignore, and make many other divisions as they pursue goals (Klein, 1987:36).

Further more, according to cognitive meaningful learning is, as stressed by Shuell (1986, 1992) in Torstein (1994:3341), an active, constructive, cumulative, self-regulated, and goal oriented process. The learner interprets the information to be acquired and the task in which it is embedded (e.g., reading of book, listening to an explanation, analyzing a picture, writing a critique) and constructs a mental representation of the task and material based on these perceptions and relevant prior knowledge. As the essential information is always missing from the physical stimulus, the learner adds information in order to make sense of the situation. Thus, the learner's representation is unique and it may or may not be consistent with similar representation formed by a teacher. Of course, the teacher plays an important role, by ensuring that the learner is engaged appropriately with the instructional materials, but it is the learner who determines what is actually learned.

Moreover, the cognitive theorists, as noted by Klein (1987:40), are interested in how learners acquire knowledge and skills rather than how behavioral response are conditioned. The cognitive theory of learning places their focus on the students and how they gain and organize their knowledge. According to cognitive theory of learning, students do not merely receive information but actively create a pattern of what it means to learn. That is, students organize, store and retrieve information. It means that students are active meaning makers.

Learning, according to the cognitive approach, involves the recognition of when important events, such as reward and punishment, are likely to occur and an understanding of how to attain reward and avoid adversity (Klein, 1987:257). Thus, cognitive recognize that much learning involves associations established through sense. They also acknowledge the importance of reinforcement, although they stress its role in providing feedback about the correctness of responses over its role as a motivator. Hence, even though the students react to the external stimuli, they are not passive recipient of all information. They have the ability of selecting and identifying information. So, cognitive theory of learning focuses on the process within the learners, such as that they are active meaning makers in the process of learning. Cognitive learning is usually concerned with understanding while behaviorism is usually concerned with behavioral change. Here understanding involves the establishment of relation- ships among the concepts and facts that comprise that body of knowledge and such understanding can be assessed by paraphrasing, summarizing, or answering question about the material and/or by performing a transfer task (Shuell, 1992).

In general, learning is no longer viewed merely as the change of behavior or acquisition of isolated facts. The learner must carry out various cognitive operations on the information being learned for it to be acquired in meaningful manner. The emphasis should be on mental rather than physical activity. Knowledge is not an entity that can be passed from one person (teacher) to another (the learner). Each learner perceives and interprets new information in a unique manner based on the prior knowledge and then elaborates this information by relating it to existing knowledge. That means new learning builds upon the individual's prior knowledge.

2.1.3. Constructivists' views of Learning

Constructivism predominated education in second half of the 20th century. It is relatively recent development in the history of education. Basically, the theory is based on observation and scientific study about how people learn. The essence of learning is the shift from passive transfer of information to active problem-solving. According to Torstein (1994:1049), learners do not passively receive information but instead actively construct knowledge as they strive to make sense of their worlds. The constructivists stress that in the process of learning there should be active role of students for understanding and discovery.

The constructivists believe that learning is more than conditioning and/or acquiring knowledge. Rather, learning is a constructed knowledge that takes place when learners can interpret information in the context of their experience. Thus, learning is an individual set in authentic context and oriented to problem-solving. Supporting this idea, Janssen (1991) in Oli (2006:2), explained that in constructivists' learning, learners construct their own reality or at least interpret it based upon their perceptions of experiences, so an individual's knowledge is a function of one's prior experiences, mental structures, and beliefs that are used to interpret objects and events. What some one knows is grounded in perception of physical and social expenses that are comprehended by the mind.

Further more, Scholars like Arends (1997) and Bruner (1990) viewed constructivism as a model of learning that always considers students as an active agent in the process of meaningful learning. They also expressed constructivism as a perspective of teaching and learning in which a learner construct learning from experience and interaction with others and the teachers' role is to provide meaningful experience for students. This means that in constructivist approach learners are the center of the learning process. Learners play key role in creating or constructing knowledge. It is in which people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences. Here, learners are the center of the learning process while teachers help them to construct knowledge rather than to reproduce a series of facts.

Moreover, theory of constructivism emphasize on active learning than active teaching, the learner is in focus than the teacher. The learner is actively constructing his/her own knowledge out of the materials that are around. The teacher acts as a facilitator who provides an environment that is rich in materials for learning. The teacher is no longer the transmitter of knowledge but the facilitator of learning. Teachers design learning situations in which learners can work with others on meaningful learning tasks. According to Taylor (1993), constructivist teachers encourage students to constantly assess how the activity is helping them gain understanding. By questioning themselves and their strategies, students in the constructivist classroom ideally become "expert learners." This gives them ever broadening tools to keep learning. With a well-planned classroom environment, the students learn HOW TO LEARN. That is why, Solomon (2004) noted that, in constructivist teaching, how teachers teach children is as important as what teachers teach. According to Yager (1991), as cited by Mintesinot (2006:14), Constructivist teaching is guided by five basic elements. These are:

- Activating prior knowledge
- Acquiring knowledge
- Understanding knowledge
- Using knowledge and
- Reflecting on knowledge.

When we encounter something new, we have to reconcile it with our previous ideas and experience, we may change what we believe, we may discard the new information as irrelevant. In any case, we are active creators of our own knowledge. To do this, we must ask questions, explore, and assess what we know.

Generally, constructivists' views of learning can be summarized as follows:

- Learners construct their own understanding.
- New learning depends on current understanding
- Learning is facilitated by social interaction
- Meaningful learning occurs within authentic learning tasks.

Now, how does constructivism differ from traditional views of teaching and learning? Different research works indicate that in the constructivist classroom, the focus tends to shift from the

teacher to the students. The classroom is no longer a place where the teacher pours knowlee into passive students, who wait like empty vessels to be filled. In the constructivist model, the students are urged to be actively involved in their own process of learning. The teacher functions more as a facilitator who coaches, mediates, prompts, and helps students develop and assess their understanding, and there by their learning. Both teachers and students think of knowledge not as inert factoids to be memorized, but as a dynamic, ever-changing view of the world we live in and the ability to successfully stretch and explore that view.

In short, constructivists' views of learning have a lot of advantages in teaching-learning process, as some of them are indicated here under.

- Education works best when it concentrates on thinking and understanding, rather than on rote memorization. Constructivism concentrates on learning how to think and understand.
- Children learn more and enjoy learning more when they are actively involved, rather than passive listeners.
- Constructivist learning is transferable in which students create organizing principle that they can take with them to other learning settings. The students are more likely to retain and transfer the new knowledge to real life.
- Constructivism gives students ownership of what they learn, since learning is based on students' questions and explorations.
- Constructivism promotes social and communication skills by creating a classroom environment that emphasize collaboration and exchange of ideas.
- Constructivist instruction gives priority to the development of meaning and understanding rather than the training of behavior.

2.2. Instructional Methods

For the better understanding of the process of learning and the improvement of students, we need to understand the ways in which an individual learns. According to Aggarwal (2001:79) effective teachers use different strategies, tactics or methods depending on their personal talents, the content to be taught, and the interests and abilities of students. As noted by Aggarwal (2001:80), a method must link up the teacher and his students into an organic relationship with constant mutual interaction. The main focus of the teaching method is the effective presentation of the

subject-matter to have the mastery over it. The content and mode of presentation are the main elements of teaching method. That means, the subject-matter determines the method of teaching to be used.

Teaching methods are recurrent instructional processes, applicable to various subject matters, and usable by more than one teacher. Thus, teaching methods vary greatly according to what the teacher does, the educational materials that are used, and what the students do. Researchers have attempted to identify different aspects of instructional methods. Different scholars use different types of classifications when referring to instructional methods. According to ICDR (1999:68) the following are among the common classifications of teaching – learning instructional methods.

- Teacher – Centered versus Learner – Centered method.
- Direct instruction versus indirect instruction.
- Conventional versus Non-conventional method or
- Traditional versus Non-traditional method

Though these classifications of instructional methods use different terminologies, mostly they have a similar conceptual frame of reference. They are based on the degree of students' participation in the instructional process. Thus, among the aforementioned classifications of instructional methods, the most popular and dominantly used by educators is the teacher – centered versus the learner – centered instructional methods which will be briefly discussed in this part of the review in which the last classification would be virtually included.

2.2.1. Teacher – Centered Methods of Instruction

For a long period of time, the teaching –learning process has been, by and large, a process dominated by teacher – centered methods of instruction. The aim of this method of instruction was the preservation of the accumulated stock of knowledge (Aggarwal, 2001:62). Different research findings indicated that in the teacher – centered method of instruction, teacher is the center of classroom activity. The teacher has been thought to hold most of the knowledge necessary for students to be successful. Osler (1849), in Terefe (2005:1), described the traditional approaches as teacher – centered, or teacher directed and authoritarian or autocratic, because the

complete responsibility to determine the work to be done and control of actual classroom procedures are solely that of the teachers. Hence, the teacher – centered approach gives the priority role and responsibility to the teacher. This method considers the teacher as knowledgeable person of subject matter.

The teacher – centered instructional method, Knowles, et.al, (1998) in Tibebu (2006:13), assigns to the teacher full responsibility for making all decisions about what will be learned, how it will be learned, when it will be learned. According to these scholars, the student has submissive role of following teachers' instruction. The teacher is considered as the source and the student as a recipient. In addition to these, Elizabeth (1999:42) and Plass (1998:10) explained that basic features of this approach is teacher being owner of the learning, decides on the syllabus, chooses the methods, select the resources, creates experiences and takes and decides **when, where, how** and even **why** things are to be done.

Besides, in teacher – centered methods of instruction, the emphasis is on, Plass (1998:3), theory rather than practice and the successful students are the ones who can display their knowledge of the facts that have been fed into them. In other words, they are required to demonstrate their powers of memory and not their skills in processing that knowledge. Learning out put is considered more important than the process of arriving at it. Students listen, take notes, digest and then reproduce.

To put in practice the basic features of teacher – centered methods of instruction, what are the strategies to be employed? In the teacher – centered mode of teaching, the methods commonly used are lecture, demonstration and question and answer. In this model, the teacher mostly uses the lecture method "chalk and talk" or other methods of teaching in which he/she is active and the students remain passive. Here, the teacher either writes notes on the board, which the students passively copy in their exercise books or the students passively copy in their exercise books or the students memorize the information from their textbooks. When the teacher asks questions, the students were usually expected to recall or repeat information from the lecture or from the textbooks. This is thought to be the most effective method of teaching in order to get most of the information to the students (Borich, 1988). In the teacher – centered classroom, Plass

(1998:2), lecture format dominates, and students learn rote fashion, reproducing the subject matter in set exercises, in essay form and in examinations. The specific activities or instructional functions connected with such teaching can include a daily review, checking homework, presenting new contents or skills, proving students with a chance to practice and set feedback and evaluating students' performance. In other words, teacher – centered methods of instruction are not only straight lecture. A lesson could be started with introduction or some review of the previous day's work including homework and revision when necessary. A great deal of instruction takes place between teachers and students, by question and answer, usually asked by the teacher. Many research findings noted that the teacher–centered instructional methods are disadvantageous so as to bring the desired behavioral change in the teaching – learning process. Accordingly, Harris (1980) in Oli (2006:13-14), has listed the major short comings of teacher – centered approach as follows:

- Since this approach has no variety, it is monotonous and boring.
- The learning process depends on the talking of teacher where the learner becomes passive receiver.
- It inhibits active, participation and research ability of the learner and encourages him or her to be submissive.

2.2.2. Learner – Centered Methods of Instruction

Today, there is a quest among education specialists to move from traditional, teacher – centered approach to modern, learner – centered approach. Those who patronize this new paradigm shift argue that learning is the territory of learners and their own style and taste must be given priority (Aggarwal, 2001:30). Knowledge is acquired by learners in the process of their self – initiated inquires and personal style (Janetius and Mulat, 2006:122). According to Plass (1998:3), in contrast to teacher – centered approach, in the learner – centered approach, students are actively involved in the learning process, and their prior knowledge and experience is an integral part of the process. They are encouraged to articulate their ideas and opinions. A variety of approaches is used for different learning styles. No one style of teaching dominates the process. The teacher creates opportunity for learning and encourages learner autonomy. Theory and practice are integrated, and students are assessed not only on their knowledge but also on their understanding

of the subject matter. Students work in pairs and in small groups, collaborating, sharing their own and benefiting from each other's individual styles, strategies and skills.

Aggarwal (2001:62) explained that the recent changes in the concept of teaching- learning process have led to the development of newer areas of educational endeavor. Extending his argument, Aggarwal noted that in a traditional society the aim of teaching – learning was the preservation of the accumulated stock of knowledge. But in the modern society, the main aim of teaching – learning is not acquisition of knowledge alone. It is the awakening of curiosity, the stimulation of creativity, the development of proper interests, attitudes and values and the building of essential skills such as independent study. Teaching – learning process has to serve as a powerful instrument of social, economic and cultural transformation of the society. John Dewey (1902), in Bishop (1995:91), argued that instead of fitting the child to the school curriculum, the curriculum should be adapted to the child. A subject has meaning only if it is translated to the child's own experiences and meets his/her growing needs. It goes without saying that what is taught must be interesting and meaningful to the child, as against being interesting only to the teacher. Continuing his argument, Dewey explained that the interests of children should be used to influence methods of teaching since the children's interest lies more in the sphere of method, rather than content.

It is understood that a learner – centered instruction, as noted by Deci and Ryan (1991) in Terefe (2005:19), is critical to the creation of optimal learning climates at all levels of the system and for all participants. Teaching guided by a learner – centered perspective can enhance students' motivation to learn and more important to their actual learning and performance.

Different terms have some common themes to learner–centered approach. Some say student – centered, participatory – learning and others say child – centered. In any way, the central issues of learner – centered instruction, Temechegn (2001, Vol. 1) are methods of teaching which fosters reflection, autonomy, active learning and the degree of students participation. Further more, Temechegn (2002) argued that whether or not a given activity is learner- centered depends largely on who is in charge, who should learn it, what methods and resources should be used and how the success of the effect should be measured . To him to the extent that the learner makes

those decisions, the approach is generally considered as learner – centered method, for it promotes active involvement of the learners .

As mentioned by Plass (1998:6-7), some of the benefits of a learner – centered methods of instruction are:-

- Students develop skills which are transferable.
- The methodology requires a shift in focus from product to process, the "how" of learning as opposed to the "what" of learning which helps the students to be aware of how to become successful learners, and can apply the resulting knowledge.
- Students learn autonomy and self – direction to take the initiative and to take the risks.
- The accent is on cooperative as opposed to competitive learning. The sense of individual competition is replaced by the sense of team competition.
- The students learn to assign and to share responsibilities for tasks, and peer group pressure ensures accountability on the part of all group members.
- The students learn the importance of negotiating goals, reaching a consensus, reformulating ideas to present a coherent argument, to see from different perspectives, to diverge without creating friction or confrontation.
- The students are more in control of their learning, they develop the sense of ownership of knowledge, a pride in what they have produced, and they take more responsibility for their own learning and develop independence and autonomy as learners.
- The students create self – esteem, a sense of empowerment, the appetite for challenge and the satisfaction of achievement.
- The question of motivation is fundamental for all learning. It is argued that for successful learning intrinsic motivation, which is derived from the activity or task in learner – centered approach, is of vital importance.

From the foregoing discussion, learner – centered methods of instruction has different implications in teaching – learning process. Children learn best when they are active participants in the process. When we consider the child an agent in his own learning, we must create

conducive learning environment for him/her to be active. The medium of learning is the activities undertaken by the learner. Learning takes place through a continuous process of interaction between the learner and his environment. As noted by Aggarwal (2001:65), out of the three components of a learning situation; the learner, the teacher and the environment, pride of place is to be given to the learner. The other implication of learner –centered approach is that knowledge or information is not the goal. Rather, self – realization is the most important goal. Personality and character development are more important than the subject matter. Moreover, learner –centered approach is based on learner's needs and abilities in which teacher's role is that of a facilitator in teaching – learning process. Instruction is to be activity – based with different teaching strategies and hence active learning approach is the main theme in learner – centered methods of instruction. Thus, different perspectives of active – learning approach will be briefly discussed as here under.

2.2.2.1. Active–Learning Approach

The active learning approach is one of the learner – centered methods. It is an approach that gives a due emphasis to the learner to be an actor in learning and searching solutions rather than to be dependent only on the teacher (Silberman, 1996). Children are active by their nature and any process or method that is not based upon the student activity is not in accord with the progressive educational theories. Rousseau considers the child as a "hero" in the drama of education and as such he must be allowed to play the dominant role.

The constructivist perspectives of learning mainly initiate the need for active learning in the classroom. Aggarwal (2001:67) noted that, according to constructivists, activity does not mean mere physical activity. If a pupil is to develop all sides of his/her personality, then it is necessary for him/her to be active in all ways, to exercise all the power he/she has. To constructivists, active learning is, thus, a meaningful learning in which something of interest and value to the learner has been accomplished and understood. This implies that the teacher can not do the learning for the pupil and that in order for understanding to occur the pupil has to be active in the learning process. That means, active learning is deep and meaningful in contrast to passive learning which is shallow and devoid of understanding on the part of learners.

Supporting the above ideas, ICDR(1999:71) explained that , in the active learning approach students not only receive information from lectures and books , they also collect information, record it systematically ,discuss it, analyze it, draw conclusion from it and communicate about it. Similarly, Sguazzin and Graan (1998) in Oli (2006:15) explained that active learning is a social process that puts an emphasis on collaboration and exchange of ideas, experiences values and attitudes. It is a negotiated process where our understanding expands through interaction and active engagement with others. The emphasis on teaching has shifted from transmission of facts to teaching learners how to learn, how to fined information for themselves. To this effect, active learning clearly addresses different learning styles. It brings comprehensive collection of instructional strategies to gather in one source. It includes ways to get students to be active in learning process. Thus different active learning methods create the best match for students to learn how to learn.

According to CTGV (1993) cited in Tibebu (2006:20) active learning's are compressive instructional systems that:

- Are evolving from constructivist philosophy and theories
- Promote study and investigation within authentic (i.e., realistic, meaningful, relevant, complex and information rich) contexts.
- Encourage the growth of students' responsibility, initiative, decision making and intentional learning.
- Cultivate an atmosphere of cooperative learning that promote high level thinking process (i.e., analysis, synthesis, evaluation, problem-solving, experimentation, creativity and examination of topics) from multiple perspectives.
- Help students to integrate new knowledge with old knowledge and there by create rich and complex learning structures.
- Assess students' progress in content and learning to learn through realistic tasks and performance.

Why active learning is considered to be important in the new era? Why it is becoming the best instructional method in comparison to the other methods? Aggarwal (2001:65) stated some of the importance's of active learning as follows:

- The child is the agent in his own learning.
- Children learn best when they are active.
- Knowledge or information is not the goal. Self–realization is the goal.
- It emphasis the process rather than the product.
- It gives freedom to the student under the creative and sympathetic direction of the teacher.
- A child is unique being and can function only by remaining in the world in which it has a specific role to play.
- The child's sense of astonishment and natural curiosity lead to a leaning process which should be encouraged by teachers.

In line with the above ideas, ICDR (1999:65-66) listed some basic points on why active learning is considered to be so important in the new era.

- Teaching is effective only when student are learning.
- Learning is effective only when it is meaningful to students.
- Learning is meaningful only when students can use it, connect it to their lives or actively participate in it.
- Memorizing facts and bits of knowledge alone is not effective learning
- It is to damage young learners, when one tries to teach them only by giving facts, since it is preventing meaningful learning.
- Learning facts alone does not prepare students to understand their environment or function effectively in it. It does not prepare them to understand and participate in a complex world.
- Learning must prepare students to solve problems and to use information from their environment and other sources to make a better life for themselves, their families and their communities (Dewey, 1949).
- Students must be encouraged not only to learn facts but also to investigate, to understand the world around them, to analyze, draw conclusion and communicate, in another words, to think deeply.

- Students must be encouraged to use higher –order thinking skills (analyzing, comparing, drawing conclusions) and move away from the exclusive use of lower –thinking skills, which is memorizing (Borich, 1984).
- Students must be encouraged to communicate effectively about what they are doing and what they are learning.

The handbook, further elaborates why active learning methods and activities are useful to promote effective learning in the following ways.

- We all remember much more when we are active and when we participate.
- We all became more enthusiastic learners when we are active.
- Active learning is particularly important for younger learners.
- The young learners learn best when they can connect what is being learned with their own life which makes learning meaningful.
- Learning how to learn is more important than memorizing facts.
- Active learning leads to long last knowledge.
- Active learning encourages participation, analysis and critique, which are higher – order thinking skills.
- Active learning prepares students for participation in a democratic society.

To sum up, the advantages of active learning approach are of manifolds and diversified as discussed earlier. However, some scholars in the field raise some limitations of active learning approach in practical applications. Regarding to this, Aggarwal (2001:66) mentioned few limitations of active learning approach.

- Too much freedom is likely to engender ego-centralism in children.
- Children may grow to be un willing to accept reasonable authority.
- Perhaps no nation can afford to spend so much money, resources and time on such approach.
- Teachers find it difficult to cover the prescribed syllabus since it is time consuming.
- The implementation of active learning requires well – trained teachers.
- It may not be possible to use it in all situations.

Even though active learning approach has few limitations in its implementations, any teaching – learning process that is not based upon student's activity is not in accordance with modern educational theories since active learning tends to free students from the tyranny of the traditional approach in education and brings about authentic and meaningful learning.

2.2.2.2. Instructional Task Assignments in Active Learning

In the above part of review of related literature, the essential features and the main principles of active learning approach have been discussed. The implications of the method in teaching-learning process were also pointed out. But what are the techniques of instructional strategies to be employed to facilitate active learning and to implement the essential features of active learning approach?

Instructional strategies are instructional activities involving students in doing things and thinking about what they are doing (Cole, 1994). The use of these techniques in the classroom is vital because of their powerful impact upon students' learning. For example, several studies have shown that students prefer strategies promoting active learning to traditional lectures. Other research studies have demonstrated that many strategies prompting the development of students' skills. Besides these, current thinking and practice in education highly advocate the need to actively involve learners in different active learning techniques. To this end, there are a wide range of methods and techniques for active learning approach. According to Silberman (1996) some of the instructional strategies (active learning methods) are inquiry method, discovery method, project method, problem – solving, Discussion, Brain storming, Debating, Role–Playing, Group work, Demonstration, Balloon game, Storytelling, Field trip, Drama, Pyramiding, Jigsaw groups, Gapped lecture, etc.

On the other hand, instructional task assignments may include all those activities which teachers assign students as a part of their instructional activities in order to attain instructional objectives. Some of these tasks can be group/individual works, homeworks, class works, project works, reading assignments, etc. Brophy and Alleman (1991) in Cole (1994:256) defined learning activities as "anything that students are expected to do, beyond getting in put through reading or listening, in order to learn, practice, apply, evaluate, or in any other way respond to curricular

content". In the same way Plass (1998:3) defined task as a learner activity which has clear learning objectives and leads to an outcome such as the solution to a problem. Supporting this idea, Derebssa (2004:219) explained that tasks represent samples of the students' activities that students may be asked or assigned to do to support the program goals and objectives. Activities need not be an exhaustive list, but rather, represent quality examples of the types of activities /tasks that would support the specified objectives. Thus, from the above definitions, it is possible to deduce that instructional task assignments are active learning strategies that stimulate student's interest and enhance learning.

To this end, Aggarwal (2001:101) asked why it is necessary to give task assignments to students as a mechanism of active learning strategies.

- Is it to maximize learning?
- Is it for self-realization?
- Is it for content coverage?
- Is it for punishment or as a punitive tool?
- Is it to facilitate an independent learning?
- Is it to burden students?

The significance of an assignment as the techniques of teaching is unquestionable. An assignment represents one of the most important phases of teaching. As described by Aggarwal (2001:86) dynamic and progressive methods of teaching should emphasize the shift from verbalism and memorization to learning through purposeful, concrete and realistic situations, and for this purpose, the principle of "Activity Method" and "Project Method" should be assimilated in school practices as task assignments to maximize learning. Extending his argument, Aggarwal noted that, teaching methods should provide opportunities for students to learn actively and to apply practically the knowledge that they have acquired in the classroom. Students should be given adequate opportunity to work in groups and to carry out group projects and activities so as to develop in them the qualities necessary for group life and cooperative work. Therefore, the purpose of task assignments is not for punishment, but rather, it is to maximize learning which will ultimately enhance student learning.

On the other hand, there are many important criteria for the effectiveness of learning activities and work tasks in promoting student learning. As explained by Cole (1994:259-260) and Aggarwal (2001:99) some of these variables are as follows:

- Activities and work tasks must be useful, effective and efficient means of accomplishing worth while curricular goals. That means, task assignments are relevant if they are related to prescribe instructional tasks.
- The difficulty level of a task should match with the maturity level and ability of the students to complete the task.
- The task assignments should arouse the motivational value of the students so that the students can perform well on the task.
- The meaningfulness of the work task for student's background and needs are more likely to result in better task performance.
- The assignments should be varied and adaptable to the needs and interests of the students.
- Systematic organization of learning activities and work tasks facilitates student success and accomplishment of intended out comes.

Generally, when assigning work tasks, teachers should select those tasks that are likely to benefit students and enhance learning. As noted by Cole (1994:275-279) the following are some of the principles of assigning appropriate work tasks in order to promote student learning.

- Ensure that students are assigned work tasks that involve them in practical activities in order to achieve instructional goals.
- Make sure that all work tasks are meaningful and related to instructional objectives. Work tasks are meaningless to students unless they match their knowledge, understanding and experience and are relevant to instructional objectives.
- Avoid tasks that involve meaningless or rote practice. That means, tasks should involve meaningful practice or active, problem-solving abilities so as to achieve understanding of new concepts and acquisition of skills.
- Ensure that the content and format of work tasks are inherently interesting so that the students will become actively involved in the assigned tasks.

- Make sure that each work task includes both new content and prior experience in order to integrate new knowledge with previously acquired knowledge that results in successful and better performance in the assigned tasks.
- Set work tasks that allows students to generalize or transfer their knowledge to practical problems and real – life situations.
- Vary the format and content of work tasks. Students can be maintained if there is sufficient variations in the tasks they are required to compete.
- Set the work tasks in accordance with the level of understanding of the students. That means, set easy tasks for those student with learning difficulty and challenging work tasks for above average ability students.
- Make appropriate changes if students experience difficulty with any particular aspect of a work task.
- Sequence task items in the order from easy to difficult.
- Schedule work tasks appropriately since the effectiveness of work tasks can be influenced by the way they are scheduled.

From the above discussion, one can understand that the effectiveness of instructional task assignments highly depends on the way the work tasks are designed to motivate the students to actively participate in completing the task assignments. Thus, teachers should consider different variables that may influence the effectiveness of task assignments while constructing the tasks for their students. In addition to this, students should be prepared adequately to accomplish the instructional task assignments that lead to student learning.

2.2.2.3. Active Learning in Ethiopian Context

The curriculum reform initiated in 1994 in Ethiopia after the adoption of the New Education and Training Polity had led to extensive changes in education. One of the changes is the paradigm shift in the mode of teaching and learning which involves the shift from rote learning to active learning and the shift from a linear to an integrated curriculum (Leu, 1998:1). This change has brought a major paradigm shift in our thinking about education, and in the meaning of knowledge and learning. As to the instructional approaches, the underlining ideas like active

learning approach, such as participatory, problem – solving, discovery learning, project works, etc, and the practice of higher order thinking skills have been introduced through this reform.
To elaborate more precisely, the major changes or paradigm shifts in the curriculum reform of Ethiopia enhance the shifts from the traditional passive and rote learning to the new mode of participatory and active learning approach. In other words, the shift is form positivist epistemology to constructivist epistemology, which involves shift from learning through memorization and repeating information to learning through discovery, analyzing and problem – solving and evaluating to create understanding and new knowledge.

The Education and Training policy and the subsequent school curriculum focuses on the modern method of teaching that propagates active learning strategy. Ambaye (1999:2) stated that, in Ethiopia the new curriculum at schools is now under way and calls for emphasis on intellectual stimulation, practical application and active learning. This implies that, the curriculum development and instructional materials which were based on teacher – centered method in the past and instructional methods which was dominated by passive learning which encourages pouring of information in the brain of the learner is being changed.

Currently, active learning methods are given emphasis more than ever before. In the Education and Training Policy (1994:7), it is indicated that education will be directed towards the development of "physical, mental, potential and the problem – solving capacity of individuals". To materialize objectives such as this, the recommended strategy is stated as follows:

> "The teaching – learning process shall emphasize problem – solving .....
> Teaching need to be as much as possible coordinated and integrated with research and development (Transitional Government of Ethiopia,
> Education Sector Strategy 1994:15).

The implication of this is that the teaching – learning process in Ethiopian education system is required to be active learning. This is because active learning instruction is characterized by problem – solving, student participatory and inquiry oriented teaching –learning strategy (Borich, 1988).

As explained in ICDR (1999:71) the instructional strategy of the country should focus on active learning instructional strategy in which students not only receive information from lectures and books but also collect information, record it systematically, discuss it, draw conclusions from it and communicate about it. Thus, the emphasis in teaching – learning process has shifted from transmission of facts to learners to teaching learners how to learn, how to find information for them.

As discussed earlier, in the Ethiopian context, there is a tendency to promote and develop students' cognitive abilities and problem – solving skills which are among the major educational goals stated in the policy (1994). According to the recent theories of learning, these abilities and skills can be best developed in the learners when the teaching and learning process are approached from active learning perspective. Hence, it is of vital importance to implement the active learning approach in Ethiopian educational system to empower learners in the teaching-learning process of the country.

2.2.2.4. Research Findings on Active- Learning

Many research findings consistently have shown that the traditional lecture, demonstration and question and answer methods in which teachers talk and students listen dominate widely practiced in the classroom. These directions naturally do not encourage students to actively participate in teaching- learning process. But practically, all learning is inherently active and that students can learn to the extent that they are actively involved in the process. Analysis of the research literature (Chickring and Gamson, 1987, in Aggarwal ,2001) suggests the importance of active learning that students must do more than just listen. They must read, write, discuss and be engaged in solving problems. In other words, to be actively involved in learning, students must be engaged in such higher- order thinking tasks as analysis, synthesis and evaluation.

Several studies demonstrated that giving students some choices enhance their learning. For instance, Siler (1998) in Tibebu (2006:25) found that teachers who captured the interest of their students by allowing them to be a vital part in the lesson and learning process were effective. Siler, further, states that the key to active learning is "spatial dynamics". **Spatial dynamics** is an

instructional strategy that teachers use to capture the students interest by allowing them to participate in learning.

Another researcher, Halperin (1994) cited in Amenu (2005:27), comments on the domination of old instructional approach in most higher education institutions. He suggests that most activities , today in a majority of higher education continue to reflect on "old style" of instructions where students sit quietly, passively receiving words of wisdom being professed by the lone instructor standing in front of the class. But practically, most cognitive psychologist and educators agree that instructions are effective when students are encouraged to become actively involved in their own learning. Besides, an allowance of time must be made for meaningful open interaction between students and teacher and group of students that nurture the students' natural curiosity.

Other researcher, Grinder (1991) in Silberman (1996:5), stresses on different styles of learning. He points out that in every group of 30 students, an average of 22 are able to learn effectively as long as a teacher provides a blend of visual, auditory and kinesthetic activity through active learning technique. The remaining 8 students, however, prefer one of the modalities over the other two in that they struggle to understand the subject matter unless special care is taken to present it in their preferred mode. This implies that in order to meet these learners' needs teaching has to be multi sensory and filled with variety, which is possible through active learning approach.

Moreover, the research finding of Sirak (2000) indicates that about 58% of class activities in the teachers' training institutes were inclined to teacher centered while 42% were identified as learner centered.

Regarding factors hindering the implementation of active learning, the study of Fiseha(2001) reveals that among other elements, teachers' lack of adequate pre- service and in –service training as well as the way training materials prepared negatively affected the implementation of active learning in primary schools.

In contrary to this finding, Amenu (2005) found out that, in different colleges of Oromia Regional State, even though lecture method is practiced occasionally, much of the time is devoted to active learning instructional approach. Finally, although some have criticized the effectiveness of active learning instructional approach, more studies has revealed the true effectiveness of active learning approach on academic achievement and student learning.

2.3. Factors Influencing the Implementation of Active Learning

Different research findings indicated that people play a key role in implementing any new change. But, usually people are not ready to accept and implement these new changes. According to Derebssa (2004:194), this resistance may occur due to self – interest, misunderstanding and lack of trust in the change. For effective implementation of any new perspective, including active learning instructional strategies, positive attitude on the issues and sound knowledge and skills in the area are very important. Particularly, the underlying ideas, concepts, merits and demerits of the new approach should be clearly understood by the stake holders. A number of factors may facilitate or hinder the implementation of active learning approach in educational system. However, in this part of review of literature, the researcher only stresses on teacher-related, student-related and school-related factors that may influence the implementation of active learning approach.

2.3.1. Teacher-Related Factors

Scholars have suggested that, if education is to be successful, next to curriculum, teacher education is of special significance, to maximize the development of changes in education (Smyth, 1987) in Oli (2006:30). Emphasizing on the role of teacher's training institutes, Aggarwal (2001:89) explained that when in doubt, teachers will teach in the way they were taught themselves and not in the way they are told to teach. So, if a school system is to become more flexible and teaching methods more lively and varied, it is essential that these qualities be established very early in the practice, as well as in the theory in teacher training institutes.

Bruner (1996) suggested similar views related to teachers' competencies and training. He mentioned about the general areas of the teachers' competence related to components of theoretical knowledge, about learning and human behavior, mastery that required practical application in concrete situation, curricular arrangement, and knowledge of general and specific

methods of teaching. This is because theoretical knowledge can be used to interpret situation and solve- problems, many classroom events that may be recognized, reserved by applying theories and concepts of human behavior. He stresses that the quality of teaching has direct relation with the teacher's extensive training and repeated exercises. Good and effective education in the classroom demands a well – prepared teacher, a competent teacher (both academically and professionally) and on the selection of best teaching strategies, activities and materials to achieve the objectives, which in turn depends on the quality of teacher' s training institutes.

The way teachers trained can strongly affect the whole educational process, particularly the implementation of active learning approach, since teachers are the most important elements in implementing active learning. For this purpose and to reflect the essence of their profession, teachers should be properly trained. According to Tilahun (2002:75), untrained teachers in most cases are found to be inactive. This is practically observed in the earlier days, with primary school teachers directly employed without training, workshops and seminars. Such teachers remain ineffective and unsuccessful even if they are provided with best kind of materials and excellent curriculum. Thus, international experiences suggest that learning complex skills, such as those required to promote active learning requires proper initial training followed by periodic reinforcement to sustain changes in teaching behavior (World Bank, 1997:148).

Thus, to implement the leaner – centered method, proper pre – service teachers training becomes very important. During their stay in the training center, teachers have to have a relevant and balanced professional and academic education. If teachers are properly trained and implement the skills they acquire in their professional career, they are likely to influence their students. In teachers training, the knowledge and skills teachers acquire enable them to help their students rather than forcing, relating materials in class to learners experience and social needs, recognizing individual needs of pupils, cooperating with the whole staff in solving school problems(Tilahun, 2002: 74-75).

To strengthen the new method of instruction the Ministry of Education has clearly identified the learner-centered method in general objectives of teacher' s education in Ethiopia, which include:-

- Producing teachers who are academically qualified, professionally skilled, attitudinally and ethically committed to their profession.
- Preparing teachers who can confidentially promote active learning and the development of problem – solving skills through a learner – centered approach using a curriculum where content and methods are integrated.
- Equipping teachers with knowledge and ability in classroom management, which fosters constructive student inquires and interaction.
- Preparing teachers who can select and use appropriate teaching materials, choose and produce and make use of local resources to enrich student learning.

Hence, if teachers are trained in accordance with the general objectives of teacher education set by Ministry of Education, the active learning approach can be implemented as intended.
In addition to pre – service training, in – service training plays a great role in improving and facilitating teaching – learning process. Attitudinal and behavioral changes, as well as, acquaintance of new skills and strategies are the result of in – service trainings.
Researchers indicate that the attitude of teachers is also a very important factor that has to be considered in implementing active learning approach. Due to their perception many teachers tend to stick to teacher – centered method rather than learner centered method. As noted by, Branda and Ginnis (1986) as cited in Sirak (2000), teachers fear that their power, reputation, and position will collapse if teaching and learning functions which were possessed by a teacher are shifted to students and the group. In the face of the society, a teacher is a knowledgeable person who is more appreciated and valued than facilitator and resourceful person.

They think that the job would lose status and credibility. Knowingly or unknowingly, some teachers discourage active learning with the ground that it brings an extra demand in the planning and preparation of lessons. Some teachers feel that it is bounded by over – crowded subject matter and thus pressurized by the limited time they have to teach. The belief persists that active learning takes too much time and thus covering the portion is difficult or impossible. Even, they come to the conclusion that active learning may be nice in theory but unrealistic practice. These all show that there have been no enough and concrete perception about how to

install active learning in classroom which may lead to negative reactions (Capel, et al., 1995, in Amenu (2005:38).

Instructional methods by themselves cannot do much to improve learning, and thus, their value lies on the professional skills of teachers in using or handling them. There is nothing as dangerous as using a method one can not use well. Thus, teachers should possess the desired knowledge, skill and attitude, which enable them to apply active learning approach.

The teacher is increasingly becoming the focus of interest because of the key role he/she plays in the delivery of quality education to the learners. All available evidence indicate that among many teachers in sub- Saharan Africa, the critical determination of effective teaching, namely knowledge of the subject matter, pedagogical skill and motivation are acutely lacking, although teachers are in the front – line of educational reform programs (UNESCO, 1990). Continuing its argument, if teachers are to be professional and their status reinstated in the eyes of society, the first step must be to educate them to be able to work independently and reflectively, possessing the insight and skills of professional and practice like their counter part in the other professions. As stated in (Journal of Education Policy, 1993):

> Nothing matters so much to the success of an educational enterprise as a well – selected, well-trained, well-motivated, well – respected, well – rewarded and well – administrated teachers.

As to the Ethiopian context, all available evidences indicate that, the above qualities (knowledge of subject matter, pedagogical skills and motivation) expected of teachers are actually lacking. Because of this reason teachers use only a small number of methods typically teacher talk, question and answer and textbook assignments (Ambaye, 1999). Therefore, practically to implement the new instructional approach, it requires teachers who are committed to change, academically qualified and professionally prepared.

2.3.2. Student-Related Factors

The new instructional model, active learning intends to produce active and motivated learners who can cope with the demands of the modern world. Active learning methods encourage

students' autonomous learning and problem–solving skills. It provides pupils with greater personal satisfaction, more interaction with peers, promotion of shared activity and teamwork, greater opportunities to work with a range of pupils, and for all members of the class, to contribute and respond (Capel, et al, 1995) in Lemma (2006).

Similarly, other scholars (Dary and Terry, 1993, in Amenu, 2005: 42) have stressed the importance of students' past experience, which is transformative rather than passive accumulation of knowledge. They notice that unless learners consider the implementations of the ideas for them in their own lives and decide to act, know and believe in new ways; they are likely to adopt a passive teachers' knowledge structure. And ultimately, this passive students learning has not made a difference because it has not been transformative and at best resulted in some accretion of knowledge. Thus, it is possible to suggest that active learning approach seeks the emancipation of learners from the old belief that has dominated methods of teaching over the last century.

On the other hand, one of the reasons for students' resistance is the demand that active learning presents to the students. In active learning situation, teachers may give students group work or individual tasks, which require application of a concept that may not be done with rote memorizing. Such context, may force students to exert more efforts on what they are doing. As a result, students may view active learning as something threatening. Such thinking may make students to lack confidence and be filled with anxiety (Farrant, 1980). That means, lack of confidence or intellectual maturity may prevent students from accepting responsibilities for own learning.

According to Escandon (2004:6-8) student resistance is manifested in many students' disruptive behavior or practices, such as:

- Sitting in the back of the classroom.
- Repeated absence.
- Lack of responsibility.
- Pretending not to know.
- Negligence to all class activities.

- Not responding to questions.
- Forgetting materials (pens, textbooks, notebooks).
- Forgetting assignment deadlines and evaluation days.
- Indifferences (Sleeping in class, daydreaming, not taking notes, not completing assignments, plagiarism).
- Repeatedly failing examinations.
- Negative attitude towards constructivist approaches to learning.
- Rudeness (excessive lateness, making noise, chattering, operating mobile telephones, ignoring simple requests, frequent exists from class, ignoring requests to be quiet).

Further more, Escandon stressed that these students' disruptive behavior are a sign of generalized dissatisfaction with the education system.

As Cole (1994:304) explained, there are three major categories of factors that are causes of inappropriate behavior:

- The first category includes classroom and teacher – related variables (e.g. poor instruction, poor classroom communication and organization).
- The second categories are the home and social group variables (e.g. unfavorable home background, lack of social support from the family).
- The third category refers to student's adjustment and personality variables (emotional disorders, distractibility).

Generally, in spite of all contributions of active learning approach to learning, the students may not have appropriate perception towards the approach. They have developed negative attitude due to various reasons and their resistance could be manifested in different ways as discussed above. However, since the role of the students is very important in implementing active learning approach, it is necessary to encourage and develop interest in students in order to make practical the approach.

2.3.3. School-Related Factors

To implement active learning approach, the support of school management is very important. School principals should supervise and support the school staff methodologically and materially in the implementation of active learning strategy. The school principals are expected to provide feedback, monitoring, guiding, redirecting and giving professional assistance for the purpose of solving problems and improving the teaching–learning environment and the process in order that the desired goals would be achieved.

Besides, social environment of a given educational institution, the location, size, shape and construction of classroom, as the presence of school facilities like, furniture, resources centers, laboratory services have direct bearing in the instructional methods. The nature of classroom is one of the most important factors that should be considered in the teaching – learning process. According to Silberman (1996:6), the physical environment in a classroom can make or break active learning. The interior of classrooms can challenge active learning especially when the furniture is less than ideal. Classrooms are adequate when there is desk for every pupil and when it is well ventilated with good light and there is a standard chalk board for every class.

As indicated by Temecheng (2001:41) the physical lay out of classroom in Ethiopian schools is mentioned as a factor that is not conducive to learner – centered methods. It is generally true that attention to the classroom–learning environment in learner centered method may include changing the physical lay out of the room allowing for seating changes. If the furniture is movable, it is possible to arrange different layouts or sitting arrangement that can facilitate learner centered method of teaching. According to Slilbrman (1996:10) these layouts include: U-shape, team style, conference table, circle, group-on-group, work station, breakout groupings, chevron arrangement, traditional classroom and auditorium.

Similarly, as Amare (1998:294) explains, over crowdedness of classroom is one of highly observed critical problem of education in Ethiopian context. This problem has hindered student follow up, student participation, teacher – student communication and feedback in the classroom. Thus, giving students enough attention and meeting the need of every student, so as to engage actively in the learning process is difficult in large class size. For this reason, teachers attempt to

retain control and teach all the students at the same time by lecturing them. What can be said here is that, for proper implementation of active learning the number of students in a class should be ideal.

On the other hand, availability and effective utilization of resource centers managed by skilled personnel, the presence of well organized and managed library which is stacked with latest, varied and sufficient reading room, with appropriate seating facilities, and the presence of trained person in laboratory science and the presence of laboratories equipped with modern laboratory materials which managed by qualified of active learning approach (Farrant, 1980). Generally, the physical environment and of schools, such as classroom arrangement, class size, furniture arrangement, classroom appearance and layout and classroom facilities contribute a lot to promote active learning approach

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

In this chapter, method of the study, sources of data, sample population and sampling techniques, instruments of data collection, data collection procedures and method of data analysis are presented.

3.1. Method of the study

As mentioned earlier, the purpose of this study is to assess perception of students and the applications of instructional task assignments in selected preparatory schools of Horro-Guduru Wollaga Zone. For this purpose, the descriptive survey method was employed to disclose the perception of students and the application of instructional task assignments in the selected preparatory schools. This approach was chosen with the assumption that it helps to conduct data as it exists and to gather several data related to the problem under study. Supporting this idea, Sharma (2000:148) stated that descriptive survey method is appropriate to gather data from a relatively large number of cases at a particular time. In addition, descriptive survey method serves as direct source of valuable knowledge concerning human behavior (Ibid: 147). The qualitative approach was used to supplement or to get an in depth understanding of complex processes especially related to human behavior that affects the application of instructional task assignments.

Moreover, descriptive survey method was employed because it helps to explain educational phenomena interms of the conditions or relations that exist, opinions that are held by the students, teachers and experts, processes that are going on, effects that are evident, or trends that are developing. At times descriptive survey is the means through which opinions, attitudes, suggestions for educational practices can be obtained (Kaul, 1996:403) in Lemma (2006:42).

3.2. Sources of Data

The main sources of data for this study were students and teachers of the selected preparatory schools. Additional data were also gathered from the principals and supervisors of respective

schools to strengthen the information by triangulation. Moreover, the researcher made classroom observations while the actual class was going on.

3.3. Sample Population and Sampling Techniques

As mentioned earlier, the study was conducted in Horro-Guduru Wollaga Zone. The population of the study was the preparatory schools in the zone among which the two (50%) preparatory schools, namely, Amuru preparatory school and Shambu preparatory school were taken as samples assuming that they represent the case of the other preparatory schools in the zone. To make the study more manageable, Physics teaching in grade 11 was made the target of the study. As a result sample population were grade 11 Physics students, Physics teachers, principals and supervisors of the preparatory schools under study. The sample preparatory schools and sources of data were summarized here in Table 1.

Table 1: Sample Preparatory Schools and Sources of Data

No	Preparatory Schools	Total No of Physics Teachers			Sample Physics Teachers			Total No of Grade 11 Physics Students			Sample Students			Principals			Supervisors		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1	Amuru	5	-	5	5	-	5	93	12	105	41	9	50	1	-	1	-	1	1
2	Shambu	6	-	6	6	-	6	110	15	125	41	9	50	1	-	1	1	-	1
Total		11	-	11	11	-	11	203	27	230	82	18	100	2	-	2	1	1	2

As indicated in Table 1, all Physics teachers, 11 (100%), from both schools were included in the study. Regarding the sample size of students, there are 105 (93 males and 12 females) grade 11 Physics students in Amuru preparatory school, among which 50 (41 males and 9 females) students (47.6%) were taken as a sample. From this sample 41 (82%) were males and 9 (18%) were females. Similarly, there are 125 (110 males and 15 females) grade 11 Physics students in

Shambu preparatory school, among which 50 (41 males and 9 females) students (40%) were taken as a sample. In this sample, 41 (82%) students were males and 9 (18%) students were females. Table 1 reveals that 2 principals and 2 supervisors were included in the study. In general, the necessary information for this study was collected from 115 respondents from the sample preparatory schools.

As to the sampling techniques, purposive, systematic random sampling and availability sampling techniques were used. In selection of preparatory schools, purposive sampling technique was employed. The two preparatory schools (Amuru and Shambu) were purposely selected based on the assumption that they have relatively long years of experiences at preparatory level and due to their transport accessibility. Grade 11 and Physics teaching in grade 11 were also purposely selected because of the background experiences of the researcher in teaching Physics.

Concerning the selection of sample students, systematic random sampling technique was employed. Systematic random sampling involves selecting subjects from a population list in a systematic rather than random fashion (Cohn, 1994:87). In this case, the formula K=N/n, where N=population size, n= sample size and every K^{th} individual would be selected from the list until the sample size will complete (Sharma, 2000:129). In this method each element of the population has an equal and independent chance of being included in the sample. It is free from subjectivity and free from personal error. The homogeneity of the sample population would be also kept in this technique (Ibid: 128). That is why this technique was used in selecting sample students.

With respect to the teachers, principals and supervisors, availability sampling technique was used. As stated by Sharma (2000:132) availability sampling technique is applied to those samples that are taken because they are most frequently available. This refers to groups which are used as samples of population because they are readily available. That is why availability sampling procedure was employed in considering readily available Physics teachers, principals and supervisors of the selected preparatory schools in the study.

3.4. Instruments of Data Collection

The data for the study was collected using three data collecting instruments, namely questionnaire, observations and interviews.

Questionnaire

Questionnaire was the main instrument used to collect data for the study. The questionnaire was aimed to acquire necessary information for the research. It is widely used in education research to obtain information about certain conditions and practices, and to inquire in to opinions and attitudes of individuals or group (Best, 2004:245). Based on these facts, to get valuable information from students and teachers both close (structured) and open (unstructured) forms of questionnaires were employed. For teachers a questionnaire with two parts were prepared. The first part focused on personal information of the teachers like sex, age, educational standard (qualification) and teaching experiences. Part two was about the main data that contained close and open-ended questions. The close-ended questions were related to knowledge and experience of the teachers and the perception of teachers on the application of the instructional task assignments. The last part was about the factors that may influence the application of instructional task assignments. In the same way, for students a questionnaire with two parts was prepared. The first part was dealt with general information (sex, age) about the sample students. Part two was about the main data that consisted of close and open-ended questions. The close-ended questions were about the perception of students and application of instructional task assignments and about the factors that may influence the application of instructional task assignments. The questionnaire for students was prepared in English language and then translated to Afan Oromo to make it easily understandable by the sample students.

Observation

The real instructional activities are manifested in the classroom while teachers teach and learners learn. It is in the classroom that the experiences of students, the instructional methods used, classroom conditions and other necessary facilities meet and interact. Therefore, classroom observation was one of the supplementary data collecting instruments in this study to assess the type of instructional task assignments being applied during classroom instruction. For the purposes of observations, check list was prepared and employed in both sample preparatory

schools. The check list contained three major parts, namely, the activities of teachers, activities of students, and classroom conditions. The observation totally focused on the application of instructional task assignments in real classroom situations and classroom facilities. Finally, the researcher checked the presence and absence of activities listed in the checklist.

Interviews

The interview permits greater depth of response, which may not be possible through any other means. It also enables an interviewer to get information concerning feelings, attitudes or emotions in relation to certain questions (Kaul, 1996:168). In this study, interview was used to collect supplementary information about the perception of students and application of instructional task assignments from principals and supervisors of the selected schools. The interview was prepared in English language and then translated to the region's official language, Afan Oromo, so that the interviewees would freely express their ideas.

The interview mainly focused on in-service training, whether they have or not any strategy for the application of active learning approach, some major factors that may influence the application of instructional task assignments and to suggest some possible solutions. The interviews were carefully recorded by tape recorder.

To come up with reliable and valid data collection tool, the instruments which were initially prepared in English language was given to expert in English so as to check the grammatical clarity of the items. Then it was shown to two education experts who graduated from Curriculum and Teachers Professional Development Studies (CTPDS), AAU, and the advisor of the researcher in order to comment the extent to which the items were appropriate in securing relevant information to the research. As a result some amendments were made based on feedbacks obtained from the experts and advisor. Accordingly, from questionnaire items, three were modified, one was added and one was cancelled. From observation check list items, some modifications were made and ambiguous statements were eliminated. Regarding interview guides, small modifications were made. Finally, the questionnaires and interview questions were translated to Afaan Oromo and then shown to the expert in Afan Oromo so as to alleviate any unnecessary complication in translation and responding to the items.

3.6. Data Collection Procedures

Before starting the data collection process, the researcher first collected letter of co-operation from AAU, Department of Curriculum and Teachers Professional Development Studies to the sample administrative zone, so that the concerned personnel would cooperate in the process of data collection. Then, all the concerned bodies were informed about the objectives of the study by the researcher. After that, necessary orientations were given to the respondents on how to complete the questionnaires and then the questionnaires were distributed in face-to-face situation by the researcher to the respondents. This was done to avoid refusals and to clarify points if additional explanations were requested. Administering questionnaires in face- to – face situation was found necessary to get necessary cooperation and to get back all the filled questionnaires. Finally, classroom observations and interviews were conducted with permissions from concerned personnel.

3.7. Methods of Data Analysis

In order to analyze the data gathered from different sources, the researcher first tallied, structured, organized and systematically framed the raw data collected from the field using tables. After this analysis was done using percentages, and descriptive statements along with the basic questions, current research findings and modern education theories.

In addition, qualitative data were analyzed by summarizing the words of interviewees and the results of observations to substantiate the findings obtained through questionnaires. This enabled the researcher to reach at some relevant conclusions and recommendations.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter deals with presentation and analysis of data. It has five main parts. The first part of the chapter presents the background information of the respondents while the second part presents and analyses about the application of instructional task assignments in grade 11 Physics teaching in Horro-Guduru Wollega Zone.

The third part of the chapter is the data related to factors that may influence the application of instructional task assignments. The fourth part is about students' interest and participation in doing instructional task assignments in Physics teaching. Finally, the chapter presents about trainings and teachers application of knowledge /skills acquired in training programs.

4.1 Background Information of the Respondents

The respondents involved in this study were teachers, students, principles and CRC supervisors of the selected schools in the zone. The researcher believes that the respondents are direct stakeholders and as a result they were considered to be relevant as main sources of information for the study.

The questionnaires were administered to 111 respondents and all of the copies of completely filled questionnaires were returned. This includes, 100 copies of the questionnaires administered to grade 11 selected Physics students, and 11 copies administered to Physics teachers. Finally, interview was conducted with 2 principals and 2 cluster resource center (CRC) supervisors. Thus, the returned copies of questionnaires and interviews were found to be sufficient to draw inferences for the study.

4.1.1. Background Information of Teachers, Supervisors and Principals

The background information of teachers, supervisors and principals were presented in Table 2 below.

Table 2: Bio-Data of Sample Population

No	Items	Teachers (N=11)		Supervisors (N=2)		Principles (N=2)	
		N	%	N	%	N	%
1	Sex a) M	11	100	1	50	2	100
	b) F	-	-	1	50	-	-
2	Age a)18-25	6	54.5	-	-	-	-
	b)26-33	1	9.1	1	50	1	50
	c) 34-41	2	18.2	1	50	1	50
	d)>42	2	18.2	-	-	-	-
3	Qualification						
	a) Diploma	5	45.5	-	-	-	-
	b) Degree	6	54.5	2	100	2	100
	c) Masters	-	-	-	-	-	-
	d) Others	-	-	-	-	-	-
4	Experience						
	a) 1-5	7	63.6	-	-	-	-
	b) 6-10	-	-	1	50	-	-
	c) 11-15	1	9.1	-	-	1	50
	d) > 16	3	27.3	1	50	1	50

As can be seen from Table 2, all of the Physics teachers (100%) in both preparatory schools were males. The same table indicates that the principals of both schools were males. These data clearly reveals that the participation of females as Physics teachers in the preparatory schools and as principals was not existent. That means there are no female teachers and principals at preparatory level who serve as role models for female students. Concerning, the CRC supervisor, the supervisor of one school was female while that of the other was male.

With respect to their age, majority of the teachers (54.5%) fall in the age category of 18-25. Few of them (9.1%) were between the ages of 26-33. The rest (34.4 %) were between the age group of 34-41 and 42 and above. This figure discloses that the majority of teachers were found in the youth age group with short years of life experiences as well as teaching experiences. When we

come to the age category of the supervisors, two of them fall in the age group of 26-33 while the other two were between the ages of 34-41. Thus, supervisors and principals were found in the adult age group with relatively long years of life experiences that lay the foundation for better school management.

Qualification wise 54.5% and 45.5% of Physics teachers have degree and diploma respectively. This depicts that more than half of Physics have their first degree. However, 45.5% of them were still diploma graduates. Since the New Education and Training Policy (1994) of Ethiopia requires every one to have first degree to teach in secondary and preparatory schools, still some teachers are under qualified for the level and there was no favorable condition in this case. All supervisors and principals included in this study had their first degree.

As to the experiences of teachers, majority (63.6%) of Physics teachers have experiences that range between 1-5 years. The other (9.1%) fall in the service category of 11-15 years. The remaining (27.3%) were in the service category of more than 16 years. This reveals that majority of teachers were newly deployed, who don't have relatively adequate teaching experiences. In the case of supervisors and principals, they have relatively long years of expediencies.

4.1.2. Background Information of Student Respondents

Background Information or characteristics of sample students was organized in Table 3 below.

Table 3: Bio-data of Sample Students

No	Items	Sample Students (N=100)	
		N	%
1	Sex: a) M	82	82
	b) F	18	18
2	Age: a) 15-17	7	7
	b) 18-20	88	88
	c) 21-23	4	4
	d) >27	1	1

As indicated in Table 3, 82% of the students included in the study were males, while 18% of them were females. This discloses that there is a gap between male and female students in enrollment in grade 11 in the selected preparatory schools. During classroom observation, it was also observed that female students' distribution was negligible relative to male students' distribution in classrooms.

With regard to the age of the students, the majority (88%) fall in the age category of 18-20. The remaining (7%) and (4%) were between the age group of 15-17 and 21-23 years respectively. The rest (1%) was above 24 years. As the data indicates, the majority of the students (88%) were between the ages of 18-20. This is the dependable age to perform different instructional activities.

4.2 Teachers Application of Instructional Task Assignments

As discussed in the literature part of this study, using variety of instructional task assignments in the teaching-learning process is vital because of the powerful impact instructional assignments have upon students' learning. Research findings have demonstrated that active learning strategies promoted through varieties of instructional task assignments that bring about the development of necessary skills and practical experience for students. That is why current thinking and practices in education highly advocate the need to actively involve learners in different active learning techniques like class works, home works, group works, laboratory works and project works.

The table below shows the actual situation in preparatory schools of Horro-Guduru Wollega Zone in relation to the issue under discussion.

Table 4: Frequency of Instructional Task Assignment in Physics Teaching

Item	Teachers						Students					
	Always		Sometimes		Not at all		Always		Sometimes		Not at all	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Class work	2	18.2	9	81.8	-	-	7	7	90	90	3	3
Homework	2	18.2	9	81.8	-	-	5	5	91	91	4	4
Group work	1	9.1	7	63.6	3	27.3	1	1	88	88	11	11
Laboratory	-	-	2	18.2	9	81.8	-	-	7	7	93	93
Project work	-	-	2	18.2	9	81.8	-	-	7	7	93	93

As could be seen from the above table, about 81.8% of teachers and 90% of students responded that classworks are employed "sometimes" in Physics teaching. Only 18.2% and 7% of the teachers and students indicated the employment of class work as instructional assignment "all the times". Very few students (3%) indicated even the non existence of class works in Physics teaching.

With regard to the use of homework, both teachers' and students' responses were similar with their response given for the application of class work. That is, 81.8%, 18.2% of teachers indicated that homework as instructional assignments are employed "sometimes" and "always" respectively. In some what similar manner, 91% of the students indicated that homework are employed "sometimes" while and the remaining 5% and 4% responded for the two extreme situations- "all the time use" and "absence of use", respectively.

Table 4 also shows the frequency of other instructional task assignments namely; group work, laboratory and project work. As clearly indicated in the table, 63.6% and 88% of teachers and students respectively indicated that group works are employed "sometimes" in Physics teaching while 9.1% of teachers and only one student noted that group work is used "always". Still the remaining 3% of teachers and 11% of students indicated that teachers are not using group works in teaching Physics. For the last two instructional task assignments (laboratory works and project works), 93% of students and 81.8% of the teachers indicated the absence of these instructional

task assignments as important strategies to be employed to enhance both students learning and participation.

In all cases, majority of teachers and student respondents showed that class works, homework and group works are used sometimes while laboratory and project works are non existent.

The interview informants (school principals and supervisors) indicated that teachers are not usually using such tasks like class works, home works, and group works in teaching Physics. One of the respondent noted that "Some teachers usually order students to copy note from the textbooks and consider this as homework." Most of them repeatedly mention teachers' choice of traditional lecture as day-to-day activity and practice of common place in teaching Physics.

From the above mentioned description, one could understood that though many scholars like Cole (1994), Aggarwal (2001) and others give emphasis to the importance of instructional task assignments as means to make students agent of their own learning, to bring about meaningful learning by enhancing self-realization, instructional task assignments are not properly implemented by teachers in teaching Physics to connect day-to-day school activities to lives of students. This implies that learners are mainly recipients and passive than being active participants in their own issue. Almost the absence of laboratory and group works in teaching can negatively influence students learning of Physics. Particularly the absence of laboratory works as instructional task in teaching the subject has its own drawbacks to deepen students understanding of basic concepts and could cast a shadow on future efforts to be made by students in learning the same subject. In such a situation, it is obvious that instructional task assignments could not serve the purposes expected by scholars including consolidating knowledge gained in the classroom, developing the habit of studying and independent learning, extending formal learning beyond school days, checking frequently on the student progress, promoting co-operative learning and social interactions, etc.

In order to see what is going on in Physics classes, Observations were also conducted using the checklist prepared for the purpose. The following table is the summary of classroom observations that shows the observed activities and classroom conditions.

Table 5: The Observed Activities

1. **Activities of the Teacher**	Yes		No	
	f	%	f	%
1.1. The teacher has introduced the topic.	9	100	-	-
1.2. The teacher has clarified the learning objectives.	-	-	9	100
1.3. The teacher has related the topic to the already learned lessons.	1	11.1	8	88.9
1.4. The teacher has assessed prior knowledge and experience of the students.	1	11.1	8	88.9
1.5. The teacher has motivated the students by different techniques.	2	22.2	7	77.8
1.6. The teacher was asking questions and giving activities (work tasks)	3	33.3	6	66.7
1.7. The questions and activities were related to the topic.	9	100	-	-
1.8. The teacher has conformed that students are actively engaged on assigned tasks in physics.	-	-	9	100
1.9. The teacher has reacted constructively to the students' responses.	3	33.3	6	66.7
1.10. The teacher has given appropriate feedbacks based on students' responses.	2	22.2	7	77.8
1.11. The teacher goes round the class and gives individual support to the students who are doing the tasks.	1	11.1	8	88.9
1.12. The teacher has managed the classroom properly.	6	66.7	3	33.3
2. Activities of the Students				
2.1. The students were interested in the lesson.	3	33.3	6	66.7
2.2. The students were freely participating in the activities.	3	33.3	6	66.7
2.3The students were doing task assignments in physics by their own initiations.	3	33.3	6	66.7
2.4. The students were indifferent to class activities in physics.	6	66.7	3	33.3
2.5. The students were misbehaving in the classroom.	7	77.8	2	22.2
2.6. The students were ready to do task assignments in physics.	4	44.4	5	55.6

3. Classroom Conditions				
3.1. The number of students in a class was moderate.	-	-	9	100
3.2. The classroom has enough space for movement.	-	-	9	100
3.3. The class has adequate chairs and desks.	3	33.3	6	66.7
3.4. Desks and chairs are easily movable.	-	-	9	100
3.5 There is a standardized chalkboard for every class.	-	-	9	100

As indicated in Table 5, out of nine (9) classroom observation made, the teachers introduced the topics in all cases, while learning objectives were not clarified. That means, the students' were not informed what they should know after learning that specific topic.

Concerning whether the teachers' related the topic to already learned lessons, in most cases (88.9%), it was not practiced. But, pedagogically, it is in agreement that teachers start their lessons by revising, summarizing or asking questions about what they taught in their last periods in order to relate to the new topic.

Regarding to whether the teachers assessed prior knowledge and experiences of the students prior or not, the same table shows that, in most cases (88.9%) it was not exercised. The students' background and level of understanding of that specific topic have not assessed. From this, it can be said that most teachers used their most teachers used their knowledge and experiences rather than students experiences.

With respect to motivation, mostly teachers were not observed motivating students by using different techniques like asking questions and giving activities. Except the activities given by Plasma TV, teachers' preparation was less with this regard.

Further more, teachers have no chance to conform whether the students are actively engaged on assigned tasks or not. In all cases, teachers were not observed giving sufficient feedback to the students. Going round the class and giving individual support to the students was not generally seen. From this, it is possible to say that activities of the teachers were limited to Plasma TV transmission.

Regarding activities of the students, classroom observations show that, students' interest and participation in class activities was low. Students were not observed while asking questions or answering questions in the class. It seems that they are indifferent to class activities and lack readiness to do task assignments in Physics teaching.

Moreover, it was observed that the number of students' in a class was not moderate. The classrooms have no enough space for movement. There was no free space to facilitate different sitting arrangements for group works and other class activities.

As indicated in Table 5, some of the classrooms have no adequate chairs and desks. Students were observed standing at the back of the class due to the shortage of desks. On the top of this, the desks and chairs in all classes were heavy and were not easily movable to adjust group works. In all cases, the chalkboards were very small, rough and even difficult to write on them. Thus, the classroom conditions were not conducive to implement instructional task assignments in Physics teaching.

To sum up, though activities of teachers and student play a vital role in the implementation of active learning strategies, the activities observed to be low in Physics teaching in the sample schools, which is not favorable for the application of instructional task assignments. In addition, the schools lack classroom facilities to put in practice learner-centered approach.

4.3. Factors Affecting the Application of ITA

A number of factors may facilitate or hinder the implementation of active learning approach in education system, as disused in the review of related literature of this study. It was stated that there are a number of factors affecting the application of instructional task assignments in Physics teaching. Among those factors, this study is emphasized to teacher- related, student-related and school related factors.

The table below (Table 6) shows data related to the factors affecting the application of instructional task assignments in Physics teaching in the sample schools under study. The data

gathered during classroom observation is given in Table 5 to substantiate the data given in Table 6.

Table 6: **Factors Affecting the Application of ITA**

Factors	Teachers (N=11)		Students (N=100)	
	No.	%	No.	%
Lack of teachers Interest	9	81.8	87	87
Students lack of interest	11	100	90	90
Lack of continuous/on job/ training for teachers	9	81.8	-	-
Teachers tendency to over use traditional lecture method	9	81.8	-	-
Shortage of time	7	63.6	64	64
Large class size	9	81.8	77	77
Classroom facilities	8	72.2	75	75
Lack of support	8	72.2	67	67

As it can be seen from Table 6, the first item proposed as a hindering factor to the application of instructional task assignments in Physics teaching was lack of teachers' interest. This item was favorably perceived by majority of teachers (81.8%) and students (87%). The figure shows both teachers and students agreed that lack of teachers interest affected the application of instructional task assignments in Physics teaching. The information gathered through interview from principals and supervisors also revealed that teachers' lack of interest affected the education system in general and the application of active learning strategies in particular. One of the principals said that "because of their lack of interest, teachers are not motivating students to do task assignments." Most of the teachers have negative attitude towards the teaching profession which hampered the implementation of active learning approach.

The next item, which reads, "students' lack of interest has affected the application of instructional task assignments in Physics teaching" was agreed by all teachers (100%) and students (90%) as indicated in Table 6. That is, all the teachers and most of the students accepted

the issue, indicating the seriousness of the factor in hampering the application of instructional task assignments.

Stressing the seriousness of the problem, interview respondents underlined that students' lack of interest affected the implementation of instructional task assignments as means of applying active learning approach. They considered this issue as a serious problem in the schools today.
The classroom observation substantiated the above, idea. During classroom observation, as the frequency (66.7%) of observation in Table 5 depicts, majority of the students were not observed doing task assignments in Physics by their own initiations. They were not observed asking questions and answering questions while observation took place. The frequency (66.7%) of observation disclosed that the students were indifferent to class activities in Physics teaching.
The item, which says, "lack of continuous on job-training for teachers has affected the application of instructional task assignments in Physics teaching" was supported by most of the teachers (81.8%) as indicated in table 6. The teachers perceived the issue favorably, disclosing that teachers lack of frequent on-job training was affected the implementation of instructional task assignments.

When the interview was conducted, principals and supervisors reported that, teachers' lack of frequent on-job training negatively influenced the implementation of active learning strategies. They underlined that, due to lack of knowledge of active learning approach, knowingly or unknowingly, teachers became the sources of resistance to the application of the new instructional approach.

As discussed in the review of related literature, to employ the new teaching-learning style, it requires new roles and commitment which results from periodical on-job trainings like work-shops, seminars, etc. Many research finding also indicated absence of frequent on job-training as one of the hindering factors in applying instructional task assignments. That is why, the New Education and Training Policy (1994) calls for continuous on job-training so as to put in practice the active learning approach.

As can be seen from Table 6, the other item proposed as a hindering factor for the application of instructional task assignments in Physics teaching was teachers' tendency to over use traditional lecture method. This factor was also accepted by most of the teachers (81.8%), indicating that the majority of the teachers positively favored the idea that teachers tendency to rely on the traditional method of instruction affected the implementation of instructional task assignments as active learning strategies. The interview respondents also confirmed that most of the teachers prefer conventional method of instruction. In the classroom, it was observed that teachers were using more of lecture method. Table 5 reveals that teachers were not observed giving tasks and using different techniques to motivate students.

For the item, which reads, "shortage of time affected the application of instructional task assignments in Physics teaching" the responses of the teachers (63.6%) and students (64%) revealed that shortage of time affected the application of task assignments in teaching-learning process. Supporting the above idea, one of the principals mentioned that teachers and students are complaining about the shortage of time to implement the instructional task assignments". He said that "since most of the period is covered by plasma TV transmission, there is no enough gap to implement active learning strategies in the classroom." Extending his argument, he stressed that "teachers are highly loaded in teaching both shifts." Most of the students are also engaging themselves in different activities to support themselves and their families economically after school.

As stated in the review of related literature, some of the teachers discourage active learning approach with the ground that it demands an extra time in planning and preparation of activities. This also shows that shortage of time is one of the hindering factors to the application of instructional task assignments.

The other factor affecting the implementation of instructional task assignments is large class size. As Table 6 discloses, majority of teachers (81.8%) and students (77%) indicated that class size negatively affected the application of instructional task assignments in Physics teaching in the sample schools. During classroom observation, it was noticed that, especially in Amuru preparatory school, there were 105 (93 males and 12 females) students in grade 11. As indicated

in Table 5, the number of students in a classroom was not moderate and the classroom has no enough space for movement. It was the researchers' eye witness that some of the students stand at the back of the class. This situation does not create favorable conditions to apply active learning strategies and hence the teachers are enforced to employ traditional lecture method. Similarly, findings were reported by Amare (1998) who indicated overcrowd ness as one of highly observed critical problems of Education in Ethiopian context. This problem still exists in the preparatory schools under study.

The next factor suggested as hindering the application of instructional task assignments in Physics teaching was classroom facilities. This issue was positively favored by teachers (72.2%) and students (75%) accepting that lack of classroom facilitates affected the implementation of instructional task assignments.

Moreover, as Table 5 reveals, during classroom observation, it was observed that the classroom has no enough space for movement, in which teachers can't go round the class to give individual support to the students. Desks and chairs are heavy and not easily movable to arrange the classroom for group works and other activities. That mans, under such circumstance it is difficult to conduct active learning strategies. Similarly, findings was reported by Temechegn (2001)who indicated the Physical layout of classroom and sitting arrangement in Ethiopian Schools are mentioned as factors that are not conducive to learner-centered approach. Further more, front to back seating arrangements encourage only one way communication (Derebssa, 2008). This implies that front to back seating arrangements, which are common in Ethiopian schools; discourage students from discussing among themselves and hence hampering learning activities.
The last item proposed as the hindering factor to the application of instructional task assignment in Physics teaching was lack of school support. Concerning this item, Table 6 discloses that, teachers (72.2%) and students (67%) responded, lack of school support affected the application of instructional task assignments. In favor of this response, in the review of related literature, it was stated that methodologically and materially the support of school management facilities the implementation of active learning strategies. The school management creates conducive school environment for the application of the modern instructional method by professional assistance for the teachers. However, as explained by interviewees, there is no strategic plan to practice

active learning approach in the schools under study. Elaborating their views, the supervisors explained that school managers themselves lack experiences and professional skills. They are not in the position of facilitating library, laboratory and pedagogical centers, which lay foundation for active learning practices.

From the foregoing discussions, the factors affecting the application of instructional task assignments in Physics teaching in the sample preparatory schools are identified as lack of teachers interest, lack of continuous on-job training for teachers, teachers tendency to over use traditional lecture method, and shortage of time are teacher-related factors, whereas factors like student lack of interest and shortage of time are student-related factors. The rest, large class size, lack of classroom facilities and lack of school support could be said school-related factors.

4.4 Students Interest and Participation

One of the purposes of the task assignments as discussed earlier is providing students an opportunity to learn actively and apply practically the knowledge that they have acquired in the classroom. That is, task assignments provide opportunities to students to work independently and take initiative to participate in education system. As noted by many scholars, students benefit from the teaching learning process if and only if they have the interest to undertake the required activities. This, in turn, can be influenced by teacher's interest to involve and do many other activities in the teaching learning process.

The following table presents data obtained from teachers and students themselves regarding students' interest and their participations. Teachers' interest to employ the Instructional Task Assignment is also incorporated in the same table.

Table 7: **Students' Interest and Participation in Instructional Task Assignments**

Item	Teachers						Students					
	High		Moderate		Low		High		Moderate		Low	
	No	%	No.	%	No.	%	No	%	No.	%	No	%
Students participation in doing ITA	4	36.4	7	63.6	-	-	8	8	37	37	55	55
Students interest to do the task assignments	1	9.1	3	27.3	7	63.6	18	18	22	22	60	60
Teachers interest to use instructional task assignment	-	-	3	27.3	8	72.7	-	-	-	-	-	-

As seen from Table 7, 36.4% of teachers indicated students' "high" participation in doing the instructional task assignments. The remaining 64% considered students participation as "moderate". On the contrary, as the same table reveals, majority of the students (55%) replied that their participation in doing instructional task assignments is "low" which is against the response of teachers. The rest, 8% and 37% of them responded that their participation in doing instructional task assignments is "high" and "moderate" respectively.

In the same table, data regarding students' interest shows that majority of the teachers (63.6%) view students interest to do task assignments as "low" while 27.35% and one teacher observed students interest as "moderate" and "high" respectively. From this data which shows two seemingly contradicting responses (low interest, 63.6%) on the one hand and moderate and high participation (100% altogether) on the other, one may gallantly ask how these two issues (low interest on the one hand and moderate and high participation on the other) could be observed in the same class? To put differently, how could students participation became high or moderate when their interests were found to be low? This couldn't be imagined unless temporarily high/ moderate participation is achieved through force or pressure as it was used to be done in many traditional teacher dominated classes. Surprisingly, majority of students (60%) also indicated that they have low interest to do instructional task assignments. Only 18% of students indicated

their high interest. Those who responded as having moderate interest account for 22% of students.

During the interview, school principals noted that most of the students have low interest in doing instructional task assignments. One of the principals said that "it is not uncommon to see teachers keeping students out of sight as punishment for not doing home-works, group works and other assignments". According to the interviewees, in a situation where teachers make strict and day-to-day follow up, majority of students usually do the tasks. However, in the absence of daily follow up and punishments, it is unthinkable to expect students to do instructional task assignments as the result of the built-in motivation. In addition to this, almost all the interviewees commented lack of interest and commitment on part of the teachers to engage students in a variety of instructional task assignments and to make day-to-day follow ups.
From the above description, one may safely say that students seem to have low interest to do instructional task assignments. In the absence of interest, it may be difficult to develop intrinsic motivation that leads to future successes and development.

On the other hand, teacher respondents were also asked what their interest look like in applying instructional task assignments. As can bee seen from the same table, majority of the teachers (72.7%) indicated that there is low interest among teachers to apply instructional task assignment. Only 27.3% of the teachers indicated that teachers have moderate interest.
To get in touch with reasons for low interest, both teachers and students were also asked the question "why low interest to employ/ do instructional task assignments in Physics teaching?" The following two tables (Table 8 and 9) summarize responses of teachers and students for their low interest in instructional task assignments in Physics teaching.

Table 8: Reasons for Low Students Interest and Participation

Reasons	Teachers		Students	
	No.	%	No.	%
ITA unrelated to prior knowledge	10	100-	56	93.3
Lack of clear instruction on ITA	2	20	50	83.3
Tasks unrelated to practical problem	8	80	-	-
Absence of appropriate feedback	5	50	55	91.7
Consuming students luxury time	6	85.7	25	41.7
Increasing workload/making busy	5	71.4	54	90
Giving ITA as punishment	4	57.1	15	25

As revealed in Table 8, those students who indicated low interest and participation in instructional tasks assignment in Physics teaching also indicated their reasons in order of priority: ITA unrelated with their prior knowledge (93.3%), absence of appropriate feedback (91.7), increasing work load/ making busy (90%), luck of clear instruction on instructional task assignments (83.3%), consuming their luxury time (41.7%) and giving ITA as punishment (25%). The same table discloses that those teachers who indicated low interest and participation of students in instructional task assignments in the subject also indicated their reasons in order of priority: assignments unrelated with the students prior knowledge (100%), consuming students luxury time (85.7%), tasks unrelated to practical problem (80%), increasing work load/making busy (71.4%), giving ITA as punishment (57.1%), absence of appropriate feedback (50%), and luck of clear instruction on ITA (20%). Here, though the order of priority of reasons given by teachers and students varies, their response indicated that assignments unrelated with the students prior knowledge and experiences, absence of appropriate feedback and increasing work load/making busy are the most serious problems for low students interest and participation in instructional task assignments in Physics teaching. In addition to the given possible reasons in the questionnaire, some of the teachers specified that instructional materials (text books) are beyond the capacity of the students and hence students developed negative attitude to wards the task assignments in teaching Physics as well as the subject Physics.

During the interview, school principals and supervisors reported that most of the students have low interest and participation to do instructional task assignments in Physics teaching due to different reasons. As one of the principals mentioned "some of the teachers use ITA as a punitive tool rather than as means of instructional strategies to promote student learning." Besides, one of the supervisors stressed that "the students lack interest because the assignments are not usually corrected, valued and returned to students with necessary comments on time.

From the foregoing discussions, one could realize that, though different scholars give emphasis to the importance of prior knowledge and experience by stating that students learn more effectively if the assigned task allows for integration of new and old learning , the ITA in Physics teaching are unrelated to students prior knowledge. Similarly, lack of clear instruction on ITA and absence of appropriate feedback to the assignments unfavorably influenced the interest and participation of students in Physics learning. For the effectiveness of assignments, many research findings indicated that students should be given clear instruction about what the tasks are and how they should be completed. On the top of this, ITA should be corrected, valued, discussed by their teachers and used for the purpose of reteaching and stabilization.

In a situation, where student interest and participation is low due to the above reasons given by the respondents, the expected purposes of instructional task assignments can not be achieved. Unless the learners positively perceive the instructional methods used in teaching – learning process, the successful implementation of the instructional methods could be affected. That is the implementation of instructional task assignments depends on the interest and participation of students in the instructional task assignments.

Table 9: Reasons for Teachers Lack of Interest in Applying ITA

Reasons	Teachers	
	No.	%
Lack of awareness about contribution of ITA by the teachers	6	75
Consuming teachers luxury time	4	50
Increasing workload/making busy	7	87.5
Lack of incentives for teachers	8	100

As shown in Table 9, those teachers who have reported that they lack interest in applying instructional task assignments in Physics teaching also pointed out their reasons in order of priority as follows. Lack of incentives for teachers (100%), increasing work load /making busy (87.5) , lack of awareness about contributions of ITA by the teachers (75%) and consuming teachers luxury time (56%). Besides, in the open ended part of the questionnaire, teachers specified that students' lack of interest in teaching – learning process as a whole and in instructional activities in particular highly affected their interest in applying instructional task assignment in Physics teaching.

Moreover, the qualitative data from the interview informants indicated that the major reason why teachers lack interest in applying instructional task assignments is that they do not clearly understand the contribution of task assignments to learning. Extending their arguments, they stressed that, so far teachers do not consider instructional task assignments as the part of their job activity. One of the principals reported that "students' low participation in task assignments and misbehavior negatively influenced the interest of teachers in applying instructional task assignments". The other principal explained that "some of the teachers assume that instructional task assignments are hindrances to cover portions prescribed in textbook. As the result they resort to the traditional lecture method." In addition, all the interview respondents unanimously agreed that teacher's lack of incentives and low economic standard affected their self initiation towards the application of instructional task assignments in Physics teaching in particular and the implementation of active learning approach in general.

From the above discussions, one can infer that lack of incentives for teachers, increasing work load/ making busy, lack of awareness about the contribution of instructional task assignments by teachers, consuming teachers luxury time, students low interest and participation and misbehavior are some of the reason for teachers lack of interest in applying instructional task assignments in Physics teaching. It seems that, these conditions unfavorably affected teachers interest and thereby the application of ITA in Physics teaching.

4.5 Trainings and Teachers' Application of Knowledge Acquired in the Training Programs

In the literature part of this paper, it was noted that to promote active learning it request proper initial training followed by periodic reinforcement to sustain changes in teaching behavior. In addition to pre-service training, in-service training plays a significant role in improving and facilitating teaching-learning process. On the top of this, the New Education and Training Policy (1994) has clearly indicated that to strengthen the new method of instruction, producing teachers who are academically qualified, professionally skilled and confidentially promoting active learning, on job-training should take place periodically in-depth.

Moreover, as discussed in the literature part of this study, the application of instructional task assignments in schools is highly influenced by the implementers' (teachers') academic knowledge, professional skills and experiences more than any other factors. To this end, pre-service and in-service trainings are of vital importance since trainings play a significant role to up-date knowledge and professional skills of teachers. The degree of applying the knowledge / skills acquired in training programs also depends on the depth of trainings. Scholars emphasize that extensive training and repeated exercise enables teachers to employ active learning strategies in every day lesson. That is why the New Education and Training Policy (1994) advocates about the importance of on job training in order to implement the active learning strategies at school levels.

The following two tables (Table 10 and 11) show the actual situation in preparatory schools of Horro –Guduru Wollega Zone in relation to training on ITA in pre-service and in-service training programs and the extent of teachers' applications of knowledge /skills acquired in the training programs respectively.

Table 10: Training on ITA in Pre-service and In-service Training Programs

Type of training	Response (N=11)			
	Yes		No	
	No	%	No	%
Pre-service Training	11	100	-	-
In-service Training	5	45.5	6	54.5

Table 10 disclosed that all of the teachers (100%) had taken pre- service training on the application of instructional task assignment in teaching Physics.

With respect to in-service training, the same table revealed that 45% of the teachers have got on job- training while 54.5% of them did not get on job training of any kind about the application of instructional methods in Physics teaching. This depicts that more than half of Physics teachers did not get on job-training about the application of instructional task assignments in Physics teaching.

On the question of training, the interviewees reported that on-job trainings were not offered to some teachers, especially for newly deployed teachers. As one of the supervisors noted, on-job training is not given due attention. The other supervisor explained that "even we do not have clear vision how to apply active learning strategies". Further more, the interview respondents argued that, because of lack of appropriate on-job training, some of the teachers do not have clear direction about the New Education and Training Policy (1994) in relation to the modern instructional method.

However, as the respondents (teachers and interviewees) cordially reported, the rate of on-job training was low in the sample schools. Enough attention was not given to the importance of on-job training in implementing active learning strategies.

Table 11: The Extent of Teachers' Application of Knowledge/Skills Acquired in the Training Programs

	Response					
	High		Moderate		Low	
	No.	%	No.	%	No.	%
The relevance of the training to apply ITA	-	-	4	40	6	60

As indicated in Table 11, 40% of the teachers replied that the relevance of the training to apply the instructional task assignments in Physics teaching was "moderate". The rest 60% of them indicated low relevance of the training.

With respect to training, the interview informants reported that the on-job trainings were not offered in an in-depth manner in order to acquaint teachers with necessary knowledge and professional skills so as to apply instructional task assignments in Physics teaching. Surprisingly, one of the supervisors underlined that "usually trainings were given just for the sake of reporting, not actually to improve the application of instructional methods". Indeed, the trainings were not to conceptualize and instutionalize the essence of the new instructional approach. On the other hand, one of the principals commented that "on the side of the teachers, after taking on-job training, the effort shown to apply the results of the trainings was negligible". As a tradition, the ultimate goal of the trainings was to participate in the trainings, rather than practicing the skills acquired from the trainings in teaching process. Extending his argument, he said that "this is may be due to lack of interest and confidence in the trainings."

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

The main purpose of this study was to assess the perception of students and teachers towards the application of instructional task assignments and to investigate the factors that may influence the application of instructional task assignments in Physics teaching in selected preparatory schools of Horro-Guduru Wollega Zone. In order to meet these objectives basic research questions were set regarding the perception of students and teachers towards instructional task assignments, the application of instructional task assignments and factors (student-related, teacher-related and school related) that may influence the application of instructional task assignments.

To seek solutions for these basic questions, the study was conducted in two preparatory schools, namely, Amuru and Shambu preparatory schools in Horro-Guduru Wollega Zone of Oromia Regional state. The subjects of the study were students (100), teachers (11), principals (2) and supervisors (2) of the same schools selected using systematic random sampling and availability sampling techniques. The major data gathering instrument was questionnaire which was supported by observations and interviews. Accordingly, from students and teachers, the data were collected through structured and unstructured questionnaires. To substantiate the data obtained through questionnaire, interview was conducted with school principals and supervisors and observations were made by the researcher. The data obtained were organized, tabulated and then analyzed by using percentages, and descriptive statements against the basic questions. Based on the analysis made, the following major findings were found.

Major Findings

The analysis made using the data obtained from respondents and classroom observations resulted in the following major findings.

- The study disclosed that the perception of students and teachers towards ITA and its application was unfavorable.
- It has been found that the degree of application of instructional task assignments was found to be low in the preparatory schools under study.

- Of those instructional task assignments applied very rarely, the study showed that class works, home works and group works dominated in Physics teaching while laboratory works and project works were non existent.
- The study revealed that teachers' interest to apply instructional task assignments in Physics teaching was found to be low. Their perception of training of teachers on ITA was not also positive.
- Majority of the teachers attributed their lack of interest to absence of incentive, heavy work load, lack of awareness about the contribution of instructional task assignments and low students interest to participate in doing tasks.
- Majority of the teachers and interviewed respondents also indicated the absence of continuous on job-training for teachers.
- It has been found that students lack of interest, lack of teachers interest, lack of on job-training for teachers, teachers' tendency to over use traditional lecture method, shortage of adequate time, large class size, unavailability of classroom facilities and lack of school support affected the application of instructional task assignments in teaching Physics.
- The study also reveled that students have low interest and low participation. The factors for this from very serious to the least serious were found to be: instructional task assignments unrelated to prior knowledge, absence of appropriate feedback, heavy work load, lack of clear instructions to the tasks, tasks unrelated to practical problems and giving instructional task assignments as punishment for students.

5.2. Conclusions

Based on the major findings of the study, the following conclusions were drawn.

- The study disclosed that the perception of students and teachers towards ITA and its application was unfavorable.
- From the study, it can be concluded that preparatory school teachers in Horro- Guduru Wollega Zone are not using instructional task assignments as expected.
- Both teachers and students have low interest in employing instructional task assignments.
- Instructional task assignments in Physics teaching is hampered by multiple factors like student lack of interest, lack of teachers interest, lack of continuous on job training for

teachers, teachers tendency to over use traditional lecture method, shortage of adequate time, large class size, unavailability of classroom facilities and lack of school support.

In general, instructional task assignments did not serve the purpose they have to serve in Physics teaching.

5.3. Recommendations

Based on the findings of the study and the conclusions drawn, the following recommendations are forwarded so as to see favorable perception of students and teachers the effective implementation of instructional task assignments in Physics teaching in preparatory schools of Horro-Gudiru Wollega Zone in general and in sample preparatory schools in particular.

- Continuous and extensive orientations should be given to teachers about the contributions of instructional task assignments in promoting student learning.
- To empower teachers with necessary professional skills, the concerned government bodies (Woreda Education Bureau, Zone Education Bureau, School management) in collaboration with NGOs, have to arrange short-term and long-term trainings like work shops, seminars, conferences, model projects and educational visits with other preparatory schools so as to share experience on the innovative instructional approach in relation to the new curriculum reform in the country.
- To make teachers to be confident, interested and innovative users of active learning strategies, they should be provided with the adequate time and the facilities they need including reasonable incentives in accordance with the magnitude of their work.
- The students should be clearly oriented by school management, home room teachers, subject teachers and CRC supervisors about the contributions of instructional task assignments in learning Physics.
- Students learn more when they complete assignments that are corrected, valued, commented, and discussed by their teachers. Thus, sufficient feedback should be given to task assignments so as to develop students' positive perception towards instructional task assignments in Physics teaching.
- The students should be introduced the purpose of instructional task assignments indicating that it is to consolidate knowledge gained in the classroom, to facilitate independent

learning, to maximize learning, to develop self-confidence, making students the agent of their own learning and to involve them in practical activities but not punishment.

- Scholars agree that active learning strategies by their very nature make students busy and increase work load by involving them in different practical activities. Therefore, it is advisable that while giving task assignments the teachers should take in to consideration the home condition of the students, such as working condition in the home. Task assignments should not deprive students of the opportunity to help their parents in supplementing their income and should not hamper their relationship with the out side community. Hence, the students should be oriented to adjust themselves and to develop readiness.
- It seems advisable to tackle shortage of time by appropriately budgeting the allotted time as intended and by preventing unnecessary wastage of regular academic calendar and immediately compensating if happened.

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APPENDIX - A

A Questionnaire to be filled by Teachers

A) General Information

Instruction: - a) Writing your name is not necessary.

b) The characteristics of teachers are listed below. Please, select the appropriate answer and encircle it.

1. Name of the school _____
2. Sex: a) Male b) Female
3. Age: a) 18-25 years b) 26-33 years c) 34-41 years d) 42 years and above
4. Qualification: a) Diploma b) Degree c) Masters degree d) others ____
5. Teaching experiences

   a) 1-5 years b) 6-10 years c) 11-15 years d) 16 years and above

B) Main Data

I. Instruction: Items related to your knowledge and experiences on the application of instructional task assignments in physics teaching are providing below. Please, select the appropriate answer based on your experiences and circle the letter of your choice or write your response when necessary.

1. How often instructional task assignments in physics teaching have been practiced in your school.

(Please rate them by using tick mark "✓ " that corresponds to your response.)

No	Instructional Task assignments	Rating Scale		
		Always	Some times	Not at all
1.1	Class works			
1.2	Home works			
1.3	Group works			
1.4	Laboratory works			
1.5	Project works			

2. To what extent the students are interested to do the task assignments in physics?

   a) high b) moderate c) low

3. If your answer to question 2 is "low", it is because: (you can give more than one answer)

a) The students consider task assignments as burdens.

b) The students consider that task assignments make them busy.

c) The students consider task assignments as punishment.

d) The students do not know the contribution of task assignments to learning.

e) If any other, please specify:

_____

4. Have you taken pre – service training on the application of instructional task assignments in physics?

a) yes b) no

5. If your response to question 4 is "yes", the contribution of the training to the application of instructional task assignments in physics was:

a) high b) moderate c)low

6. Did you get in – service training (workshops, seminars, etc) on the application of instructional task assignments in physics?

a) yes b) no

7. If your answer to question 6 is "yes", how frequent do you apply it in daily lesson as an active learning strategy?

a) always b) sometimes c) uncertain

8. To what extent instructional task assignments in physics involve students in teaching - learning process?

a) high b) moderate c) low

II. Instruction: Items dealing with attitude on the application of instructional task assignments in physics teaching are listed below. Please, select the choice that reflects your opinion and circle the letter of your choice or write your response when necessary.

1. Instructional task assignments in physics teaching help the students to exercise active learning approach.

   a) agree b) disagree c) undecided

2. Students' lack of interest has affected their perception towards the application of instructional task assignments in physics teaching.

   a) agree b) disagree c) undecided

3. If your answer to question 2 is "agree", why the students lack interest? (you can give more than one answer)

    a) It is because the assignments have no clear instruction.

    b) It is because the assignments are not related to their prior knowledge.

    c) It is because the assignments do not reflect their locality.

    d) It is because the teachers do not give appropriate feedback to the assignments. e) If any other, please specify:

    _____

4. If your answer to question 2 is "disagree", the reason is that: (you can give more than one answer)

    a) It maximizes learning.

    b) It involves students in learning process.

    c) It encourages independent learning.

    d) It develops self confidence.

    e) If any other, please specify:

    _____

5. Teachers' lack of interest has affected students' perception towards the application of instructional task assignments in physics teaching.

    a) agree b) disagree c) undecided

6. If your response to question 5 is "agree", why teachers lack interest? (You can give more than one answer)

    a) It is because task assignments increase teachers' workload.

    b) It is because assignments share teachers' luxury time

    c) It is because teachers do not clearly understand the contribution of task assignments to learning

    d) Lack of incentives for teachers.

    e) If any other, please specify:

    _____

7. Instructional task assignments in physics teaching enhance students' participation in solving problems.

    a) agree b) disagree c) undecided

8. Instructional task assignments in physics teaching develop self – confidence and independent learning of students.

a) agree b) disagree c) undecided

9. Instructional task assignments in physics teaching make students responsible for their own learning.

a) agree b) disagree c) undecided

10. If your response to question 9 is "disagree", who is responsible for students learning in teaching learning process? (You can give more than one answer)

a) The teachers are the only responsible for students' learning.

b) The parents are the only responsible for students' learning.

c) The government is the only responsible for students' learning.

d) The school management is the only responsible for students' learning.

e) If any other, please specify:

---

11. The students learn more when they are indifferent to any task assignments in physics.

a) agree b) disagree c) undecided

III. Instruction: Factors that may influence the perception of students towards the application of instructional task assignments in physics are listed below. Please, rate them from "strongly agree" to "strongly disagree" based on the seriousness of the problem in your school and give your responses using tick mark "✓" to the corresponding factors.

Key: 5= Strongly Agree (SA)

4= Agree (A)

3= Undecided (UD)

2= Disagree (DA)

1= Strongly Disagree (SD)

No	Factors	SA	A	UD	DA	SD
1	Teachers' tendency to the traditional lecture method has affected the perception of students towards the application of instructional task assignments in physics.					
2	Teachers' lack of up-to-date training has affected the application of instructional task assignments in physics.					
3	Teachers' lack of interest has affected the application of instructional task assignments in physics.					
4	Students' lack of interest has affected their perception towards the application of instructional task assignments in physics.					
5	Shortage of time to apply instructional task assignments in physics has affected students' perception.					
6	Large class size has affected the implementation of instructional task assignments in physics.					
7	Poor classroom management has affected the implementation of instructional task assignments in physics.					
8	Absence of sufficient feedback has affected the perception of students towards the application of instructional task assignments in physics.					
9	Arrangements of desks and chairs affect the application of instructional task assignments in physics teaching.					
10	Lack of school support has affected the application of instructional task assignments in physics teaching					

If you have any other factors, please specify:

_____

_____

APPENDIX - B

A Question to be filled by Students

A. General Information

Instruction: a) Writing your name is not necessary.

b) The characteristics of students are provided below. Please, select the appropriate answer and encircle it.

1. Name of the school _____

2. Sex: a) Male b) Female

3. Age: a) 15-17 years b) 18-20 years c) 21-23 years d) 24 years and above

B. Main Data

I. Instruction: Items dealing with attitude on the application of instructional task assignments in physics teaching are listed below. Please, select the choice that reflects your opinion and circle the letter of your choice or write your response when necessary.

1. How often instructional task assignments in physics teaching have been practiced in your school?

(Please rate them by using tick mark "✓" that corresponds to your response.)

No	Instructional Task assignments	Rating Scale		
		Always	Some times	Not at all
1.1	Class works			
1.2	Home works			
1.3	Group works			
1.4	Laboratory works			
1.5	Project works			

2. To what extent you are interested to do the task assignments in physics?

a) high b) moderate c) low

3. If your answer to question 2 is "low", the reason is that: (you can give more than one answer)

a) It is not related to my prior knowledge.

b) It lacks clear instruction.

c) It shares my luxury time.

d) It increases work load.

e) It is given as a punishment.

f) If any other, please specify:

_____

4. If your answer to question 2 is "high", the reason is that: (you can give more than one answer)

a) It maximizes learning physics.

b) It involves students in teaching learning process.

c) It encourages independent learning.

d) It develops self – confidence.

e) If any other, please specify:

_____

5. Instructional task assignments enhance students' participation in solving physics problems.

a) agree b) disagree c) undecided

6. Instructional task assignments in physics make students responsible for their own learning.

a) agree b) disagree c) undecided

7. If your response to question 6 is "disagree", who is responsible for your learning in the teaching – learning process? (You can give more than one answer)

a) The teachers are the only responsible for students' learning.

b) The parents are the only responsible for students' learning.

c) The government is the only responsible for students' learning.

d) The school management is the only responsible for students' learning.

e) If any other, please specify:

_____

8. The students learn more when every activity in physics is done by the teacher.

a) agree b) disagree c) undecided

9. The students learn physics more when they do task assignments in physics regularly.

a) agree b) disagree c) undecided

10. The students learn physics more when they are indifferent to any task assignments in physics.

a) agree b) disagree c) undecided

II. Instruction: Factors that may influence the perception of students towards the application of instructional task assignments in physics are listed below. Please, rate them from "strongly agree" to "strongly disagree" based on the seriousness of the problem in your school and give your responses using tick mark "✓" to the corresponding factors.

Key: 5= Strongly Agree (SA)

4= Agree (A)

3= Undecided (UD)

2= Disagree (DA)

1= Strongly Disagree (SD)

No	Factors	SA	A	UD	DA	SD
1	Students' lack of interest has affected their perception towards the application of instructional task assignments in physics.					
2	Teachers' lack of interest has affected the perception of students towards the application of instructional task assignments in physics.					
3	Students' misbehavior has affected their perception towards the application of instructional task assignments in physics.					
4	Lack of clear instruction to task assignment in physics has affected students' perceptions towards its application.					
5	Lack of appropriate feedback to task assignments in physics has affected the perceptions of students towards its application.					
6	Students' lack of confidence to participate in teaching – learning process has affected their perception towards the application of instructional task assignments in physics.					
7	Large class size has affected the implementation of instructional task assignments in physics.					
8	Students' sitting arrangements has affected the application of instructional task assignments in physics.					
9	Poor classroom management has affected the application of instructional task assignments in physics.					
10	Lack of school support has affected the application of instructional task assignments in physics.					

If you have any other factors, please specify:

_____

_____

APPENDIX - C

Classroom Observation Check List

I. General Information

1. Zone _____ Date _____
2. Woreda _____
3. School _____
4. Grade _____
5. Subject _____
6. Number of students in the class

   Male _____

   Female _____

   Total _____

II. Information about the teacher

1. Sex _____
2. Qualification _____
3. Experience _____

III. Lesson Plan

1. Related to the topic _____
2. Objectives are stated _____

IV. Observation about Classroom Instruction

Key: OS= Observed sufficiently

O = Observed

NO = Not observed

NI = Need improvement

NN = Not necessary

1. **Activities of the Teacher**	OS	O	NO	NI	NN
1.1. The teacher has introduced the topic.					
1.2. The teacher has clarified the learning objectives.					
1.3. The teacher has related the topic to the already learned lessons.					
1.4. The teacher has assessed prior knowledge and experience of the students.					
1.5. The teacher has motivated the students by different techniques.					
1.6. The teacher was asking questions and giving activities (work tasks)					
1.7. The questions and activities were related to the topic.					
1.8. The teacher has conformed that students are actively engaged on assigned tasks in physics.					
1.9. The teacher has reacted constructively to the students' responses.					
1.10. The teacher has given appropriate feedbacks based on students' responses.					
1.11. The teacher goes round the class and gives individual support to the students who are doing the tasks.					
1.12. The teacher has managed the classroom properly.					
2. Activities of the Students					
2.1. The students were interested in the lesson.					
2.2. The students were freely participating in the activities.					
2.3. The students were doing task assignments in physics by their own initiations.					

2.4. The students were indifferent to class activities in physics.					
2.5. The students were misbehaving in the classroom.					
2.6. The students were ready to do task assignments in physics.					
3. Classroom Conditions					
3.1. The number of students in a class was moderate.					
3.2. The classroom has enough space for movement.					
3.3. The class has adequate chars and desks.					
3.4. Desks and chairs are easily movable.					
3.5 There is a standardized chalkboard for every class.					

APPENDIX - D

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

COLLEGE OF EDUCATION

DEPARTEMENT OF CURRICULM AND TEACHERS PROFESSIONAL DEVELOPMENT STUDIES

Interview Questions to Principals and woreda Supervisors

Dear Respondents! The objective of this research is to assess the perception of grade 11 preparatory students towards the application of instructional task assignments in physics and to investigate the factors that may influence the students' perception towards the application of instructional task assignments in Horro Guduru Wollaga Zone. This research becomes effective and meaningful if all the respondents show their cooperation to answer all the questions carefully based on their experiences. Thus, your participation in giving answers to the questions has a great contribution to the effectiveness of the research. Moreover, the information that you give will be used only for academic purpose and it is confidential. Finally, the researcher wants to send his thanks in advance for your cooperation and devotion of time.

Thank you!

1. Age _____
2. Sex _____
3. Qualification _____
4. Working experiences as a principal/ supervisor _____
5. Total working experiences _____
6. Did you get any on job training about instructional task assignments like:
   - Class works
   - Home works
   - Project works
   - Laboratory works
   - Group works and their applications
7. If yes, is their any strategy for the application of instructional task assignments in the school?

8. Have you conducted any discussion on the issue of the application of instructional task assignments with teaching staff?

   - If yes, what were the results obtained?
   - If no, what were the reasons?

9. How frequent do you observe classes?

   If observation has been made, what did you see in the classroom in relation to the application of instructional task assignments?

   - Did the teachers apply instructional task assignments in physics teaching?

   -What was the perception of students to wards the application of instructional task assignments in physics?

10. What do you think are the major factors that may influence the perception of students to wards the application of instructional task assignments at school?
11. If any difficulties are encountered, please, would you suggest some of the possible solutions?

APPENDIX –E

Gaafannoo Barattootaan Guutamu

A. **Odeeffannoo Waliigalaa**

Qajeelfama a. Gaafaannicha irratti maqaa kee barreessuun hin barbaachisu.

b. Gaffiiwwan dhiyaatan erga dubbistee booda qube filannoo kee agarsiisutti mari.

1. Maqaa mana barmsaa_____
2. Saala a. Dhiira b. Durbee
3. Umurii a. wagga 15-17 b. waggaa 18-20
   c. Waggaa 21-23 d. Waggaa 24 fi ol

B. Odeeffannoo Qorannichaa

I. **Qajeelfama:** Hubannoo barattootni hojiirra oolmaa gochaawwan barnoota fiiziksii barsiisuu keessatti kennaman irratti qaban ilaalchisee gaaffileen armaan gaditti tarreeffamanii jiru. Qubee hubannoo kee calaqqisuu filachuun itti mari yookiin bakka barbaachisaa ta'etti hubannoo kee barreessi.

1. Mana barumsaa keessan keessatti, gochaawwan barnoota fiiziksii barsiisuu keessatti kennaman hammam hojiirra ooluu? (Mallattoo "√" Kaa'uun sadarkaasaa agarsiisaa

Lakk.	Gochaawwan kennaman	Sadarkaa		
		Yeroo hundaa	Takka takka	Gonkumaa hin oolu
1.1	Hojii daree			
1.2	Hojii manaa			
1.3	Hojii garee			
1.4	Hojii laaboraatoorii			
1.5	Hojii proojektii			

2. Gochaawwan barnoota fiiziksii keessatti kennaman hojjechuuf hammam fedha qabdu?

a. olaanaa b. gidduugaleessa c. gadi aanaa

3. Deebiin keessan gaaffii 2ffaa yoo "gadi aanaa" ta'e, sababiin isaa maal isinitti fakkaata? (Deebii tokkoo ol kennuun dandaama)

a. Beekumsa duraan qabnu waliin wal hin argatu.

b. Qajeelfama ifaa hin qabu.

c. Yeroo bashannanaa keenya nu saama.

d. Baay'ina hojii nutti dabala

e. Akka adabaatti kennama.

f. Kan biroo_____

4. Deebiin keessan gaaffii 2 ffaa yoo " Olaanaa" ta'e, sababiin isaa maal isinitti fakkaata? (Deebii tokkoo ol kennuun danda'ama)

a. Barnoota fiiziksii ni cimsa

b. Adeemsa baruu-barsiisuu ni jajjabeessa

d. Ofitti amanamummaa ni kakaasa

e.Kan biroo_____

5. Gochaawwan barbnoota fiiziksii keessatti kennaman, rakkoo furuu irratti hirmaannaa barattootaa ni kakaasa.

a. Waliin gala b. nan morma c. murteessuun na rakkisa

6. Gochaawwan barnoota Fiiziksii keessatti kennaman, barnoota isaaniif, barattoo itti gafatamtoota isaan taasisa.

a. waliin gala b. non morma c. murteessuun na rakkisa

7. Deebiin keessan gaaffii 6 ffaa yoo "nan morma" ta'e, barnoota keessaniif itti gaafatamaan eenyuu? (Deebii tokkoo ol kennuun danda'ama)

a. Barnoota barattootaaf itti gaafatamootni barsiisota qofa.

b. Barnoota barattootaaf itti gaafatamootni maatii qofa.

c. Barnoota barattootaaf itti gaafatamaan mootummaa qofa.

d. Barnoota barattootaaf itti gaafatamaan bulchiinsa mana barumsaa qofa.

e. Kan biroo_____

8. Barattootni caalaatti kan baratan yoo gochaawwan barnoota fiiziksii keessatti kennaman hunduu barsiisota qofaan raawwataman dha.

a. Waliin gala b. nan morma c. murteessuun na rakkisa

9. Barattootni barnoota fiiziksii caalaatti kan baratan yoo gochaawwan barnoota filiziksii keessatti kennaman yeroo yerootti rawwatan dha.

a. Waliin gala b. nan morma c. murteessuun na rakkisa

10 Barattootni barnoota fiiziksii caalaatti kan baratan yoo gochaawwan kennaman irratti hin hirmaatan ta'e dha.

a. Waliin gala b. nan morma c. murteessuun na rakkisa

II. Qajeelfama: Hubannoo barattootni hojiirra oolmaa gochaawwan barnoota fiiziksii barsiisuu keessatti kennaman irratti qaban irratti dhimmootni dhiibbaa fiduu danda'an gabatee armaan gadii keessatti tarreeffamanii jiru. Kanaafuu, cimna rakkoo mana barumsaa kee irratti hundaa'uun "baay'een waliigala" irraa jalqabee hamma " baay'een morma" jedhutti sadarkaa kennuun mallattoo "√" kaa'uun deebsaa.

Furtuu: 5 = Baay'een waliigala

4 = waliin gala

3 = Murtessuun na rakkisa

2 = Nan morma

1 = Baay'een morma

Lak.	Dhimmoota	Sadarkaa				
		5	4	3	2	1
1.	Fedhii dhabuun barattootaa hubannoo isaan hojiirra oolmaa gochaawwan barnoota fiiziksii keessatti kennaman irratti qaban irratti miidhaa qaba					
2	Fedhii dhabuun barsiisotaa hubannoo barattootni hojiirra oolmaa gochaawwan barnoota fiiziksii keessatti kennamman irratti qaban irratti miidhaa qaba					
3.	Amala gaarii dhabuun barattootaa hubannoo isaan hojiirra oolmaa gochaawwan barnoota fiiziksii keessetti kennaman irratti qaban irratti miidhaa qaba					
4.	Gochaawwan kennamaniif qajeelfama ifaa dhabuun hubannoo barattootaa irratt miidhaa qaba					
5.	Gochaawwan kennamaniif deeb-calaqqee sirrii kennuu dhabuun hubannoo barattoota irratti miidhaa qaba					
6.	Adeemsa baruu-barsiisuu keessatti ofitti amanamummaa dhabuun barattootaa hubannoo isaan hojiirra oolmaa gochaawwan kennaman irratti qaban irratti miidhaa qaba					
7.	Daree keessatti baay'achuun barattootaa hojiirra oolmaa gochaawwan barnoota fiiziksii keessatti kennaman irratti miidhaa qaba					
8.	Akkaataan taa'umsa barattootaa hojiirra oolmaa gochaawwan barnoota fiiziksii keessatti kennaman irratti miidhaa qaba					

APPENDIX-F

YUUNIVARSITII FINFINNEE

SAGANTAA DIGRII LAMMAFFAA

KOLLEJJII BARNOOTAA

MUUMMEE SIRNA BARNOOTAA FI

QO'ANNAA GUDDINA OGUMMAA BARSIISOTAA

Kaayyoo Qorannichaa

Kaayyoo guddaan qorannoo kanaa hubannoo barattootni qophaa'ina Kutaa 11ffaa Zoonii Horroo-Guduruu Wallaggaa hojiirra oolmaa gochaawwan barnoota fiiziksii barsiisuu keessatti kennaman irratti qaban hubachuu fi dhimmooota hubannoo barattootaa irratti dhiibbaa uumuu danda'an addaan baasuuf dha. Kanaafuu, gaafannoo kanaaf odeeffannoo isin naa kennitan fiixaan ba'umsa qorannoo kanaaf murteessaa waan ta'eef, yeroo keessan gubdanii deebii gaafannoo kanaa naa kennuu keessaniif kabaja guddaan qaba. Kana malees,odeeffannoon isin kennitan qorannoo kanaaf qafa waan ooluuf, icciitiin qabamuusaa nan mirkaneessa

Guddaa Galatoomaa!

Gaaffii fi Deebii Hoggantoota Mana Barumsaa fi Supparvaayizaroota Anaaf Dhiyaate

1. Umurii_____
2. Saala_____
3. Sadarkaa Barnootaa_____
4. Muuxannoo Hojii:
    a. Akka Hogganaa Mana Barumsaatti_____
    b. Akka Supparvaayizariitti_____
5. Muxannoo hojii waliigalaa_____

6. Waa'ee gochaawwan adda addaa kanneen akkaa:
   - ❖ Hojii daree
   - ❖ Hojii manaa
   - ❖ Hojii garee
   - ❖ Hojii laaboraatoorii
   - ❖ Hojii piroojektii fi kkf irratti leenjii argattanii beektuu?
7. Deebiin kessan yoo "eeyyee" ta'e, mana barumsaa keessatti hojiirra oolmaa isaaniitiif tooftaan jiraa?
8. Haala hojiirra oolmaa gochaawwan kunniinii irratti barsiisota waliin maree gaggeessitanii beektuu?
   - Deebiin keessan yoo "eyyee" ta'e, friin argame maali?
   - Deebiin keessan yoo "lakki" ta'e, maaliif?
9. Yommuu barsiisotni barsiisan hammam daree seentanii ilaaltuu?
   Yoo ilaaltanii jiraattan, waa'ee hojiirra oolmaa gochaawwan kunniinii maal hubattan?
   - Barsiisotni barnoota fiiziksii barsiisuu keessatti gochaawwaan adda addaa hojiirra oolchuu?
   - Hojiirra oolmaa gochaawwan barnoota fiiziksii barsiisuu keessatti kennaman irratti hubannoon barattootaa maal fakkaataa?
10. Hubannoo barattootni hojiirra oolmaa gochaawwan adda addaa irratti qaban irratti dhimmootni gurguddoon dhiibbaa uuman maalfaa isinitti fakkaataa?
11. Rakkooleen yoo jiraatan, yaadni furmaataa maali jettanii yaaddu?

DECLARATION

This thesis is my original work and has not been presented for a degree in any other university and that all source of materials used for the thesis have been duly acknowledged.

Name: - Takele Wakjira

Signature _____

Date 10/07/2008

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

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