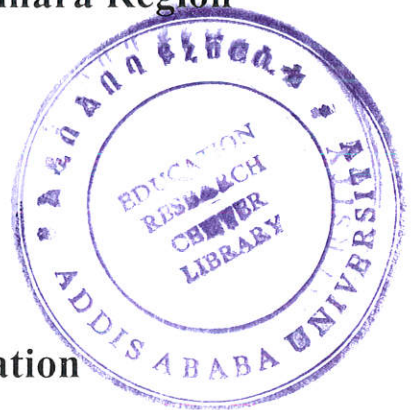


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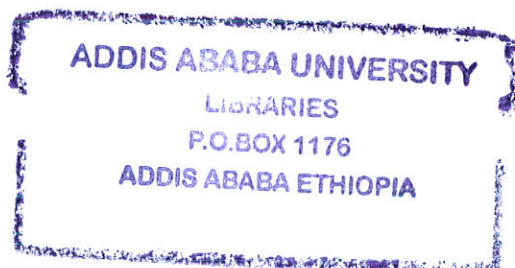
**Study on Factors of Work Motivation, Attrition and Retention
of North Wollo TVET Teachers in Amhara Region**

College of Education
Department of Business Education



By:
Dawit Tesfaye

June 2008
Addis Ababa



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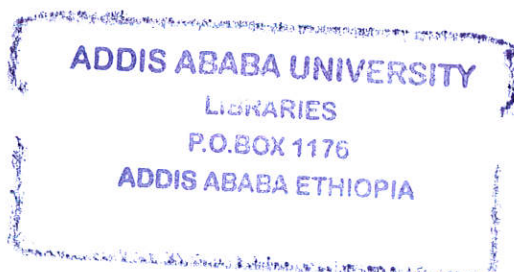
**Submitted in Partial Fulfillment of MA Degree
in Management of Vocational Education**

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ABSTRACT

This study was conducted on government TVET teachers of North Wollo Administrative Zone. Its major purpose was to investigate factors of work motivation, attrition, and retention of TVET teachers. To this effect, a structured questionnaire was prepared and administered to 62 teachers and 6 institution administrators.

Data analysis was made using the Statistical Packages for Social Science Studies (SPSS). Percentage, Mean, t-test, and one-way analysis of variance (ANOVA) were used to identify if there were difference and similarity among the respondents on several variables.

Results showed that, among the reasons teachers are highly dissatisfied and resigning their institution with the following major variables: poor pay/minimum amount of payment, the physical conditions of work/facilities availability for doing the work, poor teacher management at all level of the institution, poor level of communication between teachers and institution administrators, Negative image of the teaching profession the society, and unfair and incompetence of the supervision.

The reason for resigning teachers responded by teachers and administrators are mostly similar. Accordingly this study pointed out that, diminutive consideration has been given to teachers' retention and there fore, no effort was made to reduce teacher attrition.

The study revealed that among the factors that contributed to retain teachers in their institutions are: the opportunity for further educational advancement, the notion that teaching is better than other jobs in benefiting the society, wanting the opportunity to be creative, high level of satisfaction by the job itself, and the thinking that teaching provides an opportunity to enjoying with young people.

Further more, t-test and one way ANOVA of this study reveals that there are significant mean difference between current qualification, age, and experience across work motivation factors. On the other hand teachers don't differ on factors of teacher turn over and teacher retention. No significant difference in work motivation factors, factors of teacher turn over and retention is found across salary groups of employees.

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ACCRONYMS AND ABBREVIATIONS

CPD	Continuous Professional Development
EDAD	Educational Administration
ESAA	Education Statistics Annual Abstract
ETPI	The Educational and Training Policy and its Implementation
GCE	Global Campaign for Education
IIEP	International Institute for Educational Planning
MOE	Ministry of Education
OECD	Organization for Economic Cooperation and Development
TVET	Technical and Vocational Education and Training
VSO	Voluntary Service Overseas

CHAPTER ONE

1. Introduction

1.1 Background of the Study

A competitive global market economy requires technical and professional citizens trained in broad and specific occupation. Hence, Technical vocational Education and Training (TVET) may be seen as a center for the development of marketable and entrepreneurial skills and as a means for development. It is with such consideration that, Ethiopia put in place a comprehensive human resource development program aimed at strengthening its capacity through TVET (MOE-ESAA, 2005/06). To meet this demand, technical and vocational education and training have been diversified, enrollment has gone up, and the trainees are prepared to perform functions valued by the market and society.

TVET teachers and trainers play a key role in maintaining the standard and quality of the curriculum in institutions of TVET. Thus, there should be qualified teachers in sufficient quantity, and their living conditions have to be comfortable and their professional needs have to be met (MOE-ETPI, 2002).

Establishing and maintaining a stable work force in the hospitality and convention industry is a challenge (Ken, 2000). An effective organization will make sure that there is a spirit of cooperation and a sense of commitment and satisfaction within the sphere of its influence (Adeyinka, 2007). In order to make employees satisfied and committed to their jobs in academic and research, there is a need for strong and effective motivation at the various levels, and departments of the TVET institutions.

Motivation is a basic psychological process. A recent data based comprehensive analysis concluded that competitive problems appear to be largely motivational in nature (Miner, Ebrahimi, and Wachtel, 1995). Along with perception, personality, attitudes, and learning, motivation is a very important element of behavior.

Luthans (1998) asserts that motivation is the process that arouses, energizes, directs, and sustains behavior and performance. That is, it is the process of stimulating people to

action and to achieve a desired task. One way of stimulating people is to employ effective motivation, which makes workers more satisfied with and committed to their jobs.

As stated in Edward (1999:369), Frederic Herzberg proposed two sets of factors of work motivation: hygiene factors and motivator factors. Hygiene factors were identified as aspects of job context. They do not motivate us to work harder if they are satisfied but have the potential, if unsatisfactory, to reduce our performance by making us dissatisfied with the employment. Hygiene factors include job security, working conditions, company policy and its administration, technical supervision, peer relationships, relationships with supervisors. Satisfying experiences of employment in Herzberg's theory were what he called motivator factors. The emphasis is on the internal satisfactions of doing the work, the challenges and rewards of the doing. The motivator categories in Herzberg's lists are achievement on important tasks, recognition for doing good work, the nature of the work itself, responsibility for the work, and advancement on the basis of work.

Like wise, Berhanemeskel (2006) noted that, teachers who considering leaving the profession offered variety reasons, most among them are lack of conducive teaching learning environment, low salary, lack of professional career development, and low regards which community members and students give to teachers were the core reasons for their dissatisfaction and resignation. As stated in Berhanemeskel (2006), Mulkeen pointed out that with increasing employment opportunities in the private sectors; retention of teachers in public educational institutions becomes a great concern. As the finding of one of the studies conducted in sub Saharan Africa showed, nearly 40 percent of the teachers said that they would take a position in private educational institutions because of the demotivating factors in public educational institutions.

Currently, Technical and Vocational Education and Training Institutions have increased in number and the training areas have been diversified and enrollment has gone up at a faster rate. However, getting qualified teacher is the major problem of our education system (ETPI, 2002). So, the scarcity of qualified human resource is one of the great constraints through out Ethiopia.

It will become significantly more important in the years ahead to recognize the commitment of individuals to an organization, as well as the organization's need to create an environment in which one would be willing to stay (Harris, 2000). Thus, teacher motivation is not only about the motivation to teach but also about the motivation to be a teacher as a life long career. It is now becoming rare to see experienced teachers staying in their jobs in the most backward zones of Amhara Region, especially in North-Wollo administrative zone. The official documents and reports indicated from this zone assure this reality. Therefore, in order to minimize the impact of the Problem, it is crucial to investigate the causes of the problem and suggest appropriate solutions.

1.2 Statement of the Problem

In Ethiopia, technical and vocational education and training institutions have increased in number and the training areas have been diversified, enrollment has gone up, and resulting in shortage of qualified teachers (MOE-ESAA,2005/06). At the moment, only 39% of the total teaching force has taken the requisite training for teaching at the secondary school level (ETPI, 2002). The government is exerting all its efforts to solve this problem mainly through pre-service and in-service training. But only this does not guarantee the institutions to solve their problems to have qualified human resources.

Determining the reasons and factors why workers work has been the quest of industrial psychologists and management experts for years. It is generally agreed upon that if an employer can identify the reasons a worker is productive, reports to work on time, and remains with the company, the employer might then be able to apply these motivational factors unilaterally to the entire work force. Applying this knowledge and fashioning the employment atmosphere to better accommodate the motivational factors of the employee, the employer becomes a more desirable employment destination, retaining employees longer, and increasing productivity and service at the same time.

Examining some studies conducted in Ethiopia is relevant in this case. The work of Legesse Tsigie, (1994); Befekadu, (2001); Berhanemeskel, (2006) though they were not

specifically aimed at the issue of work motivation and retention of Amhara Region North-Wollo's TVET teachers, indicate that teachers are dissatisfied with many aspects of their job and living conditions which affect their determination to remain in teaching in TVET Institutions.

North Wollo administrative zone, as part of the country, is facing these major challenges. Many teachers are leaving TVET teaching and look for another job. As the official documents and reports shows, an average of 13% left teaching in TVET institution in this zone.

Thus, this study gives intention at seeking answers to the following basic questions.

1. What conditions motivate TVET teachers in Amhara Region North-Wollo administrative zone?
2. What are the factors that could cause teachers to leave teaching in TVET Institutions of North Wollo administrative zone?
3. What are the factors that support successful teachers' retention in North Wollo TVET Institutions?
4. Is there any relationship between the educational level, salary, age and experience of teachers and their motivation, retention and attrition in TVET institution of North Wollo administrative zone?

1.3 objectives of the study

I. General objectives

The general objective of this study is to identify the factors that contribute to teachers' motivation, attrition, and retention in TVET institution.

II. Specific Objectives

The specific objectives of this study are to investigate:

- The conditions that motivate TVET teachers in their institution.
- The factors that could cause teachers to leave teaching in TVET Institutions.
- The strategies that support successful teachers' retention.

- Whether there is a relationship between the educational level, salary, age and experience of employees/teachers and their retention /attrition in TVET institution.

1.4 Significance of the Study

This study is significance for the following reasons:

1. The result of the study will contribute towards identifying the potential factors that could cause teachers attrition and to suggest mechanisms to alleviate these factors by the concerned bodies at Regional and Zonal Levels.
2. The study will show suitable and important suggestions and strategies for policy and decision makers at various levels and other stakeholders on how to motivate and retain teachers of TVET institutions.
3. The study is also significant in terms of finding data to the existing knowledge base regarding factors of work motivation and retention of TVET teachers in Amhara Region North Wollo zone. Since there is no prior study conducted on TVET teachers' work motivation and retention in this zone.

1.5 Delimitation of the Study

As it is indicated in the main topic this research was conducted on the governmental TVET institution of North Wollo administrative zone of Amhara Regional State. The study focused, specially, on the teachers and administrators/principals of the governmental TVET institutions. Since, there are only two governmental TVET institutions in the zone, all of the teachers and administrators/principals of both institutions had been taken as respondents of the research.

1.6 Limitations of the study

There are important considerations to be made with respect to the limitations on the design of this study. The method of the filling out of the questionnaires may not have been performed in a consistent manner where the subjects were able to respond without undue distraction and with concentration. In addition respondents did not provide

responses to the open-ended questionnaire. Finally, the above limitations might have influence on the generalizability of the findings of this study.

1.7 Operational Definition of Terms

- Achievement: An act of success or failure in the performance of the job.
- Attrition: refers to forms of withdrawal of teachers from their profession /institution
- Recognition: An act of recognition to the respondent
- Collateral: Witness pledged as a guarantee for the future services of teacher
- Retention: The keeping of teachers in their teaching career
(Mulkeen, 2004).
- Working condition: physical conditions of work, work load, or facilities available for doing work.
- Work itself: The act of performing the job or the tasks of the job.

1.8 Organization of the Study

This thesis is organized in to six chapters. The first Chapter is concerned with background of the study, overview of the study, statement of the problem, Importance of the study, operational definition of terms and organization of the study. The second chapter is concerned with the review of related literatures, while the third chapter deals with research methodology and procedure of the study. The fourth chapter is concerned with the result of the data. The fifth chapter is concerned with discussion of the data. The last chapter brings to an end this survey research with summary, conclusion of the findings and recommendations.

Chapter Two

2. Review of Related Literature

This chapter summarizes the meaning of work, importance of motivation in work behavior and a number of well-known motivation theories, which appear to be relevant to the teaching context.

2.1 Work

Since the subject of this survey is the factors of work motivation of TVET teachers, it is necessary to give some clue about the meaning and nature of the term work and the importance of motivation in work behavior before discussing the status of motivation theory, which appears to be relevant to the teaching context and survey.

2.1.1 Definition of work

Work, in its ordinary usage, holds the essence equivalent to job. As Locke (1976) said, “a job is not an entity but a complex interrelationship of tasks, roles, responsibilities, interactions, incentives, and rewards. Thus, a thorough understanding of job attitudes requires that the job be analyzed in terms of its constituent elements”.

Accordingly, work is a label placed on sets of activities as they are socially related to others (Edwards, 1999). Thus, doing something for money is a clear case of socially defined work and it has become a means of social exchange to provide for our mutual lives.

Work is important in the lives of individuals for several reasons: First, there is a concept of mutual exchange; this implies that a worker receives some form of rewards, either extrinsic or intrinsic, in exchange for his or her services. The reward might create a desire to leave or retain with the organization. Second, Work has become a means of social functions. That means the work place creates opportunities for interpersonal relationships. Third, Individual’s job is often a source of occupational status in a society. That means work can be a source of social differentiation. Fourth, the meaning of work is depends up on individual worker perception, from a psychological point of view work

can be an important source of identity, self-esteem, and self actualization (Steers& Porter, 1983). Hence, the nature of the job and the meaning it has for the employee can have a significant impact on employee understanding and work behavior.

Hackman and Oldham (1976) suggested that job differ in the extent to which they involve in five dimensions: skill variety, task identity, task significance, autonomy, and task feedback. They further suggested that if jobs are designed in a way that increases the presence of these core characteristics, three critical psychological states could occur in employees' mind: (1) experienced meaning fullness of work, (2) experienced responsibility for work outcomes, and (3) knowledge of the results of work activities. According to Hackman and Oldham, when these critical psychological states are experienced, work motivation and job satisfaction will be high.

2.1.2 Importance of motivation in work behavior

Establishing and maintaining a stable work force in educational institution especially in TVET center is a challenge. More than average job in the TVET center require skilled employees. But takes on a transient quality that accommodates the needs of the individual and will leave an employer to fill the same position repeatedly (Ken, 2000)

Ofoegbu (2004) note that teacher motivation, therefore, is anything done to make teachers happy, satisfied, dedicated, and in such a way that bring out their best in their places of work so that both students, parents and the society will greatly benefit their services.

In addition to this, needs satisfaction and motivation to work are very essential in the lives of teachers because they form the fundamental reason for working in life. While almost every teacher works in order to satisfy his or her needs in life, he or she constantly agitates for need satisfaction (Ololube, 2004).

Thus, most government and other key education stakeholders recognize the crucial importance of improving the living and working conditions of teachers in order to

motivate and retain teachers in the institution and to achieve the desired improvements in quality and access to all education (Bennell & Akyeampong, 2007).

2.2 What a Motivation is?

Under this section, it is made to describe the term motivation. There are various definitions of motivation with competing attitudes towards its nature. These differences in the nature of motivation are apparent in theories. Only those definitions much concerned with this thesis are put under.

Paul and Dale (2002) note that “motivation is the process where by goal directed activity is instigated and sustained”. As a process, we do not observe motivation directly, but rather we infer it from such behaviors as choice of tasks, effort, persistence, and verbalizations. Motivation involves goals that provide impetus for and direction to action and it requires activity, physical or mental. Finally, motivated activity is instigated and sustained. Thus, motivated behaviors are voluntary choices controlled by the individual worker.

On the other hand, motivation is a human psychological characteristic that contributes to a person’s degree of commitment. It includes the factor that cause, channel and sustain human behavior in a particular committed direction (Stoner et al, 1995). Thus, organizational goals are unattainable with out the enduring commitment of member of the organization, so that the employers are obliged to provide the factors that motivate employees to higher levels of productivity.

2.3 Work motivation in theory

Work motivation refers to the Psychological processes that influence individual behavior with respect to the attainment of workplace goals and tasks. However, measuring the determinants and consequences of work motivation is complex because these psychological processes are not directly observable and there are numerous organizational environmental obstacles that can affect goal attainment (Bennell & Akyeampong, 2007).

According to Steers and Porter (1983), a comprehensive theory of motivation at work must address itself to at least three important sets of variables: 1. Characteristics of the individual, 2. Characteristics of the job, and 3. the work environment, in order to give full explanation of human behavior at work. Moreover, Bennell and Akyeampong (2007) note that motivation is a broad concept, involving both characteristics of the individual and external factors, it is open to varied interpretations in the field. There are two types of motivation, namely intrinsic and extrinsic. Intrinsic motivation is motivation that comes from within a person whereas extrinsic motivation is determined mainly by the level and type of external rewards that are available.

Although 'extrinsic incentives' (in particular higher pay and a decent working environment) tend to attract the most attention, striving to improve the substance of teachers' work, such as improvement of teaching materials or in-service training, can also be significant incentives. Thus, head teachers/managers need to hold the people determine what factors motivate them and work with them with that basis. There is a voluminous theoretical and empirical literature on human motivation for work, but all could not be reviewed here. However, some of them which are potentially quite relevant to the teaching profession are provided.

Maslow's Hierarchy of Needs

Maslow's theory of the hierarchy of needs is the first and most popular theory concerning human motivation. It consists of two fundamental premises. The first premise states, "Individuals are primarily 'wanting' creatures motivated by a desire to satisfy certain specific types of needs" (Steers and Porter, 1983). Man, therefore, is motivated by the desire to satisfy certain needs. These needs are arranged in a hierarchical order and identified as physiological, safety, belongingness, esteem, and self-actualization needs.

The second premise that is proposed by Maslow, as cited in Steers and Porter is that human needs or "wants" are arranged in a hierarchy of prepotency. The basic needs are arranged in order from lower level to higher level. And, once individuals are satisfied a

certain need, they would move up the hierarchy one level at a time in order to eventually satisfy the higher level needs.

Maslow's theory suggested that employees first need a wage sufficient to feed, shelter, and protect them and their families satisfactorily, as well as a safe working environment. Then their security needs must be met-job security, freedom from coercion or arbitrary treatment, and clearly defined regulations. Then, managers offer incentives designed to provide employees with esteem, feelings of belonging, or opportunities to grow. When all other needs have been adequately met, employees will become motivated by the need for self-actualization (Stoner et al, 1995).

The application of the logic of need hierarchy in the organization requires managers to create "proper climate" that facilitate the development of employees to their potential. Such climate might include increasing opportunities for autonomy, responsibility, and so on. So that employees could work toward the satisfaction of their higher order needs (Steers & Porter, 1983).

In applying the theory to motivate teachers, it is necessary to know the prepotency level of the teachers. Sergiovanni and Carver underlying this point in the context of educational administration when they note:

Knowing the level of prepotency of teacher is important because it does not make sense to motivate at the autonomy level if teachers are insecure or to motivate at the security level when they seek autonomy... The goal for school executives should be growth from what ever level teachers are at present (Sergiovanni and Carver, 1980:84-85).

Thus, refusing teachers' level of satisfaction can seriously impair the realization of higher-level needs with out which effective work motivation cannot be attained

Alderfer's ERG Theory

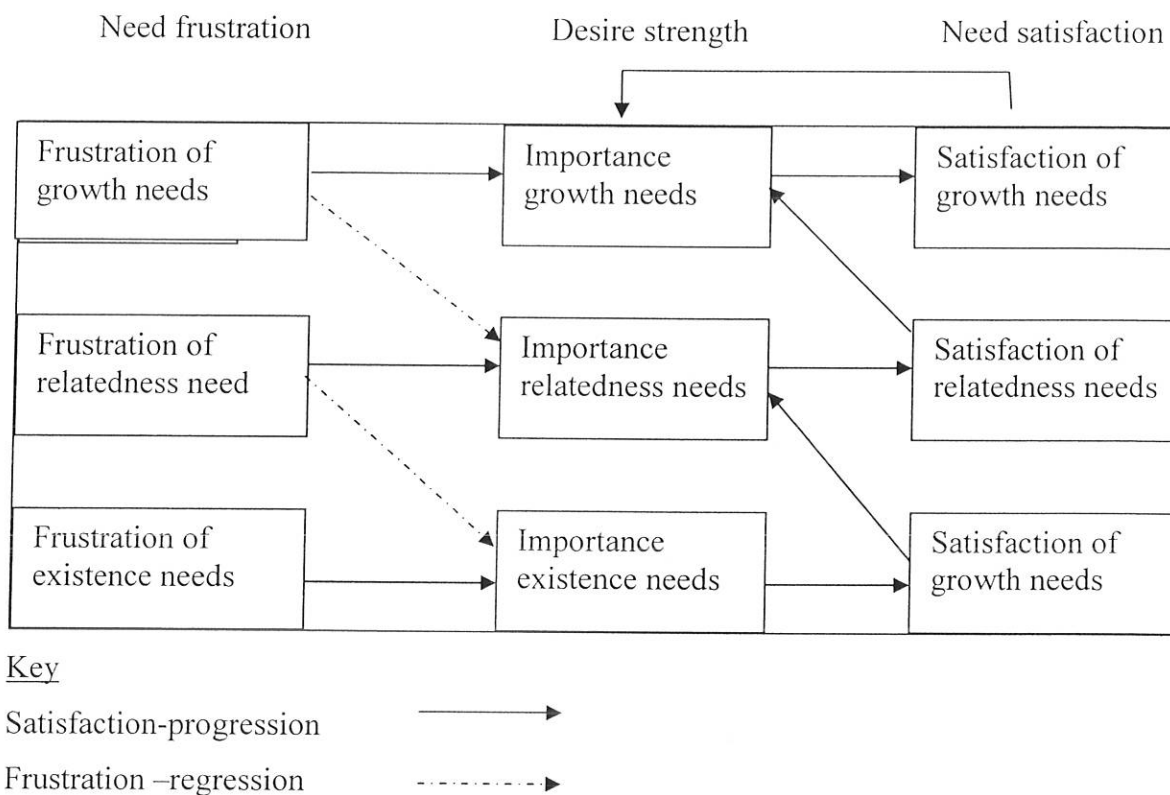
A simple form of need hierarchy theory directed specifically to the question of work motivation is that of Clayton Alderfer (Edward, 1999). Alderfer extended and simplified Maslow's need hierarchy theory in to three sets of needs: Existence, Relatedness and Growth (hence 'ERG'). Unlike Maslow, he did not see these as being a hierarchy, but being more of a continuum.

1. Existence needs these needs deals with the need to stay, alive and safe, now and in the near future. This includes Maslow's physiological and safety needs.
2. Relatedness needs: these needs concern how people relate to their surrounding social environment and it includes the needs for meaningful social and interpersonal relationships.
3. Growth needs: this category refers to the highest-level needs, includes needs for personal creativity or productive influence. This covers Maslow's self-esteem and self-actualization (Steers& Porter, 1983; Stoner et al, 1995; Edward, 1999).

According to steers and Porter (1983), Alderfer's theory has provided some special attention from Maslow's original formulation, however, in two important respects. First, if a particular level of need cannot be satisfied for whatever reasons, Maslow's hierarchy leads to the suggestion that the need remains potent and unsatisfied. However, Alderfer suggested that the individual might redirect his or her efforts toward lower-order needs.

Thus, ERG theory proposes that when an individual is continually frustrated in attempts to satisfy his/her higher order needs, lower order needs may re-emerge as a primary and the individual devoted his/her energy there.

Fig 1. Satisfaction-progression, frustration-regression component of ERG theory



Source: Landy & Trumbo, 1980, p.341 as cited in Steers & Porter, Motivation and work Behavior, 1983, p.29

A second major difference is that Maslow notes that people moving steadily up the hierarchy of needs, Alderfer proposed that more than one need might be activated at the same time. Thus, the ERG theory accounts well for individual differences among people in terms of their needs (Stoner et al, 1995; Edward, 1999).

Fig 2. Maslow’s need levels, how they are satisfied in working, and their correspondence to Alderfer’s ERG components

Maslow’s Need Level	Need-fulfilling job factors	Alderfer’s ERG Needs
Self-Actualization	Creative work Challenging work Advancement opportunity	Growth
Self-Esteem	Recognition Important work Job Status and title	
Belongingness, Love	Benevolent supervisors Compatible coworkers Job relate organizations	Relatedness
Safety	Benefits Job security Safe working conditions	Existence
Physiological	Adequate rest Food and other body needs Comfortable working conditions	

Source: Edwards C. David. (1995). Motivation and Emotion. Sage publications, India pvt.ltd. p.365

Herzberg’s Motivation-Hygiene Theory.

Herzberg, another motivational theorist, was not concerned with the source of human motivational behavior as was Maslow, rather he explored the factors that have caused either job satisfaction or job dissatisfaction motivation in the work environment. (Seguin, 1997). The findings of the study showed that the factors involved in producing job satisfaction and motivation were separate and distinct from the factors that led to job dissatisfaction. Herzberg noted that

Since separate factors needed to be considered, on whether job satisfaction or job dissatisfaction is examined, it follows that these two feelings are not opposite of each other. The opposite of job satisfaction is not job dissatisfaction but, rather, no job satisfaction; and, similarly, the opposite of job dissatisfaction is not job satisfaction, but no job dissatisfaction. (Herzberg, 1976, P.58).

Herzberg, as cited in Seguin, (1997) felt that two kinds of needs were emerging. The first type of needs, found in the environment, were the built-in drives by humans to avoid pain from their environment by satisfying basic biological needs. The other needs, found in the job content, were related to the ability to achieve and, through achievement, to experience psychological growth. The dissatisfaction or hygiene factors which were extrinsic to the job include company policy and administration, supervision, interpersonal relationships, working conditions, salary, status, and security. They were called hygienic factors because they have the potential to cause problems if they are neglected.

The satisfaction or motivator factors, which were intrinsic to the job included achievement, recognition for achievement, the work itself, responsibility, and growth or advancement. It was believed that the motivator factors had the potential to increase job performance (Edwards, 1999; Stoner et al, 1995; Steers & Porter, 1983).

Motivators are associated with long-term positive impacts on job performance while hygiene factors only tend to produce short-term changes in job attitudes and motivation, which quickly fall back to their previous level. (Bennell & Akyeampong, 2007).

Acquired Needs Theory

Acquired Needs theory uses the concept of human needs as the basic unit of study. This model has its origin in the early work of Henry A. Murray and his associates at the Harvard psychological clinic during the 1930s (Steers & Porter, 1983).

The three classifications of Acquired Needs theory were described as follows: the need for power, the need for affiliation, and the need for achievement.

Seguin (1997) note that people who felt the need for power were most concerned about the means by which goals were achieved rather than by their actual achievement of them. On the other hand, McClelland (1973) note that power had another face that held positive qualities far removed from the authoritarian and dictatorial picture. These qualities are helping people by setting their goals by developing interpersonal relationship through out the group, providing means of achieving goals, and lastly, encouraging the group to feel strong enough to work hard for those goals. People who were driven by need for affiliation were most concerned about their friends and interpersonal relationships in the workplace. Thus, this need for social interaction motivated them to make decision based on the desire to work closely with others and to maintain the relationships.

People who experienced satisfaction from reaching goals were characterized as having the need for achievement (Seguin, 1997). Individuals that were motivated by this need would gain satisfaction from successful task performance, and enjoyed feed back based on the work effort (Edward, 1999).

Thus, it is believed that each person possessed all the three of these needs, among others, and that each person differed in the extent to which these needs motivated them. Therefore, the environment of an organization could be adjusted to better provide the motivation and needs of its workers.

Equity theory of Motivation.

Adams and Rosenbaum (1962) used the equity theory to explain the behavior of individuals in their work environments in terms of perceiving fair treatment and equality. Stoner, (et al, 1995) note that equity can be defined as a ratio between the individual's jobs inputs (such as effort or skill) and job rewards (such as pay or promotion). Thus, equity theory matches the notion of "a fair day's work for a fair day's pay." Equity and fairness in the work place has been found to be a major factor in determining employee motivation and job satisfaction (Lewis et al, 1995).

As such, equity theory assumes that one important cognitive process involves people looking around and observing what effort other people are putting in to their work and what rewards follow that effort.

Thus, Teachers compare their own efforts and rewards with those of peers. The peers in question may be in other occupations as well as with in the teaching profession. Such comparisons are likely to influence teachers' perceptions of their own status.

Expectancy theory of Motivation

According to Lewis, (et al, 1995), expectancy theory is the most comprehensive motivational model that seeks to predict or explain task-related effort. It was first presented by Victor Vroom (1964) and has been modified by many others since then (Edwards, 1999). The theory suggests that people choose how to behave, from among alternative courses of action, based on their expectations of what there is to gain from each action and the work of it to them.

According to expectancy theory, work motivation is determined by two factors: (1) the relationship between effort and performance and (2) the desirability of various work outcomes that are associated with different performance levels. Simply put, the theory suggests that the motivation that will lead to job satisfaction is a function of the perceived relationship between an individual's effort, performance, and the desirability of consequences associated with job performance (Lawler, 1973; Vroom, 1964). That is, employees are influenced by the expected outcomes of their behaviors and motivation at work or the perceptible link between effort and reward.

Reinforcement Theory

Reinforcement theory, associated with the psychologist B.F skinner, shows that behavior is a function of its consequences. (Edwards, 1999). Reinforcement is defined as any effect that causes behavior to be repeated or inhibited that can be positive or negative (Naylor, 1999).

Ayalew (1991) stated that there are four common methods of behavior modification:-

- i. positive reinforcement- desirable behaviors are encouraged, or reinforced, by positive consequences such as praise or arise
- ii. Avoidance- employees change their behavior to avoid unpleasant consequences, such a criticism or a poor evaluation
- iii. Extinction- the absence of reinforcement.
- iv. Punishment- the application of negative consequences. Common examples of punishment range from criticism to reduced pay and to dismissal (stoner, 1995).

Skinner (1971) carried out several studies and came up with a conditioning model which proposes that if pleasant consequences follow a behavior, the behavior will tend to continue; where as, if unpleasant consequences follow a behavior, the behavior tends to stop (Luthans & Keritner, 1985).

According to stoner (1995), behavior modification uses reinforcement theory to change human behavior. Thus, a manger /head teacher who wishes to change employee behavior must change the consequences of that behavior and understand that employees differ in their choices of particular rewards.

Goal – setting Theory

Goal – setting theory focuses on the process of setting goals themselves (Stoner et al, 1995). Locke (1976), as cited in Bennell & Akyeamong (2007), argues that employee motivation is likely to be enhanced if work goals are specific, challenging formed through employee participation and reinforced by feedback. According to goal-setting theory, then, individuals are motivated when they behave in ways that move them to certain clear goals that they accept and can reasonably expect to attain. Bennell & Akgeamong (2007) suggested that, this theory raises important issues for educational systems in which teachers are often left to guess at what their professional goals should be or have goals imposed on them with out consideration of their views. Even where

goals have been specified feedback to teachers may be limited by infrequent contact with supervision.

2.4 Work Motivation of TVET Teachers.

The relevance of teacher motivation is very crucial to the long-term growth of any educational system around the world. According to Richard Ingersoll, as cited in Lawrence (1999), defines teaching as “an occupation with a very high turn over rate and the graying workforce is only a piece of a puzzle “. According to him when an institution loses its teachers, it may jeopardize efforts to attain institutional objectives.

Achieving better learning outcomes depends fundamentally on improvements in teaching. Thus, ways to increase teacher motivation and capabilities are central to any systematic attempt to improve learning outcomes. Because, the teacher is the one who translates educational philosophy and objective in to knowledge and skill and transfers them to students (Ofoegbu, 2004).

Educators are aware that reformers of education may establish new schools, effect changes in structure and curriculum, recommend and prescribed teaching methods and aids, in the end, the teacher will be solely responsible for applying them. Unfortunately, despite the obvious leading role teachers play in school towards attaining educational objectives, several authors including Bennell and Akyeampong (2007), GCE (2005), VSO (2002), and Ofoegbu (2004) report shows that the motivation of teachers had reached an intolerable low point.

In addition to the above report, it is widely reported that poor job satisfaction among teachers in developing countries result in high attrition rates and again, however, very little information is available on staff retention in schooling system in Africa and South Asia (Bennell and Akyeampong, 2007).

Thus, it is therefore in this era of materialism and display of wealth in the face of widespread poverty teachers need to be adequately motivated (salaries must be paid as at

when due and teaching facilities made available) for an effective viable school system (Ofoegbu, 2004).

Teachers have both intrinsic and extrinsic needs. Teacher, who is intrinsically motivated, may be observing to undertake a task for its own sake, for the satisfaction it provides or for the feeling of accomplishment and self-actualization. On the other hand, an extrinsically motivated teacher may perform the activity or duty in order to obtain some reward such as salary. Extrinsic motivation plays an important part in people's life. It is pre-eminent in influencing a person's behavior (O'Neil, 1995; as cited in Ofoegbu, 2004). Therefore, the aim of the institution or organization should be to build and enhance the intrinsic motivation for teachers to teach effectively and at the same time, to supply some extrinsic motivation along the way for school improvement.

It is demonstrated that a number of factors affect employee motivation to work. In educational institution, according to Dornyei (2001a), these can be categorized in to four aspects in terms of teacher motivation: intrinsic component, contextual factor, temporal dimensions, and negative influences.

a. Intrinsic Component

There is a high correlation that exists between intrinsic motivation and teaching. Intrinsic rewards include internal desire to educate people. (Dornyei, 2001b) suggested that "Intrinsic motivation is Performing a behavior for its own sake in order to experience pleasure and satisfaction such as the joy of doing a particular activity or satisfying one's curiosity". With the help of this definition, Dornyei proposes that intrinsic reward is divided into most satisfying views of teaching as a profession: a) the educational process itself, and, b) the subject matter. The first one is about the teacher's performance affected by working with students and perceiving the changes in the students' performance and behavior. The second one is related to studying a valued field and new information in it so that it leads to increase one's own level of professional skills and knowledge. Such intrinsic rewards make teachers forgo high salaries and social recognition.

b. Contextual Factors

Extrinsic influences on work motivation are thought to be a real domain. According to Suslu (2006), there are two types of contextual influences on teacher motivation, called macro-contextual and micro-contextual influences. Macro-contextual motives are related to teaching, as the job itself should fulfill the chief societal duties such as bringing up and educating the next generation of people. Thus, every level of society as an external influence deals with teaching. However, micro-contextual dimension is characterized with the organizational climate of the particular institution where teachers work, the class, and the traits of teaching environment, and students.

Suslu (2006) suggested the following as contextual factors that affect teacher motivation:

- the school's general climate and the existing school norms;
- the class sizes, the school resources and facilities;
- the standard activity structure within the institution;
- collegial relations;
- the definition of the teacher's role by colleagues and authorities;
- general expectations regarding student potential;
- the school's reward contingencies and feedback system;
- the school's leadership and decision-making structure (Dornyei, 2001a).

c. Temporal Dimension

Teacher motivation is not only about the motivation to teach but also about the motivation to be a teacher as a lifelong career. A career view emphasizes the temporal dimension of motivation in terms of a vocational situation. Dornyei (2001a) shows that the steps on a career path, known as the "contingent path structure" activate long-term success in a challenging manner as intrinsic pleasure of being involved in one's profession and different extrinsic rewards that career advancement causes are important.

Pennington (1995) as cited in Dornyei (2001a :) suggested that possible advancement contingency paths are as follows:

- the increased kinds of courses taught;
- helping to develop curriculum ;
- monitoring role with new discipline;
- being responsible for developing new courses / programs;
- making conference presentations / preparing professional publications ;
- managing teacher-training workshops.

d. Negative Influences

According to Dornyei (2001a:) teaching as a profession is supplied from intrinsic motives and states that there are some damaging elements which weaken and destroy the intrinsic character of teacher motivation. "Burnout is a professional hazard" (Suslu, 2006). Thus, teaching is known as one of the most stressful profession. According to him, there are three reasons why teachers burn out. The first element is emotional exhaustion. It is the result of emotional and physical overextension. Trying to do too many things in a short time, in other words, the amount of work that has to be done within a time limit can cause emotional exhaustion. The next factor is depersonalization, which means being cynical, frustrated and critical when teachers have negative attitudes towards their colleagues. The lack of personal accomplishment is the third one. Feeling discouraged and disillusioned are the signs of burned-out teachers as they are dissatisfied with their own needs for challenges, recognition and appreciation. Thus, the teachers dissatisfied in their job.

2.5 Teachers' Motivation in Developed countries.

The literature on teacher motivation and incentives in developed countries has many common or similar themes with the very much-limited literature in low-income developing countries (Bennell & Akyeampong, 2007). According to Bennell & Akyeampong, the status of teachers in most organization for economic cooperation and

Development (OECD) countries has declined appreciably during the last fifty years, teacher autonomy and creativity has been curtailed by more control and regulation, and that teachers are being asked to do more with less.

According to reports from IIEP (2004), teachers also complain about the lack of variety and role differentiation in their careers, the limited incentives for them to improve their practice and develop as professionals, and the limited linkages between their performance, teacher compensation and teacher development.

Spear et al (2000) shows that the wide range of factors that influence teacher job satisfaction and motivation in the United Kingdom is working with children, intellectual challenge, a high level of professional autonomy, to feel that they are benefiting society, and to enjoy good relation with their colleagues. Enhanced pay, improved status, a less demanding workload and fewer administrative responsibilities do not necessarily bring about higher levels of job satisfaction.

Bennell & Akyeampong (2007) stated that in developed countries pay incentives have been found to be generally ineffective in increasing teacher motivation. Rather teacher motivation is based on intrinsic factors and that true job satisfaction is based on higher order needs. In addition to the above factors, patterns of motivation are also influenced by teachers' personal characteristics and perceptions of their roles as a teacher. Murnane (1987) suggests that some university graduates in the United States of America are attracted to teaching as a 'medium-term' occupation rather than a permanent career.

2.6 Teachers' motivation in developing countries

According to Bennell and Akyempang (2007) teacher motivation in Africa and south Asia are increasingly demotivated due to a combination of low moral and job satisfaction, poor incentives, political interference, top-down policy formulation and implementation. The voluntary service overseas (VSO) report indicates "a potential crisis in the teaching profession threatens the ability of national government's to reach internationally agreed

targets to expand and improve education. In many developing countries, the teaching force is demoralized and fractured” (VSO, 2002:1).

According to this report, the potential factors that influence teachers’ motivation and retention in Malawi, Zambia, and Papua New Guinea are

1. Poor teacher management at all levels, from the ministry of education to the school
2. Teachers’ perception that the decline in their pay has adversely affected their status
3. Insufficient upgrading opportunities
4. Delayed payment of salaries
5. lack of learning materials
6. A decline of supervisor services
7. Insufficient involvement of teachers’ representatives in policymaking.

In addition to the above factors, the Global Campaign for Education (GCE, 2005:1) shows that in the five years since the education for all goals were restated at Dakar, improving teacher motivation has still not been sufficiently prioritized as a major concern of national or international policy makers. As a result, teacher motivation and morale remain in a chronic state of decline

The main reasons for this decline are identified as large class sizes, erosion in the quality of teacher training, the employment of Para-teachers, other cost cutting measures such as multiple shifts, and poor pay (GCE, 2005:1)

2.7 Determinants of teachers’ Motivation, Retention, and Attrition.

Teachers are expected to render a very high job performance, and the ministry of education is always curious regarding the job performance of its teachers. In addition, the ministry of education demands a very measure of loyalty, patriotism, dedication, hard work and commitment from its teachers. To that end, the roles and contexts of educations’ motivational methods and tools cannot be underemphasized because high

motivation enhances productivity that is naturally in the interests of all educational system (Ololube, 2005).

Bennell and Akyeampong (2007) noted that poor teacher motivation and inadequate incentives have far-reaching adverse impacts on the behavior and over all performance of teachers and thus learning outcomes. In addition to this according to Seguin (1997), teacher motivation is also affected by age differences by surmising that people were motivated by different things at different stages of their lives more over he pointed out that as individuals moved through educational career and gained years of experience people were motivated by high level of needs.

Contemporary teacher attrition rates are believed to range between 5 and 30 percent in different countries of Sub-Saharan Africa. Malawi, with a slow economy, reported an 8 percent attrition rate in 1996, while greater economic "freedom" in Liberia contributed to attrition rates in the region of 20 to 30 percent (Mulkeen et al,2005).

Mulkeen et al (2005) suggested that teacher attrition is aggravated by economic factors, as teachers make rational economic decisions about their careers and seek better-paid work, where they can. There is also considerable evidence that teachers feel their work is becoming increasingly stressful and that their status is falling (Macdonald, 1999). Caillods (2001) states that teaching conditions have deteriorated drastically in Senegal, Burkina Faso, and Mali, with an insufficient supply of student text books and teaching materials, inadequate equipment, poor teaching and living accommodation, and high number of students per classroom.

Attrition is highest in geographical locations where living conditions are extremely poor, harsh, or expensive, or where teachers do not feel comfortable with local ethnicity, customs, or language (Macdonald, 1999). Attrition may also be related to teacher qualifications. The most highly qualified teachers may be the most likely to leave as they can easily get alternative employment (Macdonald, 1999). Hedges (2002) reports that

unqualified teachers in Ghana may have more of a stake in the communities they work with-and hence lower attrition-because they have fewer choices.

Thus, attrition may increase by a perception of teaching as a path to further education or an exit strategy and it does not simply mean a numerical loss. It also represents the loss of experienced teachers from the system. This is particularly the case where those who are leaving the profession are the more successful or more qualified teachers. This may in turn, have the effect of leaving a less capable pool of teachers in the classroom or assuming leadership positions. It may also lead to demoralization among remaining teachers (Macdonald, 1999).

According to Mulkeen et al (2005), increasing teacher's salaries may appear to be the obvious response to attrition problems. However, there is little evidence that increased salary alone has a high long-term impact on retention. Improving teachers' physical, social, and professional experience of work increases their commitment, reduces attrition, and is often cheaper than trying to tackle salary or the costs of teacher dissatisfaction, loss, and retraining.

Macdonald (1999) also suggested that benefits that might compensate or reward teachers improving retention at some instances but less than salary increases made. These include:

- Improving school building and teachers' accommodation;
- Increasing teacher responsibility for educational decisions;
- Reducing class size;
- Increasing parental and community support;
- Promoting collegial relationship among teachers and administrators;
- Providing teacher support and recognition; and
- Providing teacher counseling and medical care.

The need to avoid pain and the need for psychological growth are two basic elements found in job enrichment theory (Silver, 1982; as cited in Suslu, 2006). It is said that motivation factors should be intrinsic which present tasks that are more enjoyable, interesting and psychologically rewarding. Those are achievement, recognition, work,

responsibility, advancement, and possibility of growth. On the other hand, other factors are extrinsic in terms of the context or setting where the work is performed: organizational policy and administration, technical supervision, working conditions, status, job security, effects on personal life, interpersonal relations with superiors, peers, and subordinates, and accountability.

Organizational Policy and Administration

Poor human resource management seriously de-motivates teachers. In most of Africa, for almost all administration regarding teacher management, it is noted that a lack of clear rules which tend to generate conflict, power vacuum, and overlap and duplication of effort (IIEP, 2004).

The democratization of the organization and administration of education is provided for in educational policy article 3.8.4 cited in ETPI (2002):

Educational institutions will be autonomous in their internal administration and in the designing and implementing of education and training programs, with an overall coordination and democratic leadership by boards or committees, consisting of members from the community(society), development and research institutions, teachers and students (ETPI, 2002).

It is evident that the provision of democratization of organizational policy and administration enhances not only teachers' motivation to teach but also the motivation to remain in the institution.

Teacher Management, Technical support and Supervision

Teacher motivation and retention depends critically on effective management, particularly at the institution level. Bennell and Akyeampong (2007) suggested that teacher management tends to be authoritarian, based on rigid hierarchical structures, which results in limited participation, delegation, and communication by teachers with respect to major institution management functions. So, teachers subjected to these types

of management regimes have little sense of self-determination, which by itself seriously undermines work motivation and retention of teachers’.

Thus, teacher management is most crucial at the institutional level, as the importance of teachers’ work and their competence in performing their duties are crucially influenced by the quality of both internal and external supervision.

According to Mulkeen (2005), teachers need both technical support and supervision through out their careers. It would be naïve to assume that teachers can go through a pre-service program and then perform well for the remainder of their careers with out further professional development. Support for teachers can take a variety of forms, including access to resources, in service courses, and peer groups. Such practices has been successful with principals and other promoted staff in mentoring beginning teachers in an induction stages so that they improve their teaching and class room management abilities in the first years of teaching (Halliday, 1999).

Mulkeen (2005) notes that there is a need for teacher supervision and monitoring. The needs to be a system to help teachers develop good practice and to ensure that teachers are in a place to teaching the required course materials. However, in many African countries such inspection systems focus on faultfinding, rather than support. In some cases, supervisors or inspectors lack the resources to travel to institutions. Supervision visits can be thus infrequent and haphazard (VSO, 2002).

In sum, experienced staff and, particularly, institution principals have a key role in assisting and mentoring new teachers so that they improve and consolidate their responsibility for their own effective professional development and possibly increasing retention in the institution.

Work and Living Conditions

Bennell and Akyeampong (2007) states that working and living conditions have impact on teacher morale and motivation and thus their classroom performance. Work conditions refers to the amount of work teachers and principals do, the remuneration they receive for their work, and the support they receive from the community for their work (Mulkeen et al, 2005).

According to Davis and Neustorm (1981), if there is a fit between the individuals' psychological make up, the nature of the task, and the organization's objectives, two things are accomplished. The individual gain a sense of competence, they perform their work effectively and that the organization achieves its goals and objectives.

Executing the above processes practically is not a simple task. However, it is very crucial for an organization to harmonize its objective with those of its individual members for the maximum utilization of its human resources. In order to utilize its human resources effectively and promote smooth relationship of its subunits, therefore, the conducive working condition is believed to be one of the factors to be taken in to consideration (Legesse, 1992).

When the work and living conditions for many teachers is poor, it follows lower self-esteem and is generally demotivating to stay and work in the institution.

Interpersonal Relationships with Administrators, Peers, and Subordinates

One of the causes of teacher/employee retention in the institution is related to teacher/employee-administrator/supervisor relationship. It is important for several reasons. To begin with, some of the findings drawn on this issue indicate the considerate administrator and/or supervisory behavior is positively related to satisfaction and retention of teachers. Evidently, teacher/employee motivation or job satisfaction and retention is considerably improved when administrators/supervisors are perceived to be fair, helpful, competent, and effective. This includes the supervisor /administrator's skill

as a problem solver, coach or trainer and as the timely source of key job-related information for teachers/ employees (Mitchell and Larson, 1987, Carellet al, 1992).

Conversely, poor relationship like incentives and incompetent, administrators/supervisors are reported to have the most negative effect on employee job satisfaction and retentions. These includes, according Carell et al (1992), unfair or biased treatment by administrators/ supervisors, failure of supervisors/administrators to listen and respond to teachers'/employees' problems and problems with management communication credibility.

Moreover, employee/teacher motivation and retention is significantly affected by the quality of relationship of employee with co-workers in the work environment who might act as a role model. For instance, Carell et al (1992) concluded that the quality of relationships with in the work group is very important to employees/teachers; especially to the extent that the individual is accepted as part of the work unit and the friendliness and support of his/her fellow employees/teachers.

Eble (1987) suggests that it is essential that a personal joy and pleasure be derived from the act of teaching and the interpersonal communication of knowledge. In general, the level of interpersonal trust reveal that the extent to which individuals see their social environment as cooperative or friendly determines the tendency of the employee/teacher to accomplish the task assigned effectively .

Teacher Professional Development

Training in both subject content and pedagogy is essential for high quality teaching and learning in TVET education. With increasing demand for TVET education, there is a concern to provide a sufficient number of teachers/trainers with adequate training and skill.

Bennell and Akyeampong (2007) suggest that teachers need continuous professional development (CPD) as well s support from peers and supervisors. CPD is usually scarce,

one-time, top-down, unrelated to a broad strategy, and not targeted at teachers who need it most. In the absence of appropriate development and support, teachers can quickly lose motivation. There have been some very effective interventions in this area. In Guinea, for example, teachers have been encouraged to take more responsibility for their own professional development, in particular by enabling them to access training resources through a competitive grant scheme (Bennell and Akyeampong).

In the area of changing demands on teachers, it is inappropriate to structure teacher development as a single period of teacher education at the start of a career (Mulkeen et al, 2005). One of the potentially valuable initiatives in the ongoing teacher development is the involvement of experienced teachers in the design and delivery of courses at the institution level. This has the double benefit of ensuring that the courses are relevant and practical, while also providing development opportunities for the experienced teachers (Gaynor, 1998).

Motivation is highly related to career-path projections and opportunities for progression. However, promotion opportunities within the profession are often limited. As a result, many skilled teachers leave the profession, while others become demotivated. (VSO, 2002). Thus, teacher professional development has a major impact on teacher motivation, retention and movement, the professional conduct of teachers, and educational outcomes.

2.8. Work motivation, Attrition, and Retentions of Teachers in Ethiopia

The Ministry of Education introduced a new career structure to decrease the increasing attrition of teachers and improve their severely compromised teachers' living standard (ETPI, 2002). However, the study investigated on teacher attrition in Gambella by Temesgen Birega (2005) indicated that the average attrition rate of teachers reached 23% between 1993& 1996 E.C.

According to him, the reasons for attrition pointed out were: inadequate salary, poor administration, unfavorable climate condition, low social status, lack of housing service, scarcity of instructional materials, lack of opportunity for further education, heavy work

load, large class size, poor communication between teachers and institution principals, and inability to teach.

Studies carried out in the Ethiopian situation at different times, showed that teacher motivation is declining and teachers have low self-esteem in their professional role, and feel they are not respected by others (Manna Olango and Tesfaye Shelema, 2000; as cited in Berehanemeskel,2006). The effect is that, teacher turn over is high in the schools and it resulted in the possible erosion of education quality.

The research investigated by Manna and Tesfaye as cited in Berehanemeskel (2006), pointed out that the new career structure didn't address sufficiently to motivate and retain teachers in their institutions or profession.

CHAPTER THREE

3. Research Methodology and Procedure of the Study

3.1 Method

The type of study is a descriptive (survey) research study which describes the characteristics of a particular population. The purpose of descriptive method, according to Ezeani (1998) as cited in Adeyinka (2007), is to collect detailed and factual information that describes an existing phenomenon. Such as, current conditions, attitudes, interests, feelings and characteristics. Thus, this study was concern with the extent to which teachers are motivated and factors that make teachers to retain/left the institution. And descriptive method of research is considered as the most appropriate method to be used for the study.

3.2 Participants

The description of participants should identify the number, source, and characteristics of the sample. It should also define the population, from which the sample was being selected. Thus, the major sources of primary information for the study were all TVET teachers and deans (principals).

Moreover, Government guide lines, policies, directives and practices were used as sources of information in order to understand the current situations so as to enrich the finding.

3.3 Sample Population and Sampling Technique

Two TVET centers of North Wollo administrative zone comprise of the sample area of the study. This indicates all of the total TVET centers.

The selection of the sample TVET centers were done by using purposive sampling technique. From the sample TVET centers, all teachers were selected with out any discrimination. Among, the total numbers of 62 teachers in the sample TVET centers, all

teachers who were currently teaching were included using availability sampling technique.

3.4 Instruments

Since the method of my research is survey, the instrument used to collect data was questionnaire; two types of questionnaires (Close and open ended) were prepared for the concerned bodies of respondents independently. The questionnaire was mainly closed ended items with few open ended questions.

Some parts of the questionnaire were prepared in the form of structured and unstructured type with the intention of allowing the chance for respondents to disclose free responses. The other parts of the questionnaire were set up in the form likert-type rating scale to gauge the level of agreement among respondents. This scale was used to get information in the level of teachers' / trainers' work motivation, attrition and their intent to retain in the institution.

3.5 Procedure of Data Collection

The following procedures/steps were undertaken in conducting the study. From the beginning, important literatures were assessed to obtain the necessary information related to the issue. Secondly, relevant statistical data was secured. Thirdly, two sets of questionnaires were prepared: one for the existing teachers, the other for the existing educational administrators.

3.6 Pilot-Test

Some of the items of the questionnaire were prepared by the researcher and some of them were adapted from Berhanemeskel Tena (2006), Seguin Michael J. (1997) and Bennell & Akyeampong (2007) and focus group items were developed by the researcher. Thus, to check the appropriateness and clarity of items pilot testing was done, .the questionnaire was pilot tested with 15 employees. Based on the pilot test result some corrections were taken.

3.7 Data organization and Analysis

After the questionnaires are gathered, item discrimination (chi-square test), item total correlation and alpha reliability test was done. For item discrimination (chi-square test), thirteen of the fourteen reasons that initiated teachers to become teacher, eighteen of the twenty factors of job satisfaction, and twelve of the sixteen factors for teacher turn over items showed $X=0.05$. But on the item total correlation test, 9 of the 13 (exception of item 13) reasons that initiated teachers to become teacher, 16 of the 18 (exception of item 18 and 20) factors of job satisfaction, 10 of the 12(exception of item 2, 8, 9, and13) factors for teachers' turn over, and 9 of the 10 items factors of teachers' retention showed 0.4 and above correlation with the total value. (See AppendixC)

3.7.1 Factor analysis

By excluding the items, which have an item total correlation value below 0.4, factor analysis was done for both scales. For factors of teachers' turn over and teachers' retention items, alpha reliability value was done but the factors can not grouped together based on their value. For this reason it was decided to abandon the analysis on the basis of the factors of teachers' turn over and teachers' retention, and use total score of all items for each group as a single variable.

Where as, factors analysis was done intentionally for factors of job satisfaction, motivator (1,2,3,5,and6) and hygiene (7,8,10,11,12,13,14,15,16,17,and19) factor, and their alpha reliability value were above 0.6.

Table1: Reliabilities of motivator and hygiene factor scale dimensions

Factor	Motivator 5 Items	Hygiene 11 Items	Total Scale 16 Items
Alpha Reliability	0.775	0.850	0.893

Thus, the analysis is done only for the nine reasons that initiated teachers to become teacher, ten factors for teacher turn over, nine factors to teacher retention items by taking each group as a single variable and sixteen job satisfaction items by dividing two variables, hygiene and motivator factor.

After the data have been gathered tested for its reliability, different statistics were used for analysis. In order to perform the survey properly, the statistical package for the social sciences program (SPSS) was employed for the data analysis. Depending on the nature of the basic questions and data to be collected, descriptive statistics was utilized for computing the percentage and mean scores to find out the average values of the factors affecting TVET teachers' work motivation and their retention. Eventually, T-test and one-way ANOVA was used to examine the effects of different variables on factors of job satisfaction, turn over, and retention of teachers towards teachers' age group, experience, qualification, and salary

Chapter Four

4. Results

The findings obtained by employing questionnaire are presented in five major sections. In the first part, the demographic characteristic of respondents is summarized. In the second section, the agreement level of respondents to the reasons that made teachers become a teacher is presented. The third part presents the level of teacher motivation. In the fourth part the opinion of teachers to the factors of teacher turn over are summarized. The last section presents the possible factors to teachers' retention.

4.1 Demographic characteristics of Respondents

Sixty two teachers and five institution administrators were taken as respondents and the result obtained about their demographic characteristics is summarized as follows.

Table 2. Demographic Characteristics of Teacher Respondents

No.	Characteristics		Respondents	
			No	Percent
1	Sex	Male	57	91.9
		Female	5	8.1
		Total	62	100.0
2	Age	21-25	23	37.1
		26-30	21	33.9
		31-35	8	12.9
		36-40	5	8.1
		41-45	2	3.2
		>=46	3	4.8
		Total	62	100.0
3	Marital status	Single	44	71.0
		Married	18	29.0
		Total	62	100.0
4	Qualification when you joined the profession	M.A/M.Sc	0	0
		B.A/B.Sc.	25	40.3
		Diploma	37	59.7
		Other	0	0
		Total	62	100.0

5	Current level of qualification	M.A/M.Sc	0	0	
		B.A/B.Sc.	34	54.8	
		Diploma	28	45.2	
		Other	0	0	
		Total	62	100.0	
6	Currently studying to up grade	Yes	26	41.9	
		No	36	58.1	
		Total	62	100.0	
7	Current career structure	Beginner-Teacher	25	40.3	
		Junior-Teacher	14	22.6	
		Teacher	7	11.3	
		Higher-Teacher	4	6.5	
		Associate-Leader-Teacher	3	4.8	
		Leader-Teacher	4	6.5	
		Graduate Assistant 1	3	4.8	
		Graduate Assistant 2	3	4.8	
		Assistant Lecturer	0	0	
		Lecturer	0	0	
		Total	62	100.0	
8	Gross salary per month in birr	601birr-1400birr	46	74.2	
		1401birr-2350birr	16	25.8	
		2351birr-3550birr	0	0	
		3551birr-5000birr	0	0	
		>=5001birr	0	0	
		Total	62	100.0	
9	Additional Income	Yes	26	41.9	
		No	36	58.1	
		Total	62	100.0	
10	Position	Teacher	52	83.9	
		Section Head	3	4.8	
		Department Head	7	11.3	
		Total	62	100.0	
11	Experience	0-5 years	39	62.9	
		6-10 years	13	21.0	
		11-15 years	5	8.1	
		16-20 years	1	1.6	
		21-25 years	1	1.6	
		>=26 years	3	4.8	
		Total	62	100.0	
12	load	Maximum	6.00	28.00	18.2903
		Minimum			
13	Class size		10.00	50.00	28.8710

As it is indicated in table two above, 57 (91.9%) of the respondents are males and 5(32%) of the respondents are females.

Concerning the age of respondents, 37.1% are from 21-25 years, 33.9% are 26-30years, 12.9% are 31-35years, and 8.1% are 36-40 years, 3.2% are 41-45 years and 4.8% are 46 and above years.

Regarding the marital status of respondents, 71% are single and 29% are married.

About the educational level of respondents when they joined the profession, 40.3% were degree holder and 59.7% were diploma holder. Where as the current level of their qualification indicate that 54.8% are degree holder and 45.2% are diploma holders. On the other hand 40.3% are currently studying to up grade their qualification.

Concerning the current career structure of the respondents, 38.7% are beginner-teachers, 22.6% are junior-teachers, 9.7% are teachers, 6.5% are higher-teacher, associate-leader-teacher and leader-teacher each, 4.8% are graduate assistant I, 3.2% are graduate assistant II, and 1.6% are assistant lecturers.

Respondents were requested about their salary and the results found are the following. The proportion of teachers whose salary lies between 651-1400 birr accounts 74.2% and 25.8% are lies between 1401-2350 birr. No teacher in both institutions earns salary above 2350 birr.

Regarding additional income that is related to their profession the results show that, 45.2% of the respondents have additional income and the rest have not.

Concerning their position 80.6% are teachers, 4.8% are section heads, and 14.5% are department heads.

Respondents were requested about their total years of experience and the results found are the following. The proportion of employees who have experience of 0-5years are 62.9%, 6-10years are 21%, 11-15years are 8.1%, 16-20 years and 21-25 years are 1.6% each, and at the last 26 years and above are 4.8%.

Concerning to their work load (periods per a week) the minimum is 6 periods and the maximum is 28 periods per a week. Beside to these, table one shows that, the minimum number of students in a class is 10, the maximum class sizes are 50 students and their average (mean) is 28.87 students in the class.

Table 3. Demographic characteristics of Administrator

Characteristics		Respondents	
		No	Percent
Sex	Male	6	100.0
	Female	0	0
	Male	6	100.0
	Total	6	100.0
Age	21-25years	0	0
	26-30 years	2	33.3
	31-35 years	2	33.3
	36-40 years	1	16.7
	>=46 years	1	16.7
	Total	6	100.0
Marital status	Single	2	33.3
	Married	4	66.7
	Total	6	100.0
Qualification	M.A/M.Sc	1	16.7
	B.A/B.Sc.	4	66.7
	Diploma	1	16.7
	Total	6	100.0
Field of study	other	5	83.3
	Educational planning and management/management of VOED	1	16.7
	Total	6	100.0
Current position	Admin. & dev. Vice dean/general service	2	33.3
	Acc. & research Vice dean/vice direct.	2	33.3
	Dean/Director	2	33.3
	Total	6	100.0
Teaching experience	0-5 years	2	33.3
	6-10 years	2	33.3
	16-20 years	1	16.7
	>=26 years	1	16.7
	Total	6	100.0
Administration experience	0-5 years	6	100.0

As it is indicated in table three above, 6 (100.0%) of the respondents are males.

Concerning the age of respondents, 33.3% are from 26-30 years and 31-35 years each, and 16.7% are 36-40 years and 46 and above years.

Regarding the marital status of respondents, 33.3% are single and 66.7% are married.

Respondents were requested about their educational level the results found are, 16.7% are M.A/M.Sc graduates, 66.7% are degree holders, and 16.7% are Diploma holders.

Concerning the field of study, 16.7% of respondents are educational planning and management and the rest 83.3% are from other fields of studies. Concerning to their position 33.3% are Administration and development vice dean/administration and general service head, Academic and research vice dean/vice director, and Dean/director each.

Respondents were requested about their total years of experience and the results found are the following. The proportion of employees who have experience of 0-5 years and 6-10 years are 33.3% each, and 16-20 years and 26years and above are 16.7 years each. Where as concerning to their administration experience all of them are 0-5 years.

4.2 Respondents' level of agreement on reasons to become a teacher

A total of 14 statements about reasons to become a teacher were presented for respondents. Respondents were asked to indicate their degree of agreement as strongly agree, agree, not sure, disagree and strongly disagree. The responses of the respondents to those statements are presented below.

Table 4. Respondents' level of agreement on reasons to become a teacher

No	Items	Respondents										Mean
		Strongly Agree		Agree		Not Sure		Disagree		Strongly Disagree		
		No	%	No	%	No	%	No	%	No	%	
1	Job security and safety	12	19.4	28	45.2	10	16.1	6	9.7	6	9.7	3.5484
2	To enjoy work with young	16	25.8	27	43.5	6	9.7	6	9.7	7	11.3	3.6290
3	It had better work condition	6	9.7	15	24.2	6	9.7	14	22.6	21	33.9	2.5323
4	It had attractive career structure	5	8.1	18	29.0	7	11.3	14	22.6	18	29.0	2.6452
5	It creates additional income	4	6.5	23	37.1	9	14.5	12	19.4	14	22.6	2.8548
6	It had better pay and allowance	1	1.6	9	14.5	7	11.3	16	25.8	29	46.8	1.9839
7	It puts high social status in the society	8	12.9	8	12.9	13	21.0	10	16.1	23	37.1	2.4839
8	It provides the best research environment.	18	29.0	33	53.2	3	4.8	4	6.5	4	6.5	3.9194
9	It was better than other jobs in benefiting the society	30	48.4	18	29.0	4	6.5	5	8.1	5	8.1	4.0161

As can be seen from table four above, thirteen of the fourteen items which refer to reasons to become a teacher showed a significant difference in responses of teachers at $X=0.05$ and nine of the thirteen items showed 0.4 and above item total correlation. A more specific presentation of each of the nine ^{ever} (4,6,8,9,10,11,12,13,14,15,and16) items is given below. The higher the Mean means the more possible reasons to become a teacher.

As it is revealed in the above table respondents put their reasons of becoming teachers are: It was better than other jobs in benefiting the society (Mean=4.0161), teaching creates the opportunity to become creative as it provides the best research environment (3.9194), teaching provides an opportunity to enjoy work with young people (3.62903), teaching creates feeling of job security and safety (3.5484), teaching creates an opportunity to earn secondary income (2.8548), teaching profession had attractive career structure(2.6452), the profession had better work condition and living environment than other professions (2.5323)..

4.3 Respondents' level of agreement on factors of work motivation

A total of twenty statements about factors of job satisfaction were presented for respondents. And respondents were asked to indicate their level of satisfaction as very satisfied, satisfied, not sure, dissatisfied and very dissatisfied. Out of the twenty items presented for sixty two (62) teachers, only eighteen items show a significant difference in responses of teachers at $X=0.05$ and sixteen(1,2,3,5,6,7,8,10,11,12,13,14,15,16,17,and 19) of the eighteen items showed 0.4 and above item total correlation were selected. After factor analysis was done the selected items were grouped into two, motivator (1, 2, 3, 5, and 6) and hygiene factor (7,8,10,11,12,13,14,15,16,17,and 19), dimensions and a more specific presentation of each of the two dimensions is given below

Table 5. Respondents' level of agreement on factors of work motivation

Statements/Items	Respondents										Mean
	V.satisfied		Satisfied		Not Sure		Dissatisfied		V.dissatisfied		
I. Motivator Factor	No	%	No	%	No	%	No	%	No	%	
1.1 By your job as a teacher	7	11.3	21	33.9	9	14.5	17	27.4	8	12.9	3.0323
1.2 Status or position in the institution	4	6.5	21	33.9	10	16.1	19	30.6	8	12.9	2.9032
1.3 Recognition that could come from different sources	4	6.5	26	41.9	12	19.4	14	22.6	8	9.7	3.1290
1.4 Success in the performance of job	15	24.2	30	48.4	10	16.1	5	8.1	2	3.2	3.8226
1.5 Professional discretion in the institution	10	16.1	25	40.3	19	30.6	5	8.1	3	4.8	3.5484
Grand Mean											3.2970
II. Hygiene factor											
2.1. Institution policy and administration	1	1.6	8	12.9	15	24.2	23	37.1	15	24.2	2.3065
2.2 Competence and fairness of the supervision	3	4.8	12	19.4	14	22.6	18	29.0	15	24.2	2.5161
2.3 Physical conditions of work	2	3.2	16	25.8	5	8.1	27	43.5	12	19.4	2.5000
2.4 Workload	5	8.1	29	46.8	8	12.9	9	14.5	11	17.7	3.1290
2.5 Payment as a teacher	4	6.5	12	19.4	6	9.7	17	27.4	23	37.1	2.3065
2.6 Comparing payment and cost of living	1	1.6	4	6.5	6	9.7	17	27.4	34	54.8	1.7258
2.7 Prestige and respect given to you from the community	2	3.2	21	33.9	11	17.7	17	27.4	11	17.7	2.7742
2.8 The presence of job security including tenure	2	3.2	18	29.0	19	30.6	16	25.8	7	11.3	2.8710
2.9 The living arrangement of your own personal life	6	9.7	17	27.4	8	12.9	20	32.3	11	17.7	2.7903
2.10 The discipline of the student	5	8.1	21	33.9	8	12.9	20	32.3	8	12.9	2.9194
2.11 Your health condition	15	24.2	24	38.7	11	17.7	7	11.3	5	8.1	3.5968
Grand Mean											2.67593

As it can be observed from table five above sixteen items, which refer to factors of job satisfaction, are categorized into two variables as motivator and hygiene dimension on the basis of the factor analysis result. A more specific presentation of each of the sixteen items is given below.

The result indicates that, items included in the motivator factors dimension are: success in the performance the job (Mean=3.8226), professional discretion in the institution/carrying out of responsibility and authority (3.5484), the recognition that could come from different sources (3.1290), the job as teacher in the institution (3.03234), status or position in the institution (2.90325) and the grand mean of them are 3.287097.

Where as items included in the hygiene factors dimension are: the physical and psychological wellbeing of your self (Mean=3.5968), the work load you have (3.1290), the discipline of the student inside and/or outside of the class room (2.9194), the presence of job security including tenure (2.8710), the living arrangement of your own personal life (2.7903), the prestige and respect given to you from the community (2.7742), the competence and fairness of the supervision (2.5161), the physical conditions of work/facilities availability for doing the work (2.5000), the payment as a teacher and the institution's policy and administration(2.3065), and when you compare your payment and cost of living (1.7258), the grand mean of them are 2.67593. The greater the Mean means the possible factors of job satisfaction.

Table 6. One-way ANOVA for work motivation of teachers across age groups.

Dependent Variable	(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.
Motivational factors total	21-25	26-30	2.48654	1.14310	.266
		31-35	3.39130	1.55455	.263
		36-40	3.59130	1.86880	.400
		41-45	8.89130(*)	2.79205	.027
		>=46	2.05797	2.32485	.949
	26-30	31-35	.90476	1.57354	.992
		36-40	1.10476	1.88462	.992
		41-45	6.40476	2.80267	.217
		>=46	-.42857	2.33759	1.000
	31-35	36-40	.20000	2.15911	1.000
		41-45	5.50000	2.99414	.451
		>=46	-1.33333	2.56403	.995
	36-40	41-45	5.30000	3.16870	.555
>=46		-1.53333	2.76587	.993	
41-45	>=46	-6.83333	3.45734	.369	
Hygienic factors total	21-25	26-30	7.45963(*)	2.31394	.025
		31-35	9.54891(*)	3.14681	.040
		36-40	2.97391	3.78293	.969
		41-45	16.67391	5.65184	.050
		>=46	-1.49275	4.70609	1.000
	26-30	31-35	2.08929	3.18524	.986
		36-40	-4.48571	3.81496	.846
		41-45	9.21429	5.67333	.586
		>=46	-8.95238	4.73188	.418
	31-35	36-40	-6.57500	4.37059	.663
		41-45	7.12500	6.06092	.847
		>=46	-11.04167	5.19026	.289
	36-40	41-45	13.70000	6.41427	.284
>=46		-4.46667	5.59884	.967	
41-45	>=46	-18.16667	6.99855	.115	

- The mean difference is significant at the .05 level

As it can be seen from Table 6 above, for motivational factors there is a significant mean difference between the age groups of 21-25 and 41-45 years. The rest of the groups don't differ significantly in conforming to motivational factors of satisfaction.

As it can be seen from Table6 above, for hygienic factors there is a significant mean difference between the age groups of 21-25 with 26-30, 31-35 and 41-45 years categories. The rest of the groups don't differ significantly in conforming to hygienic factors of satisfaction.

Table 7. One-way ANOVA for work motivation of teachers across experience groups

Dependent Variable	(I) experience	(J) experience	Mean Difference (I-J)	Std. Error	Sig.
Motivational factors	0-5	6-10	3.64103(*)	1.23041	.023
		11-15	.76410	1.82499	.975
		>=16	3.76410	1.82499	.178
	6-10	11-15	-2.87692	2.02177	.490
		>=16	.12308	2.02177	1.000
	11-15	>=16	3.00000	2.42986	.608
Hygienic factors	0-5	6-10	8.17949(*)	2.62880	.015
		11-15	1.71795	3.89914	.971
		>=16	1.91795	3.89914	.961
	6-10	11-15	-6.46154	4.31955	.447
		>=16	-6.26154	4.31955	.474
	11-15	>=16	.20000	5.19146	1.000

* The mean difference is significant at the .05 level.

As it can be seen from Table 7 above, for both hygienic and motivational factors there is a significant mean difference between the experience groups 0-5 and 6-10 years categories. Thus, for most categories there is no significant mean difference between experiences and experiences doesn't matter the conformity of teachers to the motivational and hygienic factors.

Table 8. One-way ANOVA for factors of teachers turn over and retention across age groups

Dependent Variable	(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.
Factors of teacher turn over	21-25	26-30	.17184	1.92997	1.000
		31-35	.83851	2.76023	1.000
		36-40	-.70435	3.15520	1.000
		41-45	-1.30435	4.71399	1.000
		>=46	1.36232	3.92518	.999
	26-30	31-35	.66667	2.79073	1.000
		36-40	-.87619	3.18192	1.000
		41-45	-1.47619	4.73191	1.000
		>=46	1.19048	3.94668	1.000
	31-35	36-40	-1.54286	3.74415	.998
		41-45	-2.14286	5.12689	.998
		>=46	.52381	4.41253	1.000
	36-40	41-45	-.60000	5.34991	1.000
		>=46	2.06667	4.66978	.998
41-45	>=46	2.66667	5.83723	.997	
Factors to teacher retention	21-25	26-30	2.61698	2.03443	.791
		31-35	2.39674	2.76669	.953
		36-40	2.92174	3.32598	.950
		41-45	11.52174	4.96913	.204
		>=46	3.85507	4.13763	.937
	26-30	31-35	-.22024	2.80049	1.000
		36-40	.30476	3.35414	1.000
		41-45	8.90476	4.98802	.483
		>=46	1.23810	4.16030	1.000
31-35	36-40	.52500	3.84265	1.000	
	41-45	9.12500	5.32880	.530	
	>=46	1.45833	4.56331	1.000	
36-40	41-45	8.60000	5.63947	.650	
	>=46	.93333	4.92253	1.000	
41-45	>=46	-7.66667	6.15317	.812	

* The mean difference is significant at the .05 level.

As it can be seen from Table 8 above, for both factors of teacher turn over and teacher retention there is no a significant mean difference between the age groups. Thus, teachers of different age levels do not differ in their choices of factors for teacher turn over and teacher retention

4.4 Respondents' level of agreement on factors that made workers leave from their institution

In this section, respondents were requested a total of sixteen statements on factors that made workers leave from their institution and they were asked to indicate their opinion as frequently, sometimes, rarely, and not at all. Out of the sixteen items presented for sixty two (62) teachers, only twelve items showed significant differences in responses of teachers at $X=0.05$ and ten (1,4,5,6,7,10,11,12,14,and15) of the twelve items showed 0.4 and above item total correlation were selected. Their result is presented below, the values given to the scales are: 4, 3, 2and 1 for frequently, sometimes, rarely and not at all respectively.

Table 9. Respondents' level of agreement on factors that made workers leave from their institution

No	Possible factor for teachers turnover	Respondents								Mean
		Frequentl y		Sometime s		Rarely		Not at all		
		No	%	No	%	No	%	No	%	
1	Poor teacher management at all level of the institution	29	46.8	21	33.9	8	12.9	4	6.5	3.2097
2	Lack of Educational material	7	11.3	25	40.3	18	29.0	12	19.4	2.4355
3	Poor pay (minimum amount of payment)	42	67.7	11	17.7	7	11.3	2	3.2	3.5000
4	Insufficient involvement of teacher representation in policy making	22	35.5	24	38.7	8	12.9	8	12.9	2.9677
5	Lack of appropriate supervisory	14	22.6	36	58.1	7	11.3	12	19.4	2.9516
6	Heavy work load	11	17.7	30	48.4	11	17.7	10	16.1	2.6774
7	Poor level of communication	27	43.5	24	38.7	9	14.5	2	3.2	3.2258
8	Large class size	7	11.3	16	25.8	18	29.0	21	33.9	2.1290
9	Negative image of the teaching profession by the society	34	54.8	11	17.7	10	16.1	7	11.3	3.1613
10	Lack of opportunity to earn additional income	34	54.8	19	30.6	5	8.1	4	6.5	3.3387

As it can be observed from table 9 above, ten items, which refer to factors that made workers leave from their institution are selected. A more specific presentation of each of the ten items is given below.

Respondents put their opinions on the possible factors of teachers' turn over are: poor pay/minimum amount of payment (Mean=3.5000), lack of an opportunity to earn secondary/additional income (3.3387), poor level of communication between teachers and institution manager (3.2258), poor teacher management at all level of the institution (3.2090), negative image of the teaching profession by the society (3.1613), Insufficient involvement of teachers' in policy making (2.9677), lack of appropriate supervisory service and little respect by supervisor (2.9516), heavy work load (2.6774), lack of educational materials (2.4355), and large class size/over crowded class room (2.1290). Thus, the greater the mean indicates that the most important factors that made workers leave the institution.

Table 10. One-way ANOVA for factors of teachers' turn over and retention across experience groups

Dependent Variable	(I) experience	(J) experience	Mean Difference (I-J)	Std. Error	Sig.
Factors of teacher turn over	0-5	6-10	.46154	2.07359	.996
		11-15	1.79487	2.98379	.931
		>=16	-.20513	2.98379	1.000
	6-10	11-15	1.33333	3.34356	.978
		>=16	-.66667	3.34356	.997
	11-15	>=16	-2.00000	3.97274	.958
Factors to teacher retention	0-5	6-10	3.69231	2.18725	.339
		11-15	1.13846	3.24421	.985
		>=16	1.73846	3.24421	.950
	6-10	11-15	-2.55385	3.59402	.893
		>=16	-1.95385	3.59402	.948
	11-15	>=16	.60000	4.31947	.999

- The mean difference is significant at the .05 level.

As it can be seen from Table ten above, for both factors of teacher turn over and teacher retention there is no a significant mean difference between the experience groups. Thus, experience doesn't matter the conformity of teachers to the factors of teacher turn over and teacher retention.

4.5 Teachers' turn over during 2005/2006-2007/2008

In this section, the two North Wollo TVET institutions were requested to provide the number of teachers at work and number of teachers left their institution based on their qualification and sex profile.

As we can see from appendix B during 2005/2006, 21.2% of teachers who left Woldia TVET were diploma holders. In 2006/2007, 7.5% of teachers who resigned the institution were degree holders, and in 2007/2008, 6.6% of teachers resigned from Woldia and 15.8% of Lalibela TVET teachers were degree holders.

Table 11. Administrators' level of agreement on factors that made workers leave their institution

No	Possible factor for teachers turnover	Respondents								
		Frequently		Some times		Rarely		Not at all		Mean
		No	%	No	%	No	%	No	%	
1	Poor teacher management at all level of the institution	3	50.0	2	33.3	1	16.7	0	0	3.3333
2	Insufficient upgrading opportunities	6	100.0	0	0	0	0	0	0	4.0000
3	Lack of interest for the job	4	66.7	0	0	1	16.7	1	16.7	3.1667
4	Lack of Educational material	0	0	2	33.3	0	0	4	66.6	1.6667
5	Poor pay (minimum amount of payment)	6	100.0	0	0	0	0	0	0	4.0000
6	Insufficient involvement of teacher representation in policy making	1	16.7	1	16.7	1	16.7	3	50.0	2.0000
7	Lack of appropriate supervisory	0	0	2	33.3	2	33.3	2	33.3	2.0000
8	Disciplinary problem of student	0	0	0	0	4	66.7	2	33.3	1.6667
9	Absence of adequate information due to the location of institution	0	0	3	50.0	2	33.3	1	16.7	2.3333
10	Heavy work load	0	0	2	33.3	3	50.3	1	16.7	2.1667
11	Poor level of communication	3	50.0	2	33.3	0	0	1	16.7	3.1667
12	Large class size	1	16.7	1	16.7	1	16.7	3	50.0	2.0000
13	Delayed payment salaries	0	0	0	0	2	33.3	4	66.7	1.3333
14	Negative image of the teaching profession by the society	3	50.0	3	50.0	0	0	0	0	3.5000
15	Lack of opportunity to earn additional income	3	50.0	3	50.0	0	0	0	0	3.5000
16	Lack of appropriate career structure	4	66.7	1	16.7	1	16.7	0	0	3.5000

As it is revealed in Table 11 above, administrator respondents put their opinion on the possible factors on teacher turn over are: poor pay/minimum amount of payment and insufficient upgrading opportunities (Mean=4.0000)for both items, negative image of the teaching profession by the society , lack of an opportunity to earn

secondary/additional income, and lack of appropriate career structure (3.5000) for both items, poor teacher management at all level of the institution (3.3333), poor level of communication between teachers and institution manager and lack of interest for the job (3.1667) for both items, absence of adequate information due to the location of the institution(2.3333), heavy work load (2.1667), lack of appropriate supervisory service and little respect by supervisor, large class size/over crowded class room, and insufficient involvement of teacher representation in policy making (2.0000) for both items, lack of educational materials and disciplinary problems of students (1.6667) for both items, and delayed payment of salaries (1.3333). The teachers' and administrators' opinion for factors that made workers leave the institution are the same to most cases except their difference on insufficient upgrading opportunities and lack of interest for the job which is given emphasis by administrators.

4.6 Respondents' level of agreement on factors that let workers retain in their institution

A total of ten statements about factors that let workers retain in their institution were presented for respondents. And respondents were asked to indicate their level of agreement as strongly agree, agree, cannot say, disagree and strongly disagree. The responses of the respondents to those statements are presented below.

Table 12. Respondents' level of agreement on factors that let workers retain in their institution

No	Items	Respondents										Mean
		Strongly Agree		Agree		Not Sure		Disagree		Strongly Disagree		
		No	%	No	%	No	%	No	%	No	%	
1	To enjoy with young people	10	16.1	25	40.3	4	6.5	18	29.0	5	8.1	3.2742
2	The current payment is adequate	0	0	6	9.7	9	14.5	14	22.6	33	53.2	1.8065
3	To be creative	6	9.7	35	56.5	7	11.3	8	12.9	6	9.7	3.4355
4	In benefiting the society	28	45.2	11	17.7	1	1.6	5	8.1	17	27.4	3.4516
5	The current career progression is adequate	1	1.6	10	16.1	13	21.0	13	21.0	25	40.3	2.1774
6	To earn secondary income	3	4.8	12	19.4	9	14.5	21	33.9	17	27.4	2.4032
7	For further educational advancement	24	38.7	27	43.5	5	8.1	6	9.7	0	0	4.1129
8	High level of job satisfaction by the job itself	11	17.7	27	43.5	8	12.9	8	12.9	8	12.9	3.4032
9	Proper and competent administration system	5	8.1	13	21.0	8	12.9	16	25.8	20	32.3	2.4677

As it can be seen from table 12 above, all of the ten items which refer to factors that let workers retain in their institution showed a significant difference in responses of teachers at $X=0.05$ and nine of the ten items showed 0.4 and above item total correlation except item 10. A more specific presentation of each of the nine items is given below.

As it is revealed in the above table 12 respondents put their opinion on the possible factors that contribute to teacher retention are: teaching creates an opportunity for further educational advancement (Mean=4.1129), Teaching is better than other jobs in benefiting the society (3.4516), wanting the opportunity to be creative (3.4355), high level of satisfaction by the job itself (3.4032), teaching provides an opportunity to enjoying with young people (3.2242), proper and competent administration system

(2.4677), teaching creates an opportunity to earning secondary income (2.4032), the current career progression of teacher is better than other office work (2.1774), the current pay as a teacher is adequate (1.8065). Thus, the greater the mean indicates that the most important factors that let workers retain in their institution.

Table13 Means, standard deviations and t-test values of the factors of work motivation, teacher turn over and retention for current qualification. (B.A/B.Sc n=34, Diploma n=28)

Dependent Variable	current Qualification	Mean	Std. Deviation	t	Sig. (2-tailed)
Motivational factor	B.A/B.Sc	17.3824	4.06772	2.067	.043*
	Diploma	15.2857	3.89546		
Hygiene factor	B.A/B.Sc	34.8235	9.09369	2.229	.030*
	Diploma	30.1429	7.44219		
Factors of teacher turn over	B.A/B.Sc	31.7059	6.15226	.187	.853
	Diploma	31.4074	6.24659		
Factors to teacher retention	B.A/B.Sc	27.4412	6.52358	1.149	.256

As shown in Table 13 above, there were significant mean differences between degree and diploma holders for only the motivational and hygiene factor results. In this case, the higher the mean score means the more attributed to the job satisfaction factors. The t-test further found that as the educational level increases teachers give more emphasis to factors of job satisfaction. On the other hand, when we see each group; teachers don't differ on factors of teacher turn over and teacher retention.

Table: 14 Means, standard deviations and t-test values of the factors of work motivation, teacher turn over and retention for salary.

(Salary 651-1400 n= 46, salary 1401-2350 n=16)

Dependent Variable	salary	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Motivational factor	651-1400	46	16.4130	4.07472	-.071	.944
	1401-2350	16	16.5000	4.28952		
Hygiene factor	651-1400	46	33.1522	8.14580	.612	.547
	1401-2350	16	31.4375	10.13225		
Factors of teacher turn over	651-1400	45	31.0667	6.19164	-1.102	.280
	1401-2350	16	33.0000	5.96657		
Factors to teacher retention	651-1400	46	26.4783	6.80437	-.103	.919
	1401-2350	16	26.6875	7.10604		

As shown in Table 14 above, there was no significant mean difference between salary groups for the motivational and hygiene factors of job satisfaction, factors of teacher turn over and teacher retention result.

CHAPTER FIVE

5. Discussion

In this part of the study, the main results obtained from this research are discussed in relation with previous study findings in the area.

5.1 The conditions that motivate TVET teachers in their Institution's

The study investigated factors of work motivation that motivate North Wollo TVET teachers in their institutions. According to this study, factors of work motivation were classified in to two variables, motivator factors and hygiene factors. Items that best described by the respondents as motivator factors responded with in the range of 'satisfied' to 'very satisfied' are: success in the performance of the job (Mean=3.8226), professional discretion in the institution/carrying out of responsibility and authority (3.5484), the recognition that could come from different sources (3.1290), the job as a teacher in the institution (3.03234). On the other hand, teachers were dissatisfied with their status or position in the institution (2.9032).

Hygiene factors responded by teachers within the scale of 'satisfied' to 'very satisfied' are: the physical and psychological wellbeing of themselves (Mean=3.5968) and the work load they have (3.1290). The other hygiene factors responded with in the range of 'dissatisfied' to 'very dissatisfied' by the respondents are: the discipline of students inside and/or outside of the class room (2.9194), the presence of job security including tenure (2.8710), the living arrangement of their own personal life (2.7903), the prestige and respect given to them from the community (2.7742), the competence and fairness of the supervision (2.5161), the physical conditions of work/facilities availability for doing the work (2.5000), the payment as a teacher and the institution's policy and administration(2.3065), and when they compare their payment and cost of living (1.7258). Additionally, the study explored that, teachers are highly satisfied by motivator factors (3.287097) than hygiene factors (Mean=2.6759).

This result is in harmony with other findings Silver(1982) as cited in Suslu (2006), it is said that motivator factors, on the one hand, should be intrinsic that includes achievement, recognition, work, responsibility, advancement, and possibility of growth. On the other hand, other factors are extrinsic in terms of the context or setting where the work is performed. The same to this research, Herzberg (1976) noted that, employees are highly motivated by motivator factor than hygiene factor.

More over, this result is supported by the findings of GCE (2005:1), in a sense that, the decline of teacher motivation and morale are identified as hygiene factors. Like wise, Herzberg (1976) supported this notion, with his study hygiene or lower order needs that are not satisfied will produce dissatisfaction.

The result of this research is also concurrent with other findings Spear et al. (2000) which stated that, the wide range of factors that influence teacher job satisfaction and motivation in the United Kingdom is working with children, intellectual challenge, a high level of professional autonomy, and, to feel that they are benefiting society. Enhanced pay and a less demanding workload do not necessarily bring about higher levels of job satisfaction.

5.2 Factors that could cause teachers to leave teaching in North Wollo TVET Institutions

The findings of this study have pointed out factors that could cause teachers to leave teaching in TVET institution. The feeling of the respondents that could cause as possible factors of teachers' turn over in North Wollo TVET institutions responded in the range of 'some times' to 'frequently' are: poor pay/minimum amount of payment (mean=3.5000), lack of an opportunity to earn secondary/additional income (3.3387), poor level of communication between teachers and institution manager (3.2258), poor teacher management at all levels of the institution (3.2090), negative image of the teaching profession by the society (3.1613). On the other hand the opinion of the respondents that indicated between 'rarely' to 'some times' as factors of teacher turn over is: lack of educational materials (2.4355), insufficient involvement of teachers' representation in policy making (2.9677), lack of appropriate supervisory service and little respect by

supervisors (2.9516), heavy work load (2.6774), and large class size/over crowded class room (2.1290).

The teachers' and administrators' feeling for factors of teacher turn over are similar to most reasons except on insufficient upgrading opportunities and lack of interest for the job which raised and have obtained attention by administrators.

This result is in agreement with other findings Mulkeen et al. (2005), which suggested that teachers' attrition is aggravated by economic factors, as teachers made rational economic decisions about their careers and seek better-paid work, where they can; this is because total pay does not cover basic house hold.

Similarly Eble (1987) suggested that, it is essential that a personal joy and pleasure be derived from the act of teaching and the interpersonal communication of knowledge and positively related to satisfaction and retention of teachers. In the same way Macdonald (1999) pointed out that, attrition is highest in geographical locations where living conditions are extremely poor, harsh, or expensive, or where teachers do not feel comfortable with local ethnicity, customs, or language.

Likewise ETPI (2002), shows that the provision of democratization of organizational policy and administration enhances not only teachers' motivation to teach but also it reduces the attrition rate of teachers.

In general, the level of interpersonal trust reveal that the extent to which individuals see their social environment as cooperative or friendly determines the tendency of the teacher to accomplish the task assigned effectively.

5.3 Factors that support successful teachers' retention in North Wollo TVET Institutions

The study investigated possible factors that support successful teachers' retention in North Wollo TVET institutions. Respondents responded items with in the range of 'agree' to 'strongly agree' are: teaching creates an opportunity for further educational advancement (mean=4.1129), teaching is better than other jobs in benefiting the society (3.4516), wanting the opportunity to be creative (3.4355), high level of satisfaction by the job itself (3.4032), teaching provides an opportunity to enjoying with young people (3.2242). Thus, intrinsic and altruistic factors have greater influence to make teachers retain in their institution.

On the other hand respondents indicated their opinion that did not maintain currently as a teacher to retain in their institutions is because of the following factors: in adequate current payment/salary (1.8065), insufficient career structure (2.1774), lack of an opportunity to earn secondary income (2.4032), and improper and incompetent administration systems (2.4677). Thus, extrinsic factors are aggravated teachers attrition from their institution.

This result is in agreement with other findings Bennell and Akyeampong (2007), the teachers need continuous professional development to retain in their institution. In addition this study is supported by VSO (2002:1); spear et al. (2000) which stated, the potential factors that influence teachers' motivation and retention is professional upgrading opportunities, intellectual challenge, to feel that they are benefiting society, a high level of professional autonomy, and to enjoy good relation with their colleagues.

On the other hand, the result of this research is in opposition to other findings Muranane (1987) which stated that, some university graduates are attracted to teaching as a 'medium-term' occupation rather than permanent career. More over, Dornyei (2001a) stated that, teaching as a profession is supplied from intrinsic motives and states that there are some damaging elements which weaken and destroy the intrinsic character of

teacher motivation. So, teaching is known as one of stressful profession rather than an interesting job and provides high level of job satisfaction.

5.4 The Relationship between the educational level, salary, age and experience of teachers Vis a-vis work motivation, retention and attrition in North Wollo TVET institution

The purpose of this study was to determine if any difference existed between current qualification, salary, age, and experience of teachers across their work motivation, retention, and attrition in North Wollo TVET institution.

Attempts were also made to determine if any differences existed between motivation and the current qualifications of teachers. There were significant mean differences between degree and diploma holders for job satisfaction, motivator factors and hygiene factors. In this case, the t-test found that as the educational level increases teachers give more emphasis to factors of job satisfaction.

This result is in agreement with other findings VSO (2002), Bennell and Akyeampong, (2007); teacher professional development has a major impact on teacher motivation, the professional conduct, and educational outcomes.

Regarding educational level and teacher attrition, the result of this study revealed that there is no significant mean difference between current qualification and teacher turn over.

This finding contradicts to other research results Macdonald (1999) which stated that, attrition may also be related to teacher qualification; the most highly qualified teachers may be the most likely to leave as they can easily get alternatives.

Concerning educational level and teacher retention, the result of this study revealed that there was no significant mean difference between current qualification and teacher retention.

On the other hand, the result of this research is against other findings Macdonald (1999); Hedges (2002); Berhanemeskel (2006) which stated that, most highly qualified teachers may be the most likely to leave and unqualified teachers may have more stake in the communities they work with because they have fewer choices.

Regarding salary and teachers' motivation, attrition and retention there was no significant mean difference between salary groups for the motivational and hygiene factors of job satisfaction, factors of teacher turn over and teacher retention result.

The result of this research is in agreement with other findings Spear et al. (2000) which stated that Enhanced pay do not necessarily bring about differences in the levels of job satisfaction and motivation.

On the other hand, the result of this research is against other findings GCE (2005:1); Bennell and Akyeampong (2007) which stated salary affected teachers' motivation and morale.

Regarding teachers' attrition this finding contradicts to other research results Mulkeen et al. (2005), which stated that attrition may also be related to salary; increasing teachers' salaries may appear to be the obvious response to attrition problems. However, there is little evidence that increased salary alone has a high long-term impact on teacher retention.

Attempts were also made to determine if any differences existed between motivation, turn over, and retention with the age of teachers. For motivator factors there is a significant mean difference between the age groups of 21-25 and 41-45 years. The rest of

the groups don't differ significantly in conforming to motivational factors of job satisfaction.

For hygienic factors there is a significant mean difference between the age groups of 21-25 with 26-30, 31-35 and 41-45 years categories. The rest of the groups don't differ significantly in conforming to hygienic factors of job satisfaction.

For both factors of teacher turn over and teacher retention there is no a significant mean difference between the age groups.

The result of this research is compatible with other findings Seguin (1997) which stated that, People were motivated by different things at different stages of their lives.

Concerning the relationship between motivation, attrition, and retention with experience groups, the result of this study revealed that for both hygienic and motivator factors there is a significant mean difference between the experience groups 0-5 and 6-10 years categories. On the other hand for both factors of teacher turn over and teacher retention there is no significant mean difference between the experience groups.

The result of this research is in agreement with other findings Seguin (1997) which stated that as individuals moved through their educational career and gained years of experience they were motivated to high level of needs.

CHAPTER SIX

6. Summary, Conclusions and Recommendations

6.1 Summary

The main purpose of this study was to assess the factors of work motivation, attrition and retention of TVET teachers in their institution. Towards this end, the following research questions were posed:

1. What conditions motivate TVET teachers in Amhara Region North-Wollo administrative zone?
2. What are the factors that could cause teachers to leave teaching in TVET Institutions of North Wollo administrative zone?
3. What are the factors that support successful teachers' retention in North Wollo TVET Institutions?
4. Is there any relationship between the educational level, salary, age and experience of teachers and their motivation, retention and attrition in TVET institution of North Wollo administrative zone?

In order to answer the above questions, a questionnaire was prepared and administered to 62 teachers and 6 institution administrators' purposive sampling of two government TVET institutions were taken as well. Moreover, supportive data were collected through documents, government policies and directives. Then the collected data were analyzed using statistics such as percentage, mean, t-test and one-way ANOVA. Results from these statistical analyses have revealed the following:

6.1.1 According to the results of the study, the teachers' attitude towards teaching profession when they joined in to the profession include, the internal desire to educate people (teaching is better than other jobs in benefiting the society) (Mean 4.0161), to obtain the opportunity to became creative as teaching provides the best research environment (Mean=3.9194), to enjoy work with young people

(Mean=3.629), and teaching creates feeling of job security and safety (Mean=3.5484). Thus, the above reasons are also in accordance with factors of teachers' retention and these were possibly contributed to those teachers retained in their institutions.

6.1.2 The study found that job satisfaction/work motivation was divided in to two, on the basis of the factor analysis result; motivator and hygiene dimensions. Items included as motivator factors are: success in the performance of the job (Mean=3.8226), professional discretion in the institution/carrying out of responsibility and authority (Mean=3.584), the recognition that could come from different sources (Mean=3.129), and the job as a teacher in the institution (Mean=3.0323). On the other hand, teachers were dissatisfied with status or position in their institution. Therefore, teachers were satisfied with motivator factors because of this they were retained and motivated to work in their institutions.

6.1.3 The study showed that teachers who constituted with in the scale of 'dissatisfied' to 'very dissatisfied' responded as hygiene factors are: comparing payment and cost of living (Mean=1.7258), the payment as a teacher and institution policy and administration (Mean=2.3065), and the competence and fairness of the supervision (Mean=2.5161), the physical conditions of work (Mean=2.5), prestige and respect given to them from the community (Mean=2.7742), the presence of job security including tenure (Mean=2.871), and the discipline of the students (Mean=2.9194). In contrary to these factors, teachers were satisfied with their health conditions (Mean=3.5968) and the work load they have (Mean=3.129). Thus, the combined effects of these factors were possible reasons of teachers' turn over from their institutions.

6.1.4 The study investigated possible factors that made teachers leave their institutions are: poor pay/minimum amount of payment (Mean=3.5), lack of an opportunity to earn secondary/additional income (Mean=3.3387), poor level of communication

between teachers and institution manager(Mean=3.2258) , poor teacher management at all level of the institution(Mean= 3.2097) , negative image of the teaching profession by the society(Mean= 3.1613), Insufficient involvement of teachers in policy making(Mean= 2.9677), lack of appropriate supervisory service and little respect by the supervisors(Mean= 2.9516). Thus, the above factors are in accordance with hygiene factors that were not satisfied by the teachers. As a result, factors of teacher turn over were aggravated with the dissatisfaction of teachers in hygiene factors.

6.1.5 The possible factors on teacher turn over responded by administrator respondents are: poor pay/minimum amount of payment(Mean=4.0), insufficient upgrading opportunities(Mean= 4.0), negative image of the teaching profession by the society(Mean= 3.5), lack of an opportunity to earn secondary/additional income(Mean=3.5), and lack of appropriate career structure(Mean=3.5), poor teacher management at all level of the institution(Mean= 3.3333), poor level of communication between teachers and institution manager(Mean=3.1667) and lack of interest for the job(Mean= 3.1667). Accordingly, the teachers' and administrators' opinion for factors that made workers leave their institution are the same to most cases except their difference on insufficient upgrading opportunities and lack of interest for the job which is given emphasis by administrators.

6.1.6 Based on the findings of the study, the possible factors that contribute to teachers' retention are: the opportunity for further educational advancement (Mean= 4.1129), teaching is better than other jobs in benefiting the society (Mean= 3.4516), wanting the opportunity to be creative (Mean=3.4355), high level of satisfaction by the job itself (Mean=3.4032), and teaching provides an opportunity to enjoying with young people (Mean= 3.2742).

6.1.7 The t-test and one-way ANOVA of the study found that there were significant mean differences between current qualification, age, and experience group across job

satisfaction (motivator and hygiene) factors. On the other hand, teachers don't differ on factors of teacher turn over and teacher retention. Thus, the current qualification, age, and experiences of teachers provide conformity for the motivator and hygiene factors of job satisfaction/work motivation.

6.1.8 The results of the study indicated that, no significant mean difference was found in motivational factors, factors of teachers' turn over and retention across salary groups of employees. This means amount of salary doesn't matter the motivational factors, factors of teacher turn over and retention.

6.2 Conclusions

Depending on the results of the major findings, the following conclusions are made:

6.2.1 Amongst the reasons of teachers' attitude towards teaching profession when they joined in to the professions were: the internal desire to educate people, to obtain the opportunity to become creative, and to enjoy work with young people. There fore, it is possible to conclude that teachers who joined the profession were willing due to intrinsic and altruistic factors and they will retain and satisfied in the profession.

6.2.2 The research revealed that, teachers in North Wollo TVET institutions were satisfied with motivator factors except by their status or position in the institution.

6.2.3 The major causes for teachers' dissatisfaction as hygiene factors were: the payment as a teacher and cost of living, institution policy and administration, physical conditions of work, competence and fairness of the supervision, prestige and respect given to them from the community, the presence of job security including tenure, and the discipline of the students. On the other hand, they were satisfied with the work load they have and their health condition. Thus, the collective effects of the study indicated that, there is poor motivation and morale of the teachers.

6.2.4 The result of this study showed that, the reasons for teachers' resignations as responded by teachers and administrators are mostly similar. For that reason, the causes for teacher turn over are: poor pay, lack of an opportunity to earn additional income, poor level of communication between teachers and institution managers, and poor teacher management at all levels of the institutions. Thus, it can be concluded that the institutions are not encouraging teachers to retain in.

6.2.5 The findings of this study pointed out that, diminutive consideration has been given to teachers' retention, and there fore, no effort was made to reduce teachers' attrition rate.

6.3 Recommendation

Based on the findings of the present study, the following recommendations are proposed:

- 6.3.1.** Promote satisfaction factor and reduced dissatisfaction factor will result in improved teacher motivation and the greater likelihood of success in retention of teachers. It should not be forgotten that every teacher is not motivated entirely by the same demands and needs. Job satisfaction of each teacher is different from the other. Among several factors, teacher motivation should be included as part of working resources in the education system
- 6.3.2.** The core of the teacher motivation crisis and attrition is that teachers' inadequate pay. As the study clearly shows, teachers are unable to meet their basic household needs. As a result, many of them are forced to find other sources of income and leave the institution. Thus, as nearly all the respondents reported, I recommend that teacher pay should be significantly increased.
- 6.3.3.** All TVET teachers who plan to enter post-graduate educational programs and who have expressed an interest to stay in the educational profession should be given the opportunity to join higher institution (secondary degree) with collateral.
- 6.3.4** Institution systems should consider providing the opportunity to satisfy the level of communication between teachers and institution administrators. This could be achieved by frequent opportunities to interact with colleagues both at the professional and social level. The benefits from developing these opportunities would be realized in the form of improved interpersonal relationships and the building of support networks within the organizational family thereby creating a more sensitive and empathetic work environment. Thus, the institution, the administrators as well as the teachers need to work to bring about these relations.

- 6.3.5.** Institution systems should continue to encourage an environment characterized by risk-taking, autonomy, trust, creativity, and freedom to experiment in order to facilitate the possibility of attaining job satisfaction/motivation. It is through these efforts that individuals may be able to make the most mature and constructive contributions and retain to their institutions.
- 6.3.6.** Government, parents, and the society should recognize and appreciate teachers' efforts rather than blame them for the failure of educational system because of different reasons like lack of skilled man power, lack of material resources, and financial resources to teach properly trainees in TVET Institutions.
- 6.3.7.** Teachers need continuous professional development as well as support from peers and supervisors. In the absence of appropriate support, teachers can quickly lose motivation. So, the competence and fairness of the supervisors and teachers require good quality in-service and ongoing professional training, clear, and transparent regulations.
- 6.3.8** Simple strategies can be implemented by the TVET institutions to improve the conditions of service for teachers that may result in a more motivated, qualified, and satisfied teacher corps. These strategies include: creating learning communities among teachers to discuss teaching and learning issues and improving the class room environment, such as providing adequate curriculum materials and books.

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APENDICES

Appendix A

Addis Ababa University
School of Graduate Studies
Department of Business Education

↳ Questionnaire to be filled by teachers

General Direction

The purpose of this Questionnaire is to collect data that can serve as inputs to a thesis prepared for the partial fulfillment of Masters Degree in Management of Vocational Education at Addis Ababa University. The study tries to assess the extent of motivation of teachers under your institution.

Note that there is no right or wrong answers to the items in the questionnaire. The best response to any item is simply the one which best reflects your feelings. I also assure you that the collected data are to be used only for the aforementioned educational purpose and kept very confidentially. Thus, you are kindly requested to fill out the questionnaire Very carefully and honestly according to the instructions provided for each part.

Finally, I would like to thank you in advance for your devotion in filling this questionnaire.

Dawit Tesfaye
Management of Vocational Education
Graduate Student.

Part I.

Direction: Please give your response by putting an "X" mark inside the box or by writing the appropriate answer where needed

1. Sex Male Female
2. Age 21-25 26-30 31-35 36-40
 41-45 >=46
3. Marital Status Single Married
4. What was your Qualification when you joined to the profession of teaching?
 M.A. /MSc. Diploma
 B.A. /B.Sc. Other _____
5. What is your current level of qualification?
 M.A. /MSc. Diploma
 B.A. /B.Sc. Other _____
6. Are you currently studying to upgrade your qualification? Yes No
7. Your current career structure is
- | | | | |
|--------------------------|--------------------------|------------------------|--------------------------|
| Beginner-Teacher | <input type="checkbox"/> | Junior-Teacher | <input type="checkbox"/> |
| Teacher | <input type="checkbox"/> | Higher-Teacher | <input type="checkbox"/> |
| Associate-Leader-Teacher | <input type="checkbox"/> | Leader-Teacher | <input type="checkbox"/> |
| Graduate-Assistance I | <input type="checkbox"/> | Graduate-Assistance II | <input type="checkbox"/> |
| Assistant Lecturer | <input type="checkbox"/> | Lecturer | <input type="checkbox"/> |
8. What is your gross monthly payment (salary & allowance) currently?
- | | | | |
|-------------------|--------------------------|-------------------|--------------------------|
| 601birr-1400birr | <input type="checkbox"/> | 1401birr-2350birr | <input type="checkbox"/> |
| 2351birr-3550birr | <input type="checkbox"/> | 3551birr-5000birr | <input type="checkbox"/> |
| 5001 and above | <input type="checkbox"/> | | |
9. Do you have additional income relating to your profession (like part-time payment)?
 Yes No
10. Teaching Work experience in years _____
11. Your position in the institution
- | | | | | | |
|---------|--------------------------|--------------|--------------------------|-----------------|--------------------------|
| Teacher | <input type="checkbox"/> | Section head | <input type="checkbox"/> | Department head | <input type="checkbox"/> |
|---------|--------------------------|--------------|--------------------------|-----------------|--------------------------|

12. Work load (periods per a week) _____

13. Average number of students in a class _____

14. Why did you decide to become a teacher? (The following Statements/items are assumed as to be reasons to become a teacher. Read carefully and put an "X" mark in one of the boxes in front of each statement/item according to your degree of agreement.)

No.	I became a teacher because:-	Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	I was employed for temporary employment					
2	I was pushed by my friends and/or parents					
3	of lack of other employment opportunities					
4	teaching creates feeling of job security and safety					
5	teaching creates an opportunity for further educational advancement					
6	teaching provides an opportunity to enjoy work with young people					
7	teaching is an interesting job than other occupations					
8	the profession had better work condition and living environment than other					
9	profession					
10	teaching profession had attractive career structure					
11	teaching creates an opportunity to earn secondary(additional) income					
12						
13	teaching had better pay and allowances when I was employed					
14	teaching puts the teacher on a high social status in the society					
15	teaching creates the opportunity to become creative as it provides the best research environment					
16	teaching is better than other jobs in benefiting the society					

15. If you had other reason/s that is/are not mentioned above that initiated you to become a teacher, Please list down

Part II.

This part presents some factors of job satisfaction related to your work. Read carefully and please indicate your level of satisfaction from the given alternatives by putting an “X” mark in one of the boxes.

	Statements / Items	Very Satisfied	Satisfied	Not sure	Dissatisfied	Very dissatisfied
	How satisfied are you by your job as a teacher in this institution?					
	How satisfied are you by your status or position in the institution?					
	How satisfied are you by the recognition that could come from different sources (administrator, student, fellow teacher, and parent)?					
	How satisfied are you by the opportunities created for upgrading your professional qualification?					
	How satisfied are you by your success in the performance of the job?					
	How satisfied are you in the carrying out of your responsibility and authority (Your professional discretion in the institution)?					
	How satisfied are you by the institution’s policy and administration?					
	How satisfied are you by the competence and fairness of the supervision?					
	How satisfied are you with your colleagues work cooperativeness?					
0	How satisfied are you with the physical conditions of work (facilities availability for doing the work)?					
1	How satisfied are you by the workload you have?					
2	How satisfied are you by the payment as a teacher?					
3	How satisfied are you when you compare your payment and cost of living?					
4	How satisfied are you by the prestige and respect given to you from the community?					
5	How satisfied are you by the presence of job security, including tenure?					
6	How satisfied are you by the living arrangement of your own personal life?					
7	How satisfied are you by the discipline of the student inside and/or outside of the classroom?					
8	How satisfied are you by activities related to the institution; but outside of the classroom (extra curricular activities)?					
9	How satisfied are you by the physical and psychological well-being of yourself (Your health condition)?					
0	How satisfied are you by the location of your institution /distance to work/?					

Part III. Teachers Turn over/ Attrition

1. The following Statements/items are assumed as to be reasons to depart/left teachers in the institution. (Read carefully and put an “X” mark in one of the boxes in front of each statement/item according to your opinion).

No.	Possible factors for teachers turn over	Frequently	Sometimes	Rarely	Not at all
1	Poor teacher management at all level of the institution.				
2	Insufficient upgrading opportunities.				
3	Lack of interest for the job (want to be engaged in other occupations).				
4	Lack of educational materials.				
5	Poor pay (Minimum amount of payment).				
6	Insufficient involvement of teachers’ representation in policymaking.				
7	Lack of appropriate supervisory service and little respect by supervisors.				
8	Disciplinary problems of students.				
9	Absence of adequate information due to the location of the institution.				
10	Heavy work load.				
11	Poor level of communication between teachers and institution managers/Deans/				
12	Large class size /over crowded classroom.				
13	Delayed payment of salaries.				
14	Negative image of the teaching profession by the society.				
15	Lack of an opportunity to earn secondary (additional) income.				
16	Lack of appropriate career structure.				

If you have any other reason/s that is/are not mentioned above that contribute teachers to leave this institution, please write.

Part IV. Factors that contribute to teacher retention

1. The following statements/items are factors that are assumed to address teacher retention in the institution. (Read carefully and put an “X” mark in one of the boxes in front of each statement/item according to your degree of agreement.)

No.	Factors That contribute to teacher retention	Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	Teaching provides an opportunity to enjoying with young people					
2	The current pay as a teacher is adequate					
3	Wanting the opportunity to be creative					
4	Teaching is better than other jobs in benefiting the society					
5	The current career progression of teacher is better than other office work					
6	Teaching creates an opportunity to earning secondary income					
7	Teaching creates an opportunity for further educational advancement					
8	My current level of satisfaction by the job itself					
9	Proper and competent administration					
10	Lack of alternative employment opportunities					

2. If you have any other reason/s that is/are not mentioned above that contribute to continue working as TVET teacher please write.

Thank you!

Addis Ababa University
School of Graduate Studies
Department of Business Education

→ **Questionnaire to Be Filled By Institution Administrator.**

General Direction

The purpose of this Questionnaire is to collect data that can serve as inputs to a thesis prepared for the partial fulfillment of Masters Degree in Management of Vocational Education at Addis Ababa University. The study tries to assess the extent of motivation of teachers under your institution.

Note that there is no right or wrong answers to the items in the questionnaire. The best response to any item is simply the one which best reflects your feelings. I also assure you that the collected data are to be used only for the aforementioned educational purpose and kept very confidentially. Thus, you are kindly requested to fill out the questionnaire Very carefully and honestly according to the instructions provided for each part.

Finally, I would like to thank you in advance for your devotion in filling this questionnaire.

Dawit Tesfaye
Management of Vocational Education
Graduate Student.

Part I.

Please give your response by putting an "x" mark or by writing the appropriate answer where needed.

1. Sex Male Female
2. Age 21-25 26-30 31-35 36-40
 41-45 >=46
3. Marital Status Single Married
4. Qualification
 M.A/MSc. Diploma
 B.A. /B.Sc Other _____
- 5 Field of study _____
- 6 Indicate the position that you presently hold _____
- 7 Your Work experience in years only in the field of teaching _____
- 8 Your Work experience in years only after you have held your current position _____

Part II

1. The following Statements/items are assumed as to be reasons to depart/left teachers in your institution. (Read carefully and put an "X" mark in one of the boxes in front of each statement/item according to your opinion).

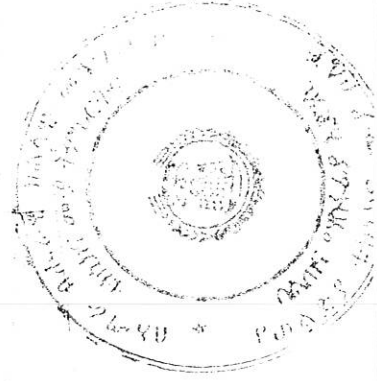
No.	Possible factors for teachers turn over	Frequently	Sometimes	Rarely	Not at all
1	Poor teacher management at all level of the institution.				
2	Insufficient upgrading opportunities.				
3	Lack of interest for the job (want to be engaged in other occupations).				
4	Lack of educational materials.				
5	Poor pay (Minimum amount of payment).				
6	Insufficient involvement of teachers' representation in policymaking.				
7	Lack of appropriate supervisory service and little respect by supervisors.				
8	Disciplinary problems of students.				
9	Absence of adequate information due to the location of the institution.				
10	Heavy work load.				
11	Poor level of communication between teachers and institution managers/Deans/				
12	Large class size /over crowded classroom.				
13	Delayed payment of salaries.				
14	Negative image of the teaching profession by the society.				
15	Lack of an opportunity to earn secondary (additional) income.				
16	Lack of appropriate career structure.				

2. If you have any other reason/s that is/are not mentioned above factors that contribute teachers to leave this institution, please write.

Appendix B1

WOLCWA TVET COLLEGE

Academic Year	No. of teachers at the Institute/college				No. of teachers left from the Institute/college (Attrition - movement)				Remark	
	Diploma		Degree		Diploma		Degree			
	M	F	M	F	M	F	M	F		
1994/2001-2002										
1995/2002-2003										
1996/2003-2004										
1997/2004-2005										
1998/2005-2006	29	2	31	9	1	10	0	1		21.2%
1999/2006-2007	24	-	24	9	4	13	3	1		7.5%
2000/2007-2008	49	-	49	20	3	23	-	-		6.6%



Approved by Ismael's bibika
 Signature [Signature]

Stamp

Lalibela Technical and Vocational Training Institute

TVET center	Academic year	Total No of Teachers at work									Total No of Teachers left their work (attrition teachers)						Attrition Rate (%)			
		MA/MSc			Degree			Diploma			MA/MSc			Degree				Diploma		
		M	F	BS	M	F	BS	M	F	BS	M	F	BS	M	F	BS		M	F	BS
Lalibela	1994/2001-2	-	-	-	-	-	-	6	-	6	-	-	-	-	-	-	-	-	-	
	1995/2002-3	-	-	-	2	-	2	5	-	5	-	-	-	-	-	-	-	-	-	
	1996/2003-4	-	-	-	-	-	-	15	1	16	-	-	-	-	-	-	-	-	-	
	1997/2004-5	-	-	-	1	-	1	14	1	15	-	-	-	-	-	-	-	-	-	
	1998/2005-6	-	-	-	2	1	3	11	-	11	-	-	-	-	-	-	1	-	1	
	1999/2006-7	-	-	-	6	1	7	9	2	11	-	-	-	-	-	-	-	-	-	
	2000/2007-8	-	-	-	10	1	11	5	-	5	-	-	-	2	1	3	-	-	-	15.8%

ደ/ሥ ገቢ ምኒሽ
 Approved by: **Haile Molla Mehratu**

Signature: *[Handwritten Signature]*

Date: *3/1/2008*
 Head, Administration & General Service

Stamp



Appendix C1

Test Statistics for reasons to became a teacher

	r1	r2	r3	r4	r5	r6	r7	r8	r9	r10	r11	r12	r13
Chi-Square(a,b)	12.355	50.097	17.516	26.710	40.968	27.194	3.645	13.323	12.032	15.903	37.032	12.677	55.236
df	4	4	4	4	3	4	4	4	4	4	4	4	4
Asymp. Sig.	.015	.000	.002	.000	.000	.000	.456	.010	.017	.003	.000	.013	.000

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.4.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.5.

Test Statistics for factors of work motivation

	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20
Chi-Square(a,b)	12.516	17.194	24.129	25.258	39.129	28.323	22.194	10.419	11.065	31.387	29.290	19.774	58.806	16.710	18.161	11.387	18.161	4.452	18.323	8.101
df	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4
Asymp. Sig.	.014	.002	.000	.000	.000	.000	.000	.034	.026	.000	.000	.001	.000	.002	.001	.023	.001	.217	.001	.086

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.4.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.5.

Test Statistics for factors of teacher turn over

	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14	a15	a16
Chi-Square(a,b)	25.871	4.839	36.710	11.677	63.032	14.645	39.032	3.161	2.129	18.129	27.677	14.129	7.032	30.000	38.516	8.258
df	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2
Asymp. Sig.	.000	.184	.000	.009	.000	.002	.000	.367	.546	.000	.000	.003	.071	.000	.000	.016

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.5.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.7.

Test Statistics for factors of teacher retention

	rt1	rt2	rt3	rt4	rt5	rt6	rt7	rt8	rt9	rt10
Chi-Square(a,b)	25.903	28.452	51.710	36.387	23.806	15.742	26.129	22.032	11.710	25.903
df	4	3	4	4	4	4	3	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.003	.000	.000	.020	.000

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.4.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.5.

Correlations for reasons to became a teacher

Appendix c2

	r1	r2	r3	r4	r5	r6	r8	r9	r10	r11	r12	r13	r14	rtotal
r1 Pearson Correlation	1	.333(**)	.490(**)	-.067	-.193	-.224	.225	.070	-.048	.357(**)	.271(*)	.160	-.033	.225
Sig. (2-tailed)		.008	.000	.606	.133	.080	.079	.589	.713	.004	.033	.215	.801	.079
N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r2 Pearson Correlation	.333(**)	1	.266(*)	-.095	-.208	.146	-.032	.025	-.021	.096	-.113	-.007	-.064	.213
Sig. (2-tailed)	.008		.037	.462	.105	.258	.804	.844	.869	.460	.382	.956	.619	.097
N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r3 Pearson Correlation	.490(**)	.266(*)	1	-.121	-.218	-.242	-.121	-.263(*)	.029	.037	-.120	-.096	-.081	.139
Sig. (2-tailed)	.000	.037		.350	.089	.058	.351	.039	.825	.773	.352	.457	.531	.281
N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r4 Pearson Correlation	-.067	-.095	-.121	1	.407(**)	.455(**)	.481(**)	.467(**)	.457(**)	.232	.234	.273(*)	.435(**)	.606(**)
Sig. (2-tailed)	.606	.462	.350		.001	.000	.000	.000	.000	.069	.067	.032	.000	.000
N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r5 Pearson Correlation	-.193	-.208	-.218	.407(**)	1	.340(**)	.194	.233	.167	.037	.067	.328(**)	.222	.301(*)
Sig. (2-tailed)	.133	.105	.089	.001		.007	.130	.068	.193	.776	.602	.009	.083	.018
N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r6 Pearson Correlation	-.224	.146	-.242	.455(**)	.340(**)	1	.254(*)	.359(**)	.268(*)	.151	.188	.365(**)	.555(**)	.513(**)
Sig. (2-tailed)	.080	.258	.058	.000	.007		.047	.004	.035	.241	.143	.004	.000	.000
N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r8 Pearson Correlation	.225	-.032	-.121	.481(**)	.194	.254(*)	1	.649(**)	.357(**)	.575(**)	.434(**)	.292(*)	.239	.693(**)
Sig. (2-tailed)	.079	.804	.351	.000	.130	.047		.000	.004	.000	.000	.021	.061	.000

	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r9	Pearson Correlation	.070	.025	-.263(*)	.467(**)	.233	.359(**)	.649(**)	1	.585(**)	.625(**)	.626(**)	.231	.218	.727(**)
	Sig. (2-tailed)	.589	.844	.039	.000	.068	.004	.000		.000	.000	.000	.071	.089	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r10	Pearson Correlation	-.048	-.021	.029	.457(**)	.167	.268(*)	.357(**)	.585(**)	1	.452(**)	.298(*)	.072	.187	.578(**)
	Sig. (2-tailed)	.713	.869	.825	.000	.193	.035	.004	.000		.000	.019	.580	.145	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r11	Pearson Correlation	.357(**)	.096	.037	.232	.037	.151	.575(**)	.625(**)	.452(**)	1	.550(**)	.312(*)	.335(**)	.731(**)
	Sig. (2-tailed)	.004	.460	.773	.069	.776	.241	.000	.000	.000		.000	.014	.008	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r12	Pearson Correlation	.271(*)	-.113	-.120	.234	.067	.188	.434(**)	.626(**)	.298(*)	.550(**)	1	.214	.247	.608(**)
	Sig. (2-tailed)	.033	.382	.352	.067	.602	.143	.000	.000	.019	.000		.095	.053	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r13	Pearson Correlation	.160	-.007	-.096	.273(*)	.328(**)	.365(**)	.292(*)	.231	.072	.312(*)	.214	1	.544(**)	.524(**)
	Sig. (2-tailed)	.215	.956	.457	.032	.009	.004	.021	.071	.580	.014	.095		.000	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
r14	Pearson Correlation	-.033	-.064	-.081	.435(**)	.222	.555(**)	.239	.218	.187	.335(**)	.247	.544(**)	1	.552(**)
	Sig. (2-tailed)	.801	.619	.531	.000	.083	.000	.061	.089	.145	.008	.053	.000		.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62
rtotal	Pearson Correlation	.225	.213	.139	.606(**)	.301(*)	.513(**)	.693(**)	.727(**)	.578(**)	.731(**)	.608(**)	.524(**)	.552(**)	1
	Sig. (2-tailed)	.079	.097	.281	.000	.018	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

s10	Pearson Correlation	.630(**)	.304(*)	.333(**)	.049	.189	.316(*)	.386(**)	.316(*)	236	1	.272 (*)	.407 (**)	.345 (**)	.317 (*)	.395 (**)	.503 (**)	.290(*)	226	.637 (**)
	Sig. (2-tailed)	.000	.016	.008	.703	.141	.012	.002	.012	.065		.032	.001	.006	.012	.001	.000	.022	.077	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
s11	Pearson Correlation	.329(**)	.423(**)	.291(*)	.075	.324(*)	.270(*)	.426(**)	.456(**)	.124	.272 (*)	1	.351 (**)	.092	.169	.348 (**)	.312 (*)	.307(*)	.393 (**)	.572 (**)
	Sig. (2-tailed)	.009	.001	.022	.564	.010	.034	.001	.000	.338	.032		.005	.476	.190	.006	.014	.015	.002	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
s12	Pearson Correlation	.375(**)	.453(**)	.299(*)	.065	.277(*)	.274(*)	.445(**)	.322(*)	.242	.407 (**)	.351 (**)	1	.674 (**)	.552 (**)	.540 (**)	.449 (**)	.066	.355 (**)	.697 (**)
	Sig. (2-tailed)	.003	.000	.018	.615	.030	.031	.000	.011	.058	.001	.005		.000	.000	.000	.000	.613	.005	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
s13	Pearson Correlation	.267(*)	.266(*)	.090	.044	.115	.021	.338(**)	.341(**)	.199	.345 (**)	.092	.674 (**)	1	.389 (**)	.307 (*)	.337 (**)	-.005	.139	.478 (**)
	Sig. (2-tailed)	.036	.036	.488	.734	.373	.869	.007	.007	.122	.006	.476	.000		.002	.015	.007	.969	.283	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
s14	Pearson Correlation	.319(*)	.409(**)	.263(*)	.053	.350(**)	.441(**)	.310(*)	.358(**)	.235	.317 (*)	.169	.552 (**)	.389 (**)	1	.455 (**)	.319 (*)	.344(**)	.402 (**)	.637 (**)
	Sig. (2-tailed)	.011	.001	.039	.683	.005	.000	.014	.004	.066	.012	.190	.000	.002		.000	.011	.006	.001	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
s15	Pearson Correlation	.563(**)	.467(**)	.380(**)	.091	.595(**)	.535(**)	.260(*)	.349(**)	.294 (*)	.395 (**)	.348 (**)	.540 (**)	.307 (*)	.455 (**)	1	.480 (**)	.405(**)	.648 (**)	.766 (**)
	Sig. (2-tailed)	.000	.000	.002	.483	.000	.000	.041	.005	.020	.001	.006	.000	.015	.000		.000	.001	.000	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
s16	Pearson Correlation	.554(**)	.251(*)	.341(**)	.255 (*)	.224	.312(*)	.269(*)	.261(*)	.047	.503 (**)	.312 (*)	.449 (**)	.337 (**)	.319 (*)	.480 (**)	1	.277(*)	.239	.635 (**)
	Sig. (2-tailed)	.000	.049	.007	.046	.080	.014	.034	.040	.714	.000	.014	.000	.007	.011	.000		.029	.062	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
s17	Pearson Correlation	.170	.184	.160	.196	.228	.349(**)	.161	.362(**)	.081	.290 (*)	.307 (*)	.066	.005	.344 (**)	.405 (**)	.277 (*)	.275 (*)	.434 (**)	
	Sig. (2-tailed)	.187	.153	.215	.126	.075	.005	.210	.004	.533	.022	.015	.613	.969	.006	.001	.029	.030	.000	
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
s19	Pearson Correlation	.416(**)	.517(**)	.385(**)	.129	.456(**)	.356(**)	.245	.328(**)	.355 (**)	.226	.393 (**)	.355 (**)	.139	.402 (**)	.648 (**)	.239	.275(*)	.641 (**)	
	Sig. (2-tailed)	.001	.000	.002	.318	.000	.005	.055	.009	.005	.077	.002	.005	.283	.001	.000	.062	.030	.000	
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
stotal	Pearson Correlation	.715(**)	.646(**)	.582(**)	.108	.604(**)	.594(**)	.575(**)	.614(**)	.355 (**)	.637 (**)	.572 (**)	.697 (**)	.478 (**)	.637 (**)	.766 (**)	.635 (**)	.434(**)	.641 (**)	1
	Sig. (2-tailed)	.000	.000	.000	.403	.000	.000	.000	.000	.005	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

a14	Pearson Correlation	.099	.049	.239	.296(*)	.535(**)	.102	.259(*)	.088	-.051	1	.372(**)	.262(*)	.544(**)
	Sig. (2-tailed)	.443	.708	.061	.019	.000	.429	.042	.494	.693		.003	.040	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62
a15	Pearson Correlation	.134	.181	-.042	.617(**)	.270(*)	.113	.151	.209	-.070	.372(**)	1	.399(**)	.515(**)
	Sig. (2-tailed)	.297	.158	.743	.000	.034	.380	.242	.102	.590	.003		.001	.000
	N	62	62	62	62	62	62	62	62	62	62	62	62	62
a16	Pearson Correlation	.241	.363(**)	.122	.247	.102	.188	.004	.177	.045	.262(*)	.399(**)	1	.252
	Sig. (2-tailed)	.059	.004	.344	.052	.432	.144	.976	.169	.730	.040	.001		.048
	N	62	62	62	62	62	62	62	62	62	62	62	62	62
atot	Pearson Correlation	.591(**)	.325(*)	.615(**)	.535(**)	.619(**)	.455(**)	.568(**)	.662(**)	.413(**)	.544(**)	.515(**)	.252	1
	Sig. (2-tailed)	.000	.010	.000	.000	.000	.000	.000	.000	.001	.000	.000	.048	
	N	62	62	62	62	62	62	62	62	62	62	62	62	62

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Appendix c5

Correlations for teacher retention

		rt1	rt2	rt3	rt4	rt5	rt6	rt7	rt8	rt9	rt10	rttotal
rt1	Pearson Correlation	1	.358(**)	.301(*)	.427(**)	.492(**)	.224	-.124	.082	.344(**)	-.212	.543(**)
	Sig. (2-tailed)		.004	.017	.001	.000	.081	.335	.528	.006	.098	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt2	Pearson Correlation	.358(**)	1	.299(*)	.282(*)	.423(**)	.353(**)	-.115	.060	.185	-.139	.475(**)
	Sig. (2-tailed)	.004		.018	.027	.001	.005	.372	.641	.149	.280	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt3	Pearson Correlation	.301(*)	.299(*)	1	.239	.210	.272(*)	.030	.258(*)	.547(**)	-.010	.568(**)
	Sig. (2-tailed)	.017	.018		.061	.102	.032	.815	.043	.000	.941	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt4	Pearson Correlation	.427(**)	.282(*)	.239	1	.649(**)	.586(**)	-.155	.498(**)	.307(*)	-.040	.752(**)

	Sig. (2-tailed)	.001	.027	.061		.000	.000	.229	.000	.015	.759	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt5	Pearson Correlation	.492(**)	.423(**)	.210	.649(**)	1	.655(**)	-.229	.362(**)	.420(**)	.129	.784(**)
	Sig. (2-tailed)	.000	.001	.102	.000		.000	.074	.004	.001	.319	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt6	Pearson Correlation	.224	.353(**)	.272(*)	.586(**)	.655(**)	1	.104	.521(**)	.470(**)	.066	.793(**)
	Sig. (2-tailed)	.081	.005	.032	.000	.000		.420	.000	.000	.609	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt7	Pearson Correlation	-.124	-.115	.030	-.155	-.229	.104	1	.002	.141	-.124	.043
	Sig. (2-tailed)	.335	.372	.815	.229	.074	.420		.985	.276	.338	.738
	N	62	62	62	62	62	62	62	62	62	62	62
rt8	Pearson Correlation	.082	.060	.258(*)	.498(**)	.362(**)	.521(**)	.002	1	.191	.044	.580(**)
	Sig. (2-tailed)	.528	.641	.043	.000	.004	.000	.985		.136	.735	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt9	Pearson Correlation	.344(**)	.185	.547(**)	.307(*)	.420(**)	.470(**)	.141	.191	1	-.040	.657(**)
	Sig. (2-tailed)	.006	.149	.000	.015	.001	.000	.276	.136		.757	.000
	N	62	62	62	62	62	62	62	62	62	62	62
rt10	Pearson Correlation	-.212	-.139	-.010	-.040	.129	.056	-.124	.044	-.040	1	.142
	Sig. (2-tailed)	.098	.280	.941	.759	.319	.609	.338	.735	.757		.271
	N	62	62	62	62	62	62	62	62	62	62	62
rttotal	Pearson Correlation	.543(**)	.475(**)	.568(**)	.752(**)	.784(**)	.793(**)	.043	.580(**)	.657(**)	.142	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.738	.000	.000	.271	
	N	62	62	62	62	62	62	62	62	62	62	62

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Declaration

I confirm that this thesis is my original work and that all sources of material used for the thesis have been dully acknowledged.

Name Dawit Tesfaye

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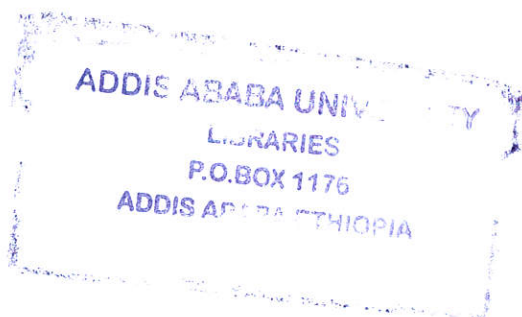
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This thesis has been submitted for examination with my approval as university advisor.

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**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**THE STATUS OF PREPARATION, AVAILABILITY AND
UTILIZATION OF TEACHING MATERIALS IN UPPER
PRIMARY SCHOOLS BIOLOGY TEACHING: THE CASE OF
NORTH GONDAR ZONE, AMHARA**

REGIONAL STATE

BY



HAILAY GEBRESLASSIE

**MAY, 2011
ADDIS ABABA**

**The Status of Preparation, Availability and Utilization of
Teaching Materials in Upper Primary Schools Biology
Teaching: The Case of North Gondar Zone , Amhara
Regional State**

By

Hailay Gebreslassie

**A Thesis Submitted to the School of Graduate Studies of Addis
Ababa University in Partial Fulfillment of the Requirements for the
Degree of Master of Arts in Curriculum and Instruction**

May, 2011

Addis Ababa

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

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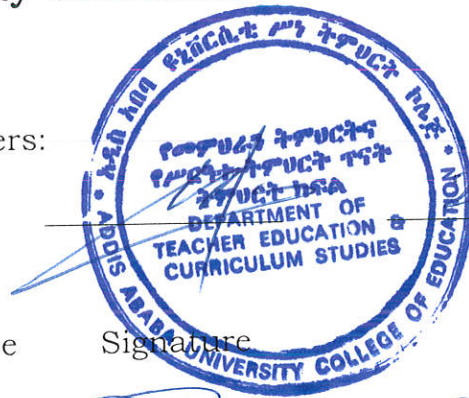
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Acronyms

AREB	= Amhara Regional Education Bureau
AUBIMs	= Availability and Utilization of Biology Instructional Materials
BIMs	= Biology Instructional Materials
IMs	= Instructional Materials
MOE	= Ministry of Education
NETP	= New Education and Training Policy of Ethiopians
SPCs	= School Pedagogical Centers
TGE	= Transitional Government of Ethiopia
UBIMs	= Utilization of Biology Instructional Materials
UNESCO	= United Nations Educational, Scientific and Cultural Organizations

Abstract

The purpose of this study was to assess the status of preparation; availability and utilization of instructional materials in upper primary schools of North Gonder Zone. In order to carry out this study the study employed descriptive survey design. The study was conducted in randomly selected nine upper primary schools from three woredas in North Gonder Zone of Amhara Regional State. For this study woredas were identified using purposive sampling techniques. The source of data for this study were grade seven and eight biology syllabus, biology teachers, students, school directors, school pedagogical coordinators and school pedagogical centers. All biology teachers, SPC coordinators and directors from selected schools participated as source of data by available sampling technique. To select respondent students stratified sampling procedure and systematic random sampling technique was used. Accordingly 97 grade seven and 83 grade eight students were selected. To gather data from the respondents, questionnaire for teachers and students were used. To validate the data interview questions to directors and to SPC coordinators and also SPC observation were used. The data collected were analyzed using frequency counts and percentages and the qualitative data obtained were used to triangulate with quantitative data. Finding of the study indicates that the sample schools had a school pedagogical center. Majority of biology teachers did not frequently prepare and utilize instructional materials in their lessons. Moreover, there was very low support by school directors to the school pedagogical center. Due to insufficient budget, lack of skilled coordinators and lack of guide materials school pedagogical centers contributed less in supporting biology teaching. This study recommends that the concerned bodies should give emphasis to make learning more concrete, meaningful, dynamic, creative and problem solving by integrating adequate IMs in the teaching learning process.

CHAPTER ONE

Introduction

1.1 Back Ground of the Study

In the modern society, education is increasingly viewed as the primary means of solving social, economic and political problems. Education is the most potent factor that significantly changes the life of an individual and empowers to contribute in the national development. It is the engine that largely drives the economic development through out the world as well as facilitates personal success at all times (Samuel, 2002).

The availability and utilization of Biology instructional materials is one of the factors that ensure quality education which is the basis for sustainable development. In line with this, UNESCO (1962) document indicated the usefulness of instructional materials in the teaching – learning process by considering Biology instructional material as a facilitator of the learning of abstract concepts and ideas, help to broaden students' knowledge, increase their level of understanding, to stimulate and motivate learners as well as discourage rote- learning. No one disputes the role and function of instructional material in enhancing the quality of education (Amare, 1999).

Instructional materials have different names such as instructional technology, instructional media, audio visual materials, teaching materials and for a long time, they have been distinctly known as teaching aids, a concept squarely tied to a teacher centered model (Amare, 1999). According to Amare (1999) instructional materials relate to all forms of materials with which students and teachers interact for the purpose of learning and teaching. He further pointed out that instructional materials are the instruments with which a teacher teach and from which students learn. The materials can be concrete including

models, specimen simulators, objects –those that allow physical involvement of learner; or abstract – those that allow imaginative involvement of learners with a minimum effect of physical involvement or sensory involvement (learning with written or spoken words). It is argued that instructional materials provide the learner with a wide variety of experiences such as: doing, drawing, reading, listening, observation, sketching, speaking, discussing, completing, reporting, researching, thinking and role playing.

In the education and training policy of Ethiopia (TGE, 1994), under the heading of educational support inputs, it has been stated “in order to promote the quality, relevant and expansion of education, due attention will be given to the supply, distribution and utilization of educational material, educational technology and facilities. This means the policy has recognized the importance of teaching materials as one part of the effort towards upgrading quality of education. Moreover according to the Amhara Education Bureau, the Education Sector Development Program (ESDP) III strategic plan (2005/06 – 2009/10) state that the over all objective of the text book and instructional materials component is to improve the quality and relevance of education in the region (AREB, 2006). This could be possible by increasing the quality of text books and instructional materials, upgrading of school library and laboratory facilities, developing efficient and effective text book and instructional material production distribution and utilization strategy.

The traditional method of learning which mainly relies on the experience of listening and reading limits the development of other experiences which in turn, are instrumental to further learning (Amare, 1999). A student centered approach, which is gaining currency, is unimaginable without the optimum use of instructional materials (Amare, 1998). The speaking – listening approach, the most common teaching method in Ethiopian schools inhibits active learning and encourages passive

learning, a syndrome that robs all feelings of students responsibility for their learning. It is argued that students' responsibility is positively correlated with the amount of invested mental effort, a prerequisite for learning. It goes with out saying that the higher the degree of responsibility a person feels the higher the performance in the area in which the person is responsible – in learning or in all other activities (Amare, 1998)

Dale (1969) has argued that instructional materials create access to the world of reality, enhancing understanding and enriching experiences. They also assist in making relationships between the real world and the symbolic world, what is pedagogically known as understanding. Words (written or spoken) lack the necessary dimensions to represent reality. Iconic or inactive representations, however, are very close to reality creating the access to it. It is a process of bringing the world in to the classroom and the classroom in to the world. Instructional materials are also known in compelling and retaining student attention (Heinich, etal, 1996). They add variety to the learning process inducing greater attention and understanding (Brown, 1985). Aggerwal (1996) also stated that instructional materials provide significant gain in information learning, retention and recalls, thinking and reasoning activity, interest, imagination, better assimilation and personal growth.

Regarding the availability of instructional materials Heinich etal, (1996) stated that “the majority of instructional materials used by teachers are ready made and available from the school, district or other easily accessible sources”.

In addition, Heinich etal, (1996) states that teachers have at least three options in obtaining instructional materials. Firstly, they use materials that are readily available in the school pedagogical center; similarly, teachers and students can have access to the local community resources by organizing field trips or by inviting resource persons to the class room

to share their experiences. Secondly, when the materials obtained are only relevant to the subject of study, then they can be modified or adapted by the teachers to meet their specific objectives. If both of the above options do not work, then the third alternative may be to produce new materials. This can be done by teachers and school pedagogical center personnel who have the main responsibility in material production using locally available resources.

Proper application of teaching materials, along with the other instructional elements, is indicated to be the means through which teachers appeal to learners understanding and active participation (Romiszowski, 1974).

The principal requirements of today's education are practice oriented, day to day use of classroom knowledge and maximization of independent learning (Arrends 1994, Hall, 1995). Therefore, educators like Heinich et.al (1996) and Wakshun (2001) have strongly advocated the utilization of instructional materials in the class room for successful achievement of instructional objectives and the development of learners mental thought. Hence, in the modern paradigm of teaching, the utilization of instructional materials seems to be necessary due to a rapid increase in the sources of information and the variety, quantity and quality of instructional materials (media). This invites students to learn from different media rather than limiting themselves to the teachers and class room text books solely (Silberman, 1996: Amera, 2003).

1.2 Statement of the Problem

According to the education and training policy of Ethiopia (TGE, 1994), one of the aims of education is to strengthen the individuals and society's problem solving capacity, ability and culture at all levels of education. In addition, education should play a key role in minimizing the gap between theory and practice. In this regard, the roles of instructional materials

are very high in making learning more concrete and relevant. And instructional materials help to stimulate the interest of students, help them form correct concepts, develop their power of observation, extend their power of vision and economize their time and energy in learning.

For this matter, teachers in all levels in general and those of primary schools in particular are expected to prepare and use instructional materials to facilitate the teaching learning process. Many researchers' findings indicate that the quality of education in different regions of the country was affected by teachers lack of attitude towards instructional materials, inadequate training of teachers and school pedagogical center heads, shortage of budget and financial capacity of the school, lack of support from NGO's to the schools, absence of guide materials for school pedagogical centers and the inadequate provision of instructional materials from Zone and woreda educational support (Akalu 2001, Amare 1999, Brhane 1999). All these research works are done by considering the aforementioned common issues. However, based on the researcher's knowledge on this study area along with the opportunity he got in teaching of secondary school, there are other constraints which were not raised by the previous researchers that might affect in preparation and utilization instructional materials by teachers. This includes, unavailability, types and sources of instructional materials, self - inspiration of the teachers and commitment in preparing and using instructional materials, lack of support from primary school's coordinators to increase teachers' participation in preparing and using instructional materials and function of school pedagogical centers. Hence, the researcher has a conviction that the study will contribute in filling the existing gap.

1.3 Objective of the Study

1.3.1 General Objective

The General objective of this study was to assess the status of preparation, availability, and utilization of instructional material in upper primary schools of North Gonder Zone, Amhara regional state.

1.3.2 Specific Objective

In line with the above general objective, the specific objective of the study includes:

1. To describe the extent to which biology instructional materials are available in upper primary schools.
2. To evaluate whether biology teachers use instructional material in teaching.
3. Examine the degree to which biology teachers and students prepare instructional materials.
4. To examine the biology teachers and students attitude towards preparation, availability and utilization of instructional materials
5. To identify major factors affect preparation, availability and utilization of Biology instructional materials.

1.4 Research Questions

Therefore, to attain the goal of the study, the researcher has the following research questions:

1. To what extent biology instructional materials are available in upper primary schools?
2. How often do biology teachers use instructional materials?
3. Do biology teachers and students produce teaching materials for biology teaching?

4. Do biology teachers and students have favorable attitude towards preparation and utilization of instructional materials?
5. What factors do affect the availability, preparation and utilization of instructional materials?

1.5 Significance of the Study

The study is significant for the reason that it focuses on the preparation, availability, and utilization of instructional materials has not given much attention in all levels of schools in general and primary schools in particular. Hence it will help for the compilation of information on the status and degree of the problem in primary schools.

It gives some insight about attitude and interest of teachers and students towards IMs. It may provide suggestions to concerned officials, teachers, school directors, school pedagogical centers coordinators and the community at large, for finding out remedies to those actual problems affecting the preparation and utilization of instructional materials. The study may also contribute knowledge on the study of problems affecting the preparation and utilization of instructional materials in Ethiopian primary schools and can serve as a source of information for further and comprehensive nation wide study.

1.6 Delimitation of the Study

The study was conducted in North Gonder zone upper primary schools of Amhara region. To be manageable nine upper primary schools of three woredas were selected so that it would be delimited biology subject to only grade 7 and 8 of upper primary schools.

1.7 Limitation of the Study

The introduction of new modular type of masters degree program starting from the very beginning at the Addis Ababa university at large, at the school of Graduate studies particularly have created time pressure as

later was budgeted short periods of time for the research work which is unusual and initial program to the university. Besides, as the student researcher, was being in class for one course and hand-in-hand starting the research work, he found it difficult.

1.8 Definition of Operational Terms

Attitude: refers to feelings of likes or dislikes of Biology teachers and students towards Biology instructional materials.

Instructional materials: refers to all forms of materials with which students and teachers interact for the purpose of teaching learning process.

Utilization: refers to the extent to which biology teachers and students use Biology instructional materials in the teaching learning process

Factor: a cause or determiner that underlines and influences performance

Preparation: is a very significant part of IMs work in a pedagogical center. And it means for our case producing IMs for effective teaching learning of biology.

Availability: refers to the presence of IMs in the pedagogical center of the upper primary schools and the accessibility of IMs for biology teachers and students.

Upper Primary school: an educational institution that gives service of teaching – learning process for the upper grades (7-8) of the 2nd cycle of the primary school.

1.9 Organization of the Study

The study was organized in to five chapters. The first chapter contains the back ground of the study, statement of the problems, objectives of the study, significance of the study, delimitation of the study, organization of the study and definition of operational terms: Chapter

two deals the review of related literature: Chapter three deals with research methodology and design: Chapter four presents data analysis and interpretation. The final chapter contains summary of findings, conclusion and recommendations of the study. At the end, relevant information that re used in this study have been annexed in the appendices.

CHAPTER TWO

2. Review of the Related Literatures

2.1 Definition of Instructional Materials

According to Heinich, et.al (1996), there is still a wide variation in the terminology used by educators in relation to the term instructional materials. The most common terms include audio visual materials, instructional media, instructional materials, instructional technology, teaching materials, learning resources, educational communication and teaching aids (Amare 1999). The concept of instructional materials, though expressed in different words by different educators, denotes the same meaning in the literature.

Instructional materials have been defined in different ways. The term refers to all materials that are used by the teacher and students for the purpose of teaching and learning. Joof (1995) cited in Medayese (2010), explaine that “the concept of instructional materials have gone through several evolutionary stages from the simple aids, instructional technology, media to communication and educational technology”. This however, tells us that instructional materials are not just objects or equipments used during the teaching-learning process, but those objects improvised by the teacher to make conceptual abstraction more concrete and practical to the learners. Instructional materials are the relevant materials utilized by a teacher during instructional process for the purpose of making the contents of the instruction more practical and less vague. In this connection, Orakwe states the following.

“... Instructional media today are very gradually finding their ways in to the classrooms where modern and versatile teachers are exploring new ways of transferring learning to the younger generation the use of prints, visual and audios or various combination of these trios make up all we have in instructional media. Instructional media therefore are the information

dissemination devices made up of prints, radio picture including films, movies, photographs, etc, used in the class room for an easy transfer of learning” (Orakwe, 2000).

Instructional materials are all sorts of physical means used to carry instructional contents, that means knowledge, skills and attitudes from various sources to the students’ and they aim at realizing a set of instructional objectives (Heinich etal, 1996). According to Locatis and Atkinson (1984), instructional materials are the means for transmitting or delivering messages. Instructional media include such things as printed materials, display materials like teacher made diagrams, charts and maps, models and specimens, projected materials, audio materials like radio programs and audio tapes; combination of sound and films like TV broad, casts video tapes and motion pictures; and programmed materials like the computer (Locatis and Atkinson, 1984).

Instructional materials are required by all teachers, for effective teaching learning process and to realize various objectives of teaching (Yadave, 1995). They relate to all forms of materials with which students and teachers interact for the purpose teaching and learning. To this point it is stated in Amare (1999) as: “Instructional materials are instruments with which a teacher teachers and from which students learn”

Brown (1969) contends the view that instructional materials are devices which present a body of information and largely self supporting rather than supplementary in teaching and learning process (Brown, 1969). According to Schram (1977), instructional materials are nothing but are the media of communication used for teaching and learning. Burton, Good, Dale, Kinder, James Mekown and Roberts all cited in Aggrawal (1996) respectively define instructional materials in five manners. Instructional materials are those sensory objects or images which initiate or stimulate and reinforce learning. And secondly, IMs are those aids which help in completing the triangular process of learning i.e. motivation, classification and stimulation. IMs are those device by the

use of which communication of ideas between persons and groups in various teaching learning is helped and they can be used to make the learning experience more concrete, more realistic and more dynamic are the third and fourth definitions. Finally, the fifth one is, IMs are supplementary devices by which the teacher through the utilization of more than one sensory channel is able to clarify, establish and correlate concepts; interpretations and appreciations

In general, the above definition indicates that IMs are very essential to improve the quality of primary education. The concept of each definition indicates that IMs give life to the teaching-learning process. In other words, concrete, vivid, dynamic, effective and meaning full learning can be achieved or gained by incorporating and using IMs in the teaching-learning process.

2.2 Classification/ Types of Instructional Materials

Different types of instructional materials are available to be used in teaching any subject effectively. However, it is not all topics that require the same type and quantity of materials. As far as educational instructions is concerned, these materials could be purchased, locally made or improvised, imported from other countries when necessary for the effective instructional delivery (Medayese, 2010).

Notable criteria abound in literature on the taxonomical bases of instructional media. Such criteria for classifying instructional materials include the degree of expertise /technical skills needed for production, nature of materials, physiological parameter or sensory modality, whether or not projection is involved, place the material is produced, and miscellaneous characteristics.

Different educators have tried to classify instructional materials in to different groups. For instance, Yadave (1995), are classified audio aids, visual aids, audio visual aids and activity aids. Audio aids, in this type of

aids fall the instructional materials like radio, tape recorder etc. This type of aids help the process of learning as they help the learner to acquire knowledge through his auditory senses; visual aids, this type of aids are very common visual aids which include charts, pictures, models, film strips, black boards, bulleting boards and magnetic boards. These materials help the learner to acquire the learning experiences through his visual senses; audio visual aids, these are sensory aids which help to make teaching concrete, effective and interesting. Examples of this type of instructional materials are television, motion picture, video film, living objects etc. By use of these aids we provide the learner an opportunity to utilize both his auditory and visual senses for gaining the desired learning experiences; and Activity aids which include excursions and visits, exhibitions experimentation in the laboratory and workshop.

Besides, for Schram (1977), instructional materials are categorized in to big media and little media. Big media include computer, television, and sound films. Little media on the other include radio, film strips, graphic, audio cassettes and various visuals. Moreover, Amare (1999:53) also classifies instructional materials in to concrete and abstract. According to him, concrete instructional materials allow physical involvement of learners and abstract ones allow imaginative involvement of learners with a minimum effect of physical involvement or sensory involvement. For instance, concrete instructional materials include real objects, models, specimens, simulators etc; and abstract instructional materials include written or spoken words (Ibid).

However, Aggrawal, (1996), classified instructional materials as audio, visual and audio visual materials. Audio materials include radio, language laboratories, and tape and disc recordings. These enable learners to improve their listening skills. In this case Amare (1999:54) indicated that IMs provide the learners with a wide verity of experiences,

for instances, listening, reading and drawing. Among these, the listening skill can be achieved by employing audio materials.

The other type (visual IMs) provide a concrete reference for ideas: they can motivate students by attracting them and holding their attention and generating emotional responses, simplify ideas that are difficult to understand and give learners a chance to comprehend visually what they might miss verbally (Heinich, 1996). Visual materials include charts, posters, photographs, pictures, drawings, models, maps, flash cards, cartoons, graphs, slides, exhibits, display boards, film strips, real objects and specimens.

In addition to audio and visual materials, the third type of IMs are audio visual materials. These include demonstration films, printed materials with recorded sound, television and video tapes. These are materials which involve both sight and hearing senses.

According to Sharma (2005:63) by using television in the teaching-learning process, students can learn about current events, scientific advance, be exposed to dramatic and musical performance, etc. It can also carry instruction to different class rooms.

In general, as observed from the aforementioned ideas, the three types of IMs obviously involve different sense by presenting stimuli that are auditory, visual and audio visual. Thus, teachers can use the materials which have relation to the educational objectives and contents this enables them achieve the intended educational objective.

2.3 Characteristics of Good Instructional Materials

Some of the major characteristics of good instructional materials are being meaningful and purposeful, accurate in every respect, simple and cheap. They should also be improvised, large enough to be properly seen by the students for whom they are meant, up-to-date and easily portable.

Furthermore, they should be according to the mental level of the students and motivate the learners (Aggrawal, 1996).

2.4 Importance of Instructional Materials

Instructional materials assist teachers to facilitate the way to achieve the expected goals of teaching, and improve the results of instruction. Instructional materials make the teaching learning process interesting and more meaningful as we are required to make the use of our senses.

As yadave (1995)elaborates the importance of instructional materials. Accordingly, teacher can win the interest and attention of the pupils by making use of instructional materials. IMs are effective motivating agents and help to bring clarity to the subject matter. They save time and energy of the students and teachers and make learning more effective and durable. Proper use of instructional materials helps to develop in the pupils, scientific attitudes and provide them with training in scientific method. They provide permanent and effective learning.

Heinich, et.al (1996), on their part assert that the main value of instructional materials is to improve the balance between concrete and abstract learning experience. Similarly, Medyasse (2010) points out that every individual has the tendency to forget, proper use of instructional materials helps to retain more concept permanently. According to him, students can learn better when they are motivated properly through different instructional materials and instructional materials develop the proper image when the students see, hear, taste and smell properly. In addition, Instructional materials create the environment of interest for the students and provide direct experience to the students.

The importance of instructional materials can be summarized as under in the words of Edgar Dale (1969) “because audio visual materials supply concrete basis for conceptual thinking, they give rise to meaningful concepts enriched by meaningful association; hence they offer the best antidote for the disease of verbalism”.

Instructional materials help the student to relate the class room instruction with the outside world. In addition to these, Amare (1999,) pointed that instructional materials provide the learner with many experiences such as doing, drawing, reading, observing, sketching, computing, discussing and speaking. This indicates that instructional materials make the students to be actively involved in learning rather than being passive learners.

On summarizing the importance of instructional materials in teaching learning process, Dale, cited in Amare (1999), has indicated that instructional materials, when properly designed and applied in the teaching-learning process, can have the following pedagogical advantages instructional materials are, stimulate the learners interest, facilitate active learning, encourage creative thinking and effect student skill development, over come the limitations of time and space, concretize abstract experience and create the access to invisible realities are also advantages of pedagogical IMs. Besides, teach and entertain, relate theory with practice make learning more functional by increasing retention and encourage responsibility.

Aggawal (1996) states that instructional materials provide significant gains in informational learning retention and recall, thinking and reasoning, activity, interest, imagination, better assimilation and personal growth and development.

John M. in Aggawal (1996), also enumerates five main reasons to underscore and justify the use of instructional materials for better

teaching and learning is to teach something more thoroughly so that the children may retain the subject matter taught and to teach quickly, this will result in covering more ground in a given time and thus gives a better chance of “getting through the syllabus”. More over, it is as a means of integrating a number of separate pieces or work already learned by other means and as a means of bringing with experience and understanding of learners something which is new to them. This often includes the presentation to learners, in a simplified form, of matters which can be appreciated fully only by adults.

As Bozimo (2002), states the importance of instructional materials lies on the fact that abstract ideas, data or information expressed are translated or reflected in forms of instructional materials and resources. The implication of using instructional materials can be summarized: they can be used to explain our points, reduce abstraction, create reality and simplify events and use of sense organs in attempt to learn, you must appeal to the sense organs of sight, hearing, touch, feeling and tasting systematically designed materials provide you with this opportunity.

Interest arousing departure from boring and unusual mode of presentation creates attention and generates interest, encourages active participation, their use can lead to the beginning of learners’ development of exploratory and inquisitive nature of the child and pace learning you can use them to meet the learner’s individual learning capability that is moving at their own pace too(Ibid).

2.5 Biology Instruction and Instructional Materials

The biological science curriculum study (BSCS) asserts that students come to science classroom with many misconceptions to correct for proper scientific learning to progress. Schools should base instructional materials on the fundamental scientific concepts and principles, which serve align students understanding with current knowledge and teach

them to monitor and control their own thought processes to facilitate learning (BSCS, 1973).

According to Biological science studies (BSCS, 1973), students of teachers who most closely followed their 5E instructional model engage, explore, explain, elaborate and evaluate achieved a high rate at success. Biology teacher who take the time to provide instructional materials and options that take in to account the different ways of receive and express knowledge, are more likely to their students succeed. Biology class room should be providing a variety of a video, visual and print in put methods depending on students need. Allow students the flexibility to communicate their knowledge in ways that displays their true learning.

Bolic (2003) identified a good relationship between effective teaching and using of instructional materials. He argued that "... while some educators have been fascinated by the potential of instructional materials to enhance teaching and learning, teachers lagged behind in using instructional materials during teaching and learning.

Instructional materials are integral components of teaching learning situations; it is not just to supplement learning but to complement its process. It then shows that, if there must be an effective teaching learning activity, utilization of instructional materials will be necessary (Ibid).

For the successful teaching of any biological lesson, the selection and use of appropriate instructional materials is one of the basic requirements of the teacher. Biology lessons deal with all living things, collection of facts and human life and the relation between them. And all the biological phenomena and features can not be brought in to class rooms in their concrete form. Thus such facts and information can be brought to the attention of learners, through their reduced and simplified representation in terms of models, charts, living specimens, pictures,

diagrams as well as field observation Yadav(1995). The most obvious reason for the use of instructional materials in teaching biology, is that they are the means through which students increase their understanding in the class rooms.

Yadav (1995), pointed out that; the teaching materials are required by a biology teacher, like teachers of other subjects, for effective teaching of the subject and to realize various objectives of teaching biology. Instructional materials help the teacher to communicate with his students in a more desirable and effective way. Effective communication requires a mastery of managerial skills of handling various instructional materials like audio aids, visual aids, audio visual aids, and activity aids.

Properly selected and utilized instructional materials help the biology teacher to communicate ideas, build students curiosity, reinforce experience and to make Biology teaching learning meaningful and pleasant (Ibid)

In general speaking, instructional materials promote students mental activity and create abilities, influence the effectiveness of teacher and students activity and also help students to keep the most important ideas of certain subject matter to memory.

Table 2.1 IMS Suggested by Grade 7 and 8 Syllabuses

Grade	Unit	Suggested IMS
7	1	Chart on branches of biology, bulletin board articles from news papers and magazines chart of a list of values,
	2	Microscope, charts on parts of microscopes glass slides, cover, slips charts, models, onion Iodine charts of animal and plant cells, charts of different types of tissues of plant and animals, charts or models of organs of plants and animals preserved specimens of organs of plants and animals
	3	Prepared slides of chlorella and spirogyra, paramecia culture, prepared slide, microscope, prepared slide of euglena, chart of the different types of bacteria, books of journals with related articles and charts
	4	Quadrates, aquarium, terrarium, charts of food chain, food web and pyramid of numbers
	5	Charts of green algae and other algae, microscope, prepared slides of volvox, spirogyra and other algae, Algae suspension from pond, charts of fungi, charts of mosses, preserved specimens of mushrooms, prepared slides of yeast and molds, preserved specimens of lichens collected moss specimens, fern plant grown in pot, preserved fern specimens, chart of fern
	6	Chart of house fly, preserved housefly specimens chart of mosquito, preserved mosquito specimens readers or articles on locust invasion, chart and preserved specimens of some social insects, chart of honey bee, preserved specimens of honey bee, charts and samples of both traditional and modern beehives
	7	Chart of the human skeleton, model of skeleton, preserved bones of mammals (sheep, cow) posters, magazines, charts showing smooth and stripped muscles, chart of food stuffs, starch powder, iodine solution, glucose, benedicts solution million's reagent test tubes, oil, paper, charts of colorific values of foods charts of age of a person VS amount of food needed, chart of deficiency diseases, chart of the digestive system model of the digestive system, charts of respiratory system of humans, lung model, fresh lungs of slaughtered sheep or goat, preserved lungs of sheep or goat, fresh heart of sheep or cow for dissection, chart or model of heart, chart of circulations process, statistical data on circulatory health, reading materials on circulation and health

Grade	Unit	Suggested IMS
8	1	Eye model, eye specimens from cattle, eye heart, a diagram for discerning the blind spot ear model, chart of human ear, charts showing taste buds and taste areas of the tongue, sweet substances like sugar, lemon, and vinegar, chart of olfactory cells, charts of skins that shows the receipts, charts of neurons brain, spinal cord, model of brain, articles from magazines, news paper, chart of the endocrine system charts of the male and female reproductive system video films, video films on HIV/AIDS
	2	Specimens of plants affected by insects and worms, prepared microscope slides that show bacteria and fungi's charts of the life cycles of these parasites, preserved specimens of ascaris and tapeworm, prepared slide of amoeba, health posters, video films, meat, fruits, vegetable, salt vinegar autoclave, small sand filter
	3	Specimens from angiosperms, specimens from flowering plants hand lens, charts that show cross sections of stems, charts and models of a flower, flower specimens, Hand lens, seed specimen's, preserved of seeds that show the different stages of germination, specimens of storage organs, charts of storage organs
	4	Charts that show the process of photo synthesis, seedlings growing in pots, Herbaceous plants such as bean or pea, microscope slides, cover slips, potted plant, dark paper, paper clips iodine solution, alcohol, beaker, test tubes, burners
	5	Pictures, specimens of types of soil, specimens from desert plants, pictures of desert animals, chart of the water cycle booklets, posters, photographs, articles from periodicals and films show (if available) on pollution and population explosion
	6	Scheme or chart that shows classification by Aristotle, charts of models of animals that show homologous structures collected and preserved specimens of plants and animals

Source Grade 7 and 8 syllabuses

2.6 Principles for Effective use of Instructional Materials

Instructional materials should be used properly to make teaching more effective. Teaching can become more effective if such aids are used widely, but the use of such aids can not provide a guarantee of good teaching. Yadav(1995), proposes the following points' as important for proper use of instructional materials. Accordingly, instructional materials should be woven with the class room teaching and these materials should be used only to supplement whilst making use of any instructional material an effort be made that instructional materials being used in any class are in conformity with the intellectual level of students and harmonized with the previous experience of the students.

In addition, the teacher should use an instructional material only he/she is quite sure about handling a specific instructional material. Instructional materials should be closely related to pupils' experience. (Yadav, 1995)

According to Aggrawal (1994,) principles in the use of instructional materials are arranged in the following way:

2.6.1. Principle of Selection:

Instructional materials prove effective only when they suit the teaching objectives and unique characteristics of the special group of learners. According to Aggrawal (1996), the following points may be kept in view in this regard:

- They should suit the age level, grade level and other characteristics of the learner.
- They should have specific educational value besides being interesting and motivating.

- They should be the true representation of the real things
- They should help in the realization of desired learning out comes.

2.6.2 Principle of Preparation:

This principle requires the following points:

- As far as possible, locally available materials should be used in the preparation of instructional material.
- The teachers should receive some training in the preparation of instructional materials.
- The teachers themselves should prepare some of the materials.
- Students may be associated in the preparation of instructional materials.

2.6.3. Principle of Physical Control

This principle relates to the arrangement of keeping instructional materials safely and also facilitates their rending to the teachers for use

2.6.4. Principle of Proper Presentation

This principle implies the following points:

- Teachers should carefully visualize the use of instructional materials before their actual presentation
- They should fully acquaint themselves with the use and manipulation of the instructional materials to be shown in the class room
- Adequate care should be taken to handle an aid in such a way as no damage is done to it

- The instructional material should be displayed properly so that all the students are able to see it, observe it and derive maximum benefit out of it
- As far as possible, distraction of all kinds should be eliminated so that full attention may be paid to the aids

2.6.5. Principle of Response

This principle demands that the teachers guide the students to respond actively to the instructional materials (audio visual) stimuli so that they derive the maximum benefit in learning.

2.6.6. Principle of Evaluation.

This principle stipulates that there should be continuous evaluation of both the instructional materials and accompanying techniques in the light of the realization of the desired objectives.

2.7 Availability of Instructional Materials

Regarding the availability of instructional materials Heinich et al, (1996, 45-46) stated that “the majority of instructional materials used by teachers are ready made and available from the school, district or other easily accessible sources”.

In addition, Heinich et al, (1996) states that teachers have at least three options in obtaining instructional materials. Firstly, they use materials that are readily available in the school pedagogical center; similarly, teachers and students can have access to the local community resources by organizing field trips or by inviting resource persons to the class room to share their experiences. Secondly, when the materials obtained are only partly relevant to the subject of study, then they can be modified or adapted by the teachers to meet their specific objectives. If both of the above options do not work, then the third alternative may be to produce

new materials. This can be done by teachers and school pedagogical center personnel who have the main responsibility on material production using locally available resources.

In the Ethiopian context, Amare (1999) suggested that most instructional materials need to be prepared by teachers, students and media personnel. In general, the availability of suitable materials, their appropriate selection, preparation and utilization is extremely important to have success in teaching learning process.

2.7.1 Source of Instructional Materials

As different educators pointed out, IMS can be found in different sources. "In the first place, materials for learning can be found almost everywhere" (Clark and Star, 1996). There are local, state, national and international sources of free and in expensive materials.

As Heinich et al, (1996) indicated that, public libraries some times make video tapes, filmstrips and prints available. Different agencies of state and federal governments make IMS available in schools for the improvement of quality of education. In addition, the federal government is the main sources of free and in expensive materials. According to these scholars, the majority of IMs used by teachers and trainers are ready made and available from different sources: schools, pedagogical centers, school library districts, company collections and other easily accessible sources.

Thus primary schools in general and teachers in particular should pay attention to all these possible sources to find and collect the required instructional materials.

2.7.2 The Role of School Pedagogical Center

In schools of any level, instructional materials could be kept in pedagogical centers, laboratories, libraries, in the classrooms. According

to Amare (2000) these are resource centers that enrich the teaching – learning processes and above all that enhance student-learning. Availability and appropriate functioning of these centers to some extent suggests extending student opportunities for using them and improving their learning.

The term “pedagogical center” is used as the name of an institutional unit that coordinated a number of media related services for students and teachers. Other terms that relate to the pedagogical center are; learning resources center, instructional material center, educational media center and instructional resources center (Carlton and Erickson, 1968). In these centers, school pedagogical coordinators, teachers and students can produce, collect and preserve instructional materials for teaching learning process. Regarding this issue, Hany and Ulmer (1970) argued that if there are extensive media resources available in the schools, greater flexibility can be built in the teaching learning process in terms of providing independent learning; of allowing individual pupils to work on special projects. In addition to the above educators, Heinich etal (1996:18) pointed out those school pedagogical centers are special units with in a school where a wide variety of media are produce, housed, and distributed from.

From these educators, it is possible to understand that the only presence of pedagogical center in schools doesn't contribute a lot to initiate both teachers and students to improve the quality of students learning but school pedagogical center should be require adequate instructional materials, committed and qualified coordinators.

2.8 Preparation of Instructional Materials

According to Heinich etal (1996), teachers have at least three options in obtaining instructional materials chosen for lesson when the selected materials are readily available, then they would be adopted or used as

they are, and this will save much resources and hence should be teachers' first choice. In addition to this, the teacher and students can also have access to the local resources by organizing field trips or by inviting resource persons to the class room to share their experiences and expertise with the students. Paradoxically, when the materials obtained are only partly relevant to the subject of the study, then they can be modified or adapted to meet the specific objectives. If both of the options dose not work, then the third alternative may be to produce new materials.

To summarize, preparation of all types of instructional materials calls for both ingenuity and good judgment, students and teachers should always be alert to new possibilities in the preparation of instructional materials. Despite the fact that the wise of these aids, the teacher will gain security and the pupils will have greater and richer opportunities for learning.

2.9 Utilization of Instructional Materials

Instructional materials are required by Biology teachers, like teachers of others subjects, for the effective teaching of the subject and to realize various objectives of teaching Biology. Furthermore, instructional materials help the teacher to communicate with their students in more desirable and effective way. The utilization of instructional materials can bring an effective relationship between the real world and symbolic world (Clark 1983: Walklin, 1982). That is, they have the power to bring the outside world in to the classroom and the class room in to the outside world.

On the other hand, educators such as Romiszowski (1970) and Hopper (1971, assumed that the purpose of instructional materials was to supplement teachers activities. That is why it was referred to as teaching or instructional aid (Hopper, 1971). More recently, however, educators have recognized that instructional materials have a power to make the

learner active, creative, responsive and independent. This however, will be materialized only to the extent that the teachers are competent to use the teaching materials effectively and to discriminate wisely in their choice of science activity in a given situation.

The principal requirements of today's education are practice oriented, day to day use of classroom knowledge and maximization of independent learning (Arrends 1994, Hall, 1995). Therefore, educators like Heinich et.al (1996), Warkhun (2001) and Collins (1996) have strongly advocated the utilization of instructional materials in the class room for successful achievement of instructional objectives and the development of learners mental thought. Hence, in the modern paradigm of teaching, the utilization of instructional materials seems to be necessary due to a rapid increase in the sources of information and the variety, quantity and quality of instructional materials (media). This invites students to learn from different media rather than limiting themselves to the teachers and class room text books solely (silberman, 1996: Amera, 2003).

This implies that the introduction of fast and accurate instructional technologies have initiated good opportunity and access to utilize instructional materials efficiently and effectively.

In addition, due to the paradigm shift of the teaching learning process, the utilization of instructional materials has become critically important. Supporting this notion, Amare (2001), silberman (1996) and collins (1996) noted that currently there is a move from a teacher to student centered approach instruction. Amare (2000) further contended that "the present era is characterized by what is called the student centered model of education; an androgenic technique"

Teheranian et.al (1997 Cited in Amera (2008), a proper utilization of teaching materials has the potential to produce the best learning. This is because instructional materials have the qualities which predominantly

influence the sense of sight. They further noted the teaching materials promote students attention and interest, which may not be attained through the common “chalk and talk” type of teaching. Moreover, Dale (1969) pointed out that the critical and systematic utilization of IMS in the teaching learning process play a great role, and enables teachers to attain the ultimate goal of liberal education-the development of independent learner who needs less assistance from the teacher. This indicates that the proper use of instructional materials gives freedom to learners in their learning and helps them not to expect every thing from their teachers

According to Kinder (1989:59) the effective utilization of IMS increases the quality of education and enables teachers and students to achieve educational goals. The proper use of IMS gives great values in the teaching learning process (Aggrawal, 1996:154). However, on the contrary, inappropriate utilization of IMS can do more harms than good to the teaching learning activities (Betsate, 2000:36). He added that in appropriate utilization could take any of these forms: under use, or misuse of media these will eventually restrict students learning.

To sum up, the concept of the utilization of IMs can be summarized on these two ideas; the proper and inappropriate utilization of IMs. The proper use of IMs provides several advantages in teaching learning process: It improves quality of primary education by enhancing active learning approach, decreases the dependency of learners on their teachers and provides learners freedom in their learning, provides concrete and meaningful learning experiences by involving all senses of the learners, and enables both teachers and learners achieve educational goals and objectives. On other hand, the reverse may be true if IMs are not used properly by teachers and students.

2.10 Factors Affecting Preparation, Availability and Utilization of Instructional Materials

A number of researchers and educators noted different factors that influencing the preparation, availability, and utilization of IMs. These factors are discussed here under.

2.10.1. Teachers Professional Knowledge and Technical Know how

Since educational communication and technology is a fairly new area of importance in education especially in developing communities, it is a lightly technical field, and to understand how it can affect the instructional delivery. Firstly, one has to understand the operational functionality of the resource kits. As much as materials differ in terms of technical components, design and set up, they also differ in terms of functionality. Some are multi dimensional; capable of various functions such as giving logical out comes, and manipulating information Medyessa (2010) and Aggrawal(1996).

Without the teacher who is knowledgeable enough, instructional materials cannot create change and progress. Teachers knowledge have a great impact on the effective application of instructional materials, this is because the teacher uses need to understand the sequential presentation of instructional gadgets so as to suit the interests of the learners and it appropriateness with instructional tasks (Ema, 2006).

2.10.2 Environmental Factor

Part of the application of instructional materials process is the target population for whom the materials are to be used and the setting or vicinity where the learning should takes place, the degree of satisfaction

derived by children in respect to comfort ability of environment of that learning situation is a great deal.

2.10.3. Financial Constraints

This factor seems to be the handicap why most educational institutions are unable to acquire relevant teaching equipments and materials. It has also adversely affected the quantity and quality of materials and these products students and teachers will lack the opportunity to learn and use new techniques in the field. There are sophisticated instructional materials that can make learning easier and faster such as computer aided programs, but lack of funds has effects on its importation and use in schools. The unsatisfactory funding for teacher education programs stands as one of the major factors working against effective implementation of the program.

The consequence of the under funding of this sector are immediate; for example, it results in the inability to purchase instructional materials to effectively prepare pre-service teachers like computers, text books, laboratory equipments, audio visual aids, slides, video clips, enough chairs and desks in class rooms to keep students from having a stand to receive lectures to mention a few.

2.10.4. Time Constraints

Time, is also a serious problem or factors that impede the effective use of instructional materials in effective instructional delivery in the class, because in most cases the time, that is allotted for a subject on the time table might not be enough for the teachers to present his contents along side with effective use of the materials which will affect the whole some delivery of the content.

2.10.5. Poor Maintenance Culture

Materials available for the effective instructional delivery are poorly handled by both teachers and some school authority. Schools are affected by non availability of resource room for the proper keeping of both the locally manufactured and the commercially purchased instructional materials, there by limiting its use as at the time needed. Many of the teachers use materials occasionally with out the proper upkeep of the materials after used for the future reference.

CHAPTER THREE

3. Research Design and Methodology

3.1 Design of the Study

The purpose of this study was to assess the status of preparation availability and utilization of instructional materials in biology teaching in grade seven and eight primary schools of some selected woredas in North Gonder Zone of Amhara region. To realize this objective, descriptive survey design was used. The use of this design was well supported by Best and Kahan (2005), when they said descriptive survey design is appropriate to describe conditions that exist, opinions that are held, process that are going on, trends that are developing and also to assess the opinions of large sample size. It was intended with the assumption that it could help to get a description of current status of preparation, availability and utilization of teaching materials in upper primary schools biology teaching.

3.2 Sources of Data

In this study, data were gathered from primary and secondary sources. Primary data were collected from school pedagogical center, school directors, school pedagogical center coordinators, Biology teachers and grade seven and eight students. Secondary source of data includes relevant documents such as syllabus of grade seven and eight biology were used to support the findings of the study.

3.3 Population Size, Sample Size and Sampling Technique

Currently, there are 11 zones in Amhara Region and this research was under taken in North Gonder Zone of Amhara Regional State. The researcher selected North Gonder Zone as sample area of this study,

because the researcher has work experience in that zone. In this zone there were 299 upper primary schools in twenty woredas and three administrative towns. For this study three woredas namely Alefa, Dembia and Takussa were selected using purposive sampling techniques. The decision to employ purposive sampling for selecting these woredas was made based on convenience of the researcher in terms of time, cost and access of transportation to collect the required data. Regarding this, Babbie (1973) advised that the researcher can select his samples based on his own knowledge of the population, convenience, and nature of his research aim.

In selected woredas there were 34 upper primary schools. From these schools nine schools were selected using random sampling technique.

As far as the respondents of the study were concerned, the respondents who participated in this study were four types. The total number of respondents included in the study was 32 biology teachers, 180 students, 9 SPC coordinators and 9 directors. Totally 230 respondents participated in this study. A stratified random sampling technique was used for selecting students' representatives for the study. In order to get stratified sample, students were classified by grade levels and by sex. Therefore, 62 male and 35 female totally 97 students from 1928 grade seven and, 54 male and 29 female total 83 students from 1672 grade eight students' were randomly selected. Since the number of biology teachers, SPC coordinators and school directors were limited all were included in the study using available sampling.

Table 3.1 List of schools, number of students, sample size by grade level and sex

Sample schools	No of students by grade			Sample size by grade			Sample size by sex					
							7		8		Total	
	7	8	Total	7	8	Total	M	F	M	F	M	F
Denglber	269	207	476	13	10	23	7	6	9	1	16	7
Atuga	95	65	160	5	3	8	2	3	1	2	3	5
Asedemariam	271	180	451	14	9	23	10	4	6	3	16	7
Delgi	267	225	492	14	11	25	11	3	7	4	18	7
Salig	209	298	507	10	15	25	6	4	9	6	15	10
Kolladuba	310	317	627	15	16	31	8	7	9	7	17	14
Shahura	317	248	565	16	12	28	11	5	8	4	19	9
Chohayte	76	54	130	4	3	7	2	2	2	1	4	3
Gamauber	114	78	192	6	4	10	5	1	3	1	8	2
Total	1928	1672	3600	97	83	180	62	35	54	29	180	

3.4 Data Collection Instruments

To secure reliable and adequate information, selection of appropriate data collection instrument is essential. Therefore, this study mainly employed questionnaires, interviews and observation instruments.

3.4.1 Questionnaires

A questionnaire is an enquiry form of data gathering instrument which respondents answer to the questions provided or respond to statements in writing and used to get factual information (Best and Kahn, 2005). So, the researcher used questionnaire for similar cases. This study uses questionnaires for both teachers and students. Teachers' questionnaire include mainly close-ended with few open-ended and consists of 30 items. The contents basically aimed at exploring preparation, availability and utilization of instructional materials in teaching biology at grade seven and eight. There were items related to the extent that teachers use IMS, directors and SPC coordinators role in producing IMs, source of IMs, attitude of teachers towards IMs, and factors affecting preparation,

availability and utilization of instructional materials. In this study a total of 32 biology teachers were included and all 32 (100%) were returned.

Students' questionnaire consists of 14 items. It was prepared first in English and later translated in to Amharic language in order to make clear and to avoid some possible misunderstanding. The contents were mainly aimed at the students' reaction to preparation and utilization of instructional materials in teaching- learning of biology. There were items related to the production of teaching materials and their attitude towards instructional materials. The questionnaires were distributed to a total of 180 students and all 180(100%) were returned.

3.4.2 Interview

Interview gives the needed information orally and face to face. Moreover, interview is important to find out what is or on some one else mind (Best and Kahn, 2005). Gubrium and Holstein (2001), also state that interview is a useful instrument to generate useful and often crucial information. Thus, with this assumption interview was used as a data gathering instrument for this study. For this study semi-structured interview schedule consists of 8 items were prepared on issues related to the preparation, utilization and major factors that affect preparation and utilization of IMs. It was conducted to each school pedagogical coordinators and directors.

3.4.3 Observation Checklist

For this study, observation check list consisting of 8 items was prepared to find out the availability of pedagogical center rooms, biology curricular materials, borrowing list, guide material, arrangement of instructional materials in SPC and types of instructional materials.

3.5 Pilot Testing of Instruments

After developing the data gathering instruments, pilot testing was conducted. The purpose of pilot test is to ensure whether the questionnaire is free from vague and irrelevant item. Thus, Esseydeber non-sample primary school was selected and the instruments were tested. Further more, participants of the pilot test were informed about the objectives of the study and how to fill, and give feedback regarding the relevance of the question items, its length and layout. Based on the suggestion forwarded, necessary corrections were made before they were administrated to the subject of the study.

3.6 Method of Data Analysis

The data analysis concerned both for qualitative and quantitative approaches were employed. All the data that were gathered from questionnaires were tallied, tabulate, analyzed and interpreted using percentage. On the other hand, the information obtained from interview and observation was qualitatively described in words.

CHAPTER FOUR

4. Presentation, Analysis and Interpretation of the Data

The objective of this study was to assess the status of preparation, availability and utilization of instructional materials in biology in grade seven and eight primary schools of some selected woredas in North Gonder zone. To this effect, this chapter deals with the presentation, analysis and interpretation of the data collected using various instruments. The chapter is organized in to five main sections. First, back ground characteristics of the respondents were discussed, followed by the items which focus on preparation, availability, utilization and those factors influencing preparation, availability and utilization in upper primary schools.

4.1 Background Characteristics of Respondents

The main source of the data for this study were biology teachers, grade 7 and 8 students, school pedagogical coordinators and school directors. Identifying the background characteristics of the respondents was very important in the analysis and discussion of the data for it tells from whom the data was collected.

Table 4.1: Background Characteristics of the Respondents

Variable	Category	Respondents							
		Teachers		Directors		SPC coordinators		Students	
		N	%	N	%	N	%	N	%
Sex	Male	20	62.5	9	100	9	100	116	64.4
	female	12	37.5	-	-	-	-	64	35.6
Age	20-30	25	78.1	5	55.6	5	55.6	-	-
	31-40	7	21.9	2	22.2	3	33.3	-	-
	41-50	-	-	2	22.2	1	11.1	-	-
Qualification	TTI	4	12.5	-	-	3	33.3	-	-
	Diploma	22	68.7	6	66.7	5	55.6	-	-
	Degree	6	18.8	3	33.3	1	11.1	-	-
Years of experience	1-10	22	68.7	3	33.3	7	77.8	-	-
	11-20	7	21.9	4	44.4	2	22.2	-	-
	21-30	3	9.4	2	22.2	-	-	-	-

As it can be seen from Table 4.1, about 62.5% teachers, 100% of Directors, 100% of SPC coordinators and 116(64.4%) of students were males, only 37.7% of teachers and 64(35.6%) of students were females. Regarding their age the majority of respondents, namely 78.1% of teachers, 55.6% Directors and 55.6% SPC coordinators were between 20-30 years of age. Furthermore, 21.9% teachers, 22.2% of the school directors and 33.3% of SPC coordinators were between 31-40 years. The rest were between 41 and 50 years.

Pertaining to their qualification, 68.7% of teachers, 66.7% directors and 55.6% SPC coordinators had diploma, 18.8% of teachers and 33.3% Directors and 11.1% SPC coordinators had degree. In addition 12.5%

and 33.3% of teachers and SPC coordinators had TTI (certificate) respectively. Regarding their work experience, 68.7% teachers 33%3 Directors and 77.8 SPC- coordinators had between 1-10 years of service, whereas 21.9 of teachers and 44.4% directors and 22.2% SPC coordinators had between 11 and 20 years of service. The remaining 9.4% of teachers 22.2% school directors had work experience ranging from 21 to 30 years.

4.2 Preparation of Instructional Materials

According to Heinich etal (1996). The available materials can modified and produced in a better way of IMs preparation.

Instructional materials are prepared by various community members of the school. Students and teachers usually participate in preparation of IMs in the SPC. Therefore, the following table shows the frequency of IMs preparation.

Table 4.2: Frequency of Preparation of Instructional Materials

No	Item	Choice	Teachers		Students	
			Frq.	%	Frq.	%
1	Do you prepare teaching materials for biology instruction?	yes	29	90.6	32	17.8
		No	3	9.4	148	82.2
2	How often do you participate in the preparation of IMs?	Always	3	9.4	-	-
		Sometimes	26	81.2	-	-
		Never	3	9.4	-	-
3	How often do you assign students to produce teaching materials to help them learn by doing?	Always	2	6.3	-	-
		Sometimes	28	87.5	-	-
		Never	2	6.3	-	-

Table 4.2 shows that 29(90.6%) of the teacher and 32(17.8%) of student respondents pointed out that they prepare teaching materials for biology instruction. On the other hand 3(9.4%) and 148(82.2%) of students replied that they did not prepare teaching materials for biology teaching.

As indicated in Table 4.2 item 2, the majority of the respondents, 26(81.2%) have responded that they sometimes prepare instructional materials and 3(9.4%) of them reported that they have never prepared IMs. The remaining 3(9.4%) of teachers reported that they always prepare instructional materials in their lesson. Hence, the results in Table 4.2 tell us that the majority of the respondents agreed that they do not frequently prepare instructional materials in their lesson.

In addition to this, interview was conducted to school pedagogical center coordinators, regarding teachers' level of preparation of instructional materials. According to Ato Tadesse (one of the coordinators) said that:

“Teachers have commitment and self initiation in preparing IMs for the teaching learning process” (25/04/2003 E.C)

Also as shown in Table 4.2 item 3 above clearly shows that out of 32 teacher respondents, 28(87.5%) of them replied that they ‘sometimes’ assign their students to produce IMs. On the other hand, 2(6.3%) of the respondents answered that they always assign their students to prepare IMs to help them learn through learning by doing. Out of the total teacher respondents 2(6.3%) of them replied that they never assign their students to prepare IMs. From the above Table discussions, it appears that biology teachers in the sample schools have not given attention to the benefits obtained from production of IMs.

4.2.1 The Role of the School Directors and School Pedagogical Center Coordinators on Producing Instructional Materials

A school pedagogical center requires a well competent coordinator so as to support greatly the realization of educational objectives. At the same time the school pedagogical center coordinator is expected to help teachers in producing and using IMs in teaching learning process where as directors are expected to give more emphasis in financing and furnishing the SPC. This is possible if and only if when the school directors and SPC coordinators have higher cooperation in producing instructional materials.

Table 4.3: Assistance Made by School Director and SPC Coordinators in Producing Instructional Materials

No	Item	Teacher respondents							
		Very high		High		Low		Very low	
		N	%	N	%	N	%	N	%
4	To what extent do school directors help you in producing IMs?	-	-	5	15.6	19	59.4	8	25
5	How do you rate the cooperation of school pedagogical center coordinators for the producing of IMs?	2	6.3	1	3.1	21	65.6	8	25

As indicated in table 4.3, out of 32 teachers 59.4% of them revealed that the support and encouragement given to the production of instructional materials on the part of school directors was low. And again, of the total respondents, 8(25%) of them answered that it is very low. Only few teachers 5(15.6%) of the total respondents responded that it is high.

Regarding this point, Ato Abebe SPC coordinator's said:

“The role of the school director in supporting the SPC is passive, especially in allocating budget timely and providing important materials”. (28/04/2003 E.C)

It is noticeably observable from Table 4.3 item 5, above most teachers about 21(65.6%) responded that the cooperation of school pedagogical center coordinators in the production of IMs was low, while 8(25%) of the respondents indicated the cooperation of school pedagogical coordinator, were very low and 1(3.1%) of teacher respondents and 'High'. In similar manner, the researcher has observed that the overall nature of the school pedagogical center, arrangement of instructional materials, level of utilization and production were not satisfactory, similarly, school directors were asked how they assigning pedagogical coordinators; and they put the following criteria:- Good handwriting, drawing ability and interest.

However most of SPC coordinators were assigned to that position not based on training or competency. This results indicates in sufficient school pedagogical coordinators cooperation in producing biology instructional materials

4.3 Availability of Instructional Materials

As several literature and research findings indicated, the availability of media resources in schools is a very important factor for quality of education in general and initiate teachers, SPC coordinators and students in preparing and using IMs in the teaching learning process in particular. This is because SPCs are the main sources of IMs at school level.

During the observation of the sample schools, it was found that all the observed primary schools have school pedagogical center. However, there were many disparities among these pedagogical centers. Hence,

seven of the schools' pedagogical centers did not give the expected service to the teaching learning process. However, there was a satisfactory amount of service in two from the observed schools. In all cases there were scarcities of equipments to produce instructional materials. It was also observed that some of the SPCs lacked adequate space, since the rooms were small. However, there are also some other centers with enough space to do the pedagogical activities effectively if there are committed to do so.

Moreover, during the time of observation, the researcher tried to check match between the availability of IMs, with the syllabus designed for grade 7 and 8 student materials. As a result, the researcher has seen that there is a mismatch between the need of IMs in the syllabus and the actually available materials in the school pedagogical center. The most common instructional materials found in the schools pedagogical center are charts, models, pictures and diagrams. (see the attached appendix F)

4.4 Utilization of Instructional Materials

Educators like Heinich etal (1996), Wakshun (2001) have strongly advocated the utilization of IMs in class room for successful achievement of instructional objective and the development of learners mental thought. Kinder (1989) on his part, stated that the effective utilization of IMs increases the quality of education and enables teachers and students to achieve educational goals.

Respondents were also asked whether they utilize IMs for biology teaching or not. The following table depicts their response:

Table 4.4: Level of utilization of IMs, as reported by Teachers and students

No	Item	Choice	Teacher		Students	
			Frq	%	Frq	%
7	Did you use locally available materials for the purpose of biology instructions	Yes	24	75	-	-
		No	8	25	-	-
8	Frequency of utilization of IMs?	Always	2	6.2	7	3.8
		Sometimes	22	68.8	163	90.6
		Never	8	25	10	5.6
9	Do teachers evaluation on utilization of IMs strong enough?	Yes	9	28.1	-	-
		No	23	71.9	-	-

The majority of the respondents 24(75%) responded that, they use locally available materials during biology lessons. On the other hand 8(25%) of the respondents answered that they did not use teaching materials while teaching biology. According to Amare (1999) instructional materials makes instruction concrete and relevant for students, which in turn allows then to construct meaning by piecing to gather bits of information. More over instructional materials provide a more direct form of experience to facilitate learning, seeing, doing and trying.

So, Biology teachers who do not frequently use instructional materials during instruction are forced to use lecture method of teaching and they can not initiate students to make self-confident. Along with this, they can not promote students activity and their creative ability.

In table 4.4 item, 8 above 22 (68.8%) teachers have responded that 'some' times utilize instructional materials. On the other hand 8(25%) of

teacher respondents answered that they never utilize instructional materials in their lesson

As can be depicted from table 4.4 above 163 (90.6%) of the respondents students reported that teachers 'sometimes' utilize biology instructional materials. And 10(5.6%) stated 'never' utilize biology instructional materials, which implies that teachers focused on traditional teaching learning process that is teacher centered "talk chalk method". Only 7(3.5%) of the respondents reported that they always utilize biology instructional materials. Particularly one SPC coordinators Ato Brhanu stated that:

Biology teachers' frequency of utilization for instructional materials is rare or small extent (6/5/2003 E.C)

From the results above it is observed that the majority of the teachers and students agreed that teachers did not frequently utilize instructional materials.

The results of table 4.4 item 9 indicate that the majority of respondents 23 (71.9%) replied that even though it is included in the teachers' evaluation criteria, it is not strong enough for effective use of IMs. On the other hand, only 9 (28.1%) of the respondents indicate that teachers evaluation of IMs utilization is strong enough.

4.4.1 The Contribution of School Pedagogical Center in Facilitating Biology Teaching Learning Process

In school of any level, instructional materials are kept in pedagogical centers which are resource centers that enrich the teaching learning process and enhance student learning. According to Brown et al (1977) educational media centers are regarded as places where students pursue a full variety of learning experience

Table 4.5: The Contribution of School Pedagogical Center in Facilitating Biology Teaching Learning Process

No	Item	Choice	Teacher	
			F	%
10	How do you evaluate the contribution of SPC in facilitating biology teaching?	Very high	18	56.3
		High	10	31.3
		Medium	4	12.5
		low	-	-
		Very low	-	-

As indicated in table 4.5, the majority of teacher respondents 18(56.3%) of the sample schools have responded that the contribution of school pedagogical centers in facilitating teaching- learning process was very high, while 10(31.3) of teachers said that the SPC contribution was high. Further more, 4(12.5%) of teachers responded that the contribution of school pedagogical center in facilitating teaching learning process was medium.

Concerning the contribution of school pedagogical centers in facilitating the teaching learning process, all SPC coordinators were interviewed and all of them believe that the SPC have a positive contribution to their teaching learning process.

4.4.2 Sources of Instructional Materials

According to Heinch et al (1996), the sources of IMS can be SPCs, libraries, the community, public libraries, museums, government and non government organizations, publishing houses etc thus the school in general and teachers and SPC coordinators in particular are expected to pay attention to different sources to display IMs and use them in the teaching learning process. In line with this issue, teachers were asked to

respond on the sources of IMs that they were using in the teaching learning process. And the data collected from those teachers are organized in Table.4.6.

Table 4.6: The Sources that Teachers Use to get IMS

No	Item	Alternative	Teacher respondents	
			Freq.	%
11	Where do you obtain the IMs required in the teaching learning process?	From school library	8	25
		From other near by schools	4	12.5
		From school pedagogical center	20	62.5
		From community	-	-

As it is observed in Table 4.6, out of the total number of teachers, 20(62.5% of them responded that they used the SPC as a source, and 8(25%) and 4(12.5%) of the teachers said that they obtain the IMs from the school library and from the near by schools.

4.5 Factors Affecting the Preparation, Availability and Utilization of Instructional Materials

To explore major factors influence preparation, availability and utilization of instructional materials in teaching biology at upper primary school level, questions regarding training opportunity, availability of guide materials, availability of skilled pedagogical center coordinators, budget allocation, teachers and students attitude and other related factors were posed to the respondents. The response will be presented as follows:

Table 4.7 :Problems in Preparing and Using Instructional Materials

No	Item	Choice	Teacher respondents	
			Freq.	%
12	Have you faced problem in preparing IMs?	Yes	27	84.4
		No	5	15.6
13	If your answer No 12 is yes, which of the following do you think following do you think to be major problem in your school?	In adequate training	8	25
		Lack of time and equipment	4	12.5
		Lack of teacher interest	3	9.4
		Lack of financial and material support	17	53.1
		Problem of manipulation IMS	-	-

As depicted in table 4.7 most of the teachers 27(84.4) responded that they face problems in preparing and utilizing instructional materials on the other hand, only 5(15.6%) of teachers have replied that they did not face any problem in preparing and using instructional materials. According to Table 4.7, most teachers agreed that they face problems in preparing and using IMS. Similarly, the interview made to the SPC coordinators indicate that the major problems in preparing and using IMs are lack of necessary equipments, lack of adequate budget, lack of adequate training and experienced man power and lack of teachers and directions commitment towards the production of IMs.

Table 4.7 item, 13 reveals that 17(53.1%) of the teacher respondents responded that lack of financial and material support is the first major problem in preparing and using instructional materials. Similarly 8(25%)

teachers responded that in adequacy of training to be the major problems. On the other hand, only 4(12.5) and 3(9.4%) of teachers answered that lack of time and teachers interest to be the major problems respectively. Hence, it is obvious that lack of financial and material support and inadequacy of training are the most serious problems encountered for the low performance of school pedagogical centers, while lack of time and lack of teacher's interest are the other serious problems in preparing and using instructional materials

According to the result of the interview with the school directors, the availability of IMs, in SPC, the finance allocation for SPC, teachers' attitude towards IMs, teachers knowledge and skill on the preparation and utilization of instructional materials have a negative impact in the teaching learning process.

Table 4.8: Training Opportunity of Biology Teachers to produce and use of Instructional Materials

No	Item	Choice	Teacher respondents	
			Freq.	%
14	Have you taken any training on how to produce and utilize biology IMs?	Yes	5	15.6
		No	27	84.4

As show in table 4.8, 27 (84.4%) of the respondents answered that, they did not took training to produce and use of instructional materials. These respondents can't be competent enough to disseminate their information to their students during instruction. Lack of training on how to produce and use of instructional materials bring a problem of understanding of the subject matter easily on the part of the student

On the other hand, 5(15.6%) of biology teachers responded that they participated in training. This information indicates that the respondents taken training on how to produce and using instructional materials, knowing how to produce and using teaching materials, is very important for any teacher to disseminate the information to their students

4.5.1 Availability of Guide Materials for Production and Utilization of IMs

Media related guide materials would help teachers to develop their knowledge and skills in preparation and utilization of instructional materials. In this regard an attempt was made to obtain evidences whether or not the targets SPC have got such guide material.

All teachers responded that no guide material on how to produce and use of instructional materials at pedagogical center. Even all the directors and SPC coordinators confirmed that there is absence of guide materials in their respective SPC. Further more, the researcher observed that there was absence of guide material in the school pedagogical centers.

4.5.2 Availability of Skilled School Pedagogical Coordinator

School pedagogical center coordinators are required to give a lot of services to teachers and students. However, to accomplish all the expected services the coordinator should trained in material preparation and utilization

Table 4.9: Frequency and Percentage Distribution of Availability of Skilled School Pedagogical Center.

No	Item	Choise	Teacher respondents	
			Freq.	%
15	Is there trained school pedagogical center coordinator in your school	Yes	9	28.1
		No	23	71.9

According table 4.9 out of the total number of teacher 23(71.9%) of the respondents answered that there is no skilled SPC coordinators, whereas 9(28.1%) biology teachers replied that yes. Therefore from the finding of this study it is possible to say lack of trained school pedagogical center coordinator affects the preparation of necessary instructional materials in the school pedagogical centers.

4.5.3 Budget Allocation for the Purpose of SPC

The production of instructional materials requires adequate budget allocation to the activities performed in the school pedagogical centers. In this regard the data were gathered from SPC coordinators and school directors through interview.

Table 4.10: Budget Allocated for Sample Schools Pedagogical Center

No	Name of sample school	Budget allocated for each school pedagogical center (2003 E C)
1	Shahura	600
2	Gamauber	550
3	Astedemariam	765
4	Denglber	700
5	Atuga	400
6	Deligi	650
7	Kolladuba	520
8	Salige	800
9	Chohayte	450

According to the interview with the school directors and school pedagogical coordinators most of the respondents indicated that the allocated budget for their schools was insufficient.

4.5.4 Teachers Attitude Towards Preparation Availability and Utilization of Biology Instructional Materials

The attitude of teachers in the educational system has an impact on the preparation and utilization of instructional materials. For instance, Erkyhun et. al cited Tilahun (1999:80) indicated that teachers with positive attitude towards instructional media were found to show better mean scores in producing, borrowing and utilizing instructional materials than those with low attitude. This, teachers' attitude towards, instructional materials plays a great role in utilizing the materials. To this end, great efforts should be done in developing a favorable attitude towards instructional materials for it determines the effective use of the instructional materials.

Teachers were asked to rate the statements that are intended to measure the extent of opinion towards instructional materials. The rating scale was constructed in the form of likert scale. Teachers were given five options to select ranging from strongly agree up to strongly disagree 6 favorable and 6 unfavorable totally 12 item opinion statements were used as a measuring device.

The responses of teachers to the attitude describing statements are illustrated in table below

Table 4.11: Teachers Attitude toward Instructional Materials

No	Item	Scale					
		Agree		Undecided		Disagree	
		N	%	N	%	N	%
1	Biology IMs are good supplement to teaching learning process	28	87.5	4	12.5	-	-
2	UBIMs simplifies the difficulty of biology teaching	24	75	3	9.4	5	15.6
3	BIMs stimulates student interest	28	87.5	4	12.5	-	-
4	Biology IMs are little use in regular class room	11	34.4	6	18.8	15	46.8
5	I am happy that my teaching is supported by IMs	30	93.8	2	6.3	-	-
6	BIMs provide a more direct form of experience to facilitate veering, seeing, doing and trying	28	87.5	4	12.5	-	-
7	Peoples can best learn with out UBIMs	8	25	-	-	24	75
8	UBIMs do not bring change in the achievement of student	7	21.9	5	15.6	20	62.5
9	Preparing BIMs is wasteful of my free time	9	28.1	8	25	15	46.9
10	Taking training on UBIMs discourage my confidence	-	-	6	18.8	26	81.2
11	BIMs do not facilitate active learning method	1	3.1	1	3.1	30	93.8
12	IMs help the teacher in capturing the attention of his students	28	87.5	2	6.3	2	6.3

As shown in item 1 Table 4.11, the respondents agreed (87.5%) on the issue “biology IMs are good supplement to teaching learning”. So, majority of the respondents had an agreement on the item.

As item two of the same table depicts that majority of the respondents agreed (75%), on the issue where as 15.6 percent disagreed to the issue.

With regard to item 3 of Table 4.11, majority (87.5%) of the respondents agreed on the issue where as item 4 of this table indicates that 46.8 percent disagreed and 34.4 percent agreed on the issue.

To item five of Table 4.11, the respondents’ responses indicated that 93.8% agreed on the issue. And as item six of the same table shows 87.5 % of respondents agreed on the idea of the item.

As shown in item seven of table 4.11, majority (75%) of the respondents disagreed to the issue where as item eight of the same table indicates that 62.5% of the respondents disagreed on the idea of the item.

In regard to item nine Table 4.11, majority (46.9%) of the respondents disagreed where as 28.1% agreed on the issue. When we come to item ten of this table majority (81.2%) of the respondents disagreed on the items idea.

With regard to item eleven of this table majority (93.8%) of the respondents disagreed on the issue as IMs do not facilitate active learning method.

The last item of table 4.11 indicates that the majority (87.5%) of the respondents agreed on the issue.

4.5.5 Students Attitude Towards Biology Instructional Materials

Students were asked to rate statements that are intended to assess the extent of opinion toward biology IMS. The rating scale was constructed

in the form of Likert scale students were given five alternatives to select ranging from strongly agree to strongly disagree. Five favorable and five unfavorable totally 10 item opinion statements were used as measuring device. The responses of students to the attitude describing statements are summarized in Table 4.12.

Table 4.12: The Responses of Students to the Attitude Describing Statement in Biology Instructional Materials

No	Statement	Scale					
		Agree		Undecided		Disagree	
		N	%	N	%	N	%
1	I really dislike biology	7	3.9	7	3.9	166	92.2
2	I hate biology instructional materials	32	17.8	16	8.9	132	73.3
3	Using biology instructional materials making learning enjoyable	148	82.2	16	8.9	16	8.9
4	Using biology instructional materials waste valuable time	29	16.1	38	21.1	113	62.8
5	Using biology instructional materials help me to be more actively participate in the practical activities	162	90	9	5	9	5
6	I like using biology IMS because they help us to visualize concepts and principles by observation	171	95	-	-	9	5
7	I always pleased when biology class comes to using biology instructional materials	151	83.9	14	7.8	15	8.3
8	We can best learn with out using biology instructional materials	28	15.6	35	19.4	117	65
9	Using biology instructional materials help me to stimulate and maintain interest in biology	168	93.3	7	3.9	5	2.8
10	I can not see much value on biology subject	4	2.2	14	7.8	162	90

With regard to item 1 Table 4.12 indicates that majority, (92.2 percent) of the respondents disagreed on the issue whereas item two of this table, majority (73.3 percent) of the respondents disagreed on the idea of the item.

As shown in item three of Table 4.12, majority (82.2%) of the respondents agreed on the issue. And item four of the same table indicates that majority (62.8 percent) of the respondents disagreed the idea whereas 21.1 percent of respondents undecided on it.

When considering item five of Table 4.12, majority (90 percent) of the respondents agreed on the issue where as item six of this table shows that majority (95 percent) of the respondents agreed on the issue.

In regard to item seven of Table 4.12, majority (83.9 percent) of the respondents agreed on the idea of the given item. The eighth item of this table also shows that majority (65 percent) of the respondents disagreed on the issue where as 19.4% of the respondents undecided on the issue.

As item nine of table 4.12, majority (93.3 %) of the respondents agreed on the issue. The last item of this table indicates also majority (90%) of the respondents disagreed on the issue.

CHAPTER FIVE

5. Summary, Conclusions and Recommendations

This chapter summarizes the major findings of the study and drawn conclusion on the basis of the findings. At the end, recommendations that are thought to address the problems are forwarded.

5.1 Summary

The purpose of this study was to assess the preparation, availability and utilization of teaching materials in biology teaching in selected primary schools of North Gonder in Amhara Reign. To this end, data were collected from a total 230 respondents as well as from secondary sources. Data collection tools were questionnaires, interview and observation. The following basic research questions were set:

1. To what extent biology instructional materials are available in upper primary schools?
2. How often do biology teachers use instructional materials?
3. Do biology teachers and students produce teaching materials for biology teaching?
4. Do biology teachers and students have favorable attitude towards preparation, availability and utilization of instructional materials?
5. What factors do affect the preparation, availability and utilization of instructional materials?

Finally data were analyzed using frequency counts and percentages and the qualitative data obtained through interview and observation were triangulated with the quantitative data. The analysis of the data resulted in the following major findings:

1. The study revealed that all the observed schools have pedagogical centers although they are not well equipped with the necessary materials.
2. In the study, it was also found out that majority of biology teachers used SPC as a source of teaching material
3. The study indicated that majority of biology teachers did not frequently prepare and utilize instructional materials in their teaching.
4. In the study, it was found out that there was shortage of Instructional materials to be used for teaching.
5. The study disclosed that majority of biology teachers did not assign their students in producing of instructional materials.
6. It was found out that the majority of the biology teachers showed that the support and encouragement provided by school directors for the production of IMs is in the sample schools of North Gonder zone is low.
7. The study indicates that the SPC coordinators' cooperation to the biology teacher to produce their own IMs was low.
8. The study indicated that all the biology teachers rated that the contribution of SPC to their teaching was high.
9. It was found out that the annual budget allocated for the school pedagogical centers activity was insufficient.
10. The study revealed that the guide materials in all sample schools of SPC was not available

11. The biology teachers and SPC coordinators have not taken a training on how to produce and utilize instructional materials
12. The study disclosed that teachers and students of the sample schools had a favorable attitude towards the instructional materials
13. The study indicated that there is a mismatch between the need of IMs in the syllabus (Grade 7 and 8) and the actual available materials in the schools pedagogical centers.
14. The study showed that the major problems in producing and using IMs are lack of financial and material support, inadequate training, lack of time and equipment and lack of teacher interest respectively.

5.2 Conclusion

Based on the Major Findings of the study, the following conclusions are drawn:

1. The availability of SPC in upper primary school is very important input for the quality of education in general and to initiate teachers, SPC coordinators and students in preparing, borrowing and consumption of IMs in particular. Since SPCs are the main sources of IMs at school level. Regarding to this idea, the study indicated that all the observed schools have SPC and Majority of the teachers use teaching materials from it. However, it is concluded that though there is availability of SPC and utilization of teaching materials by the teachers its frequency is rare or/ and sometimes, as a result, there is an inadequate preparation and utilization of teaching materials

2. Pertaining to the cooperation of school directors and SPC coordinators activities expected of them regarding instructional materials were not sufficiently implemented. Hence, it can be concluded that school pedagogical center were not well facilitated and surrendered the necessary support by the school directors and SPC coordinators
3. As to the involvement of students in producing of IMS, the result of the study indicated that biology teachers don't coordinate students to participate in the work of SPC so, depending on the result of the study it can be concluded that there is no any involvement of students in producing IMs in the SPC which is supported by the teachers.
4. Regarding teachers and students attitude the result indicated that teachers and students have favorable attitude towards IMs. Thus, it can be concluded that lack of interest is not a major problem in producing and utilization instructional material.
5. As to the unification of syllabus and SPC, the major findings show that the IMS listed down in the syllabus in Grade 7 and 8 and the available teaching materials in the SPC are mismatched. Hence, it can be concluded that there is a gap between the teaching material referred in the syllabus and the available ones in the SPC.
6. The other major findings as result indicated that there is no guide material in school pedagogical center on how to prepare and utilize IMs in all the sampled schools. Thus, it can be concluded that there is a problem of guide materials of SPC in North Gondar of upper primary schools.

7. At last, the study indicated that the major problems in producing and using IMS are lack of financial and material support, in adequate training, lack of time and equipment and lack of teacher interest respectively. Thus, it is possible to conclude that these factors can affect the biology teaching learning process.

5.3 Recommendations-

Based on the major findings of the study, the following recommendation are forwarded

- The findings of the study revealed that schools have the problem of inadequate preparation and utilization of teaching materials in Biology. Besides the result of the finding adds that majority of the teachers use SPC as only source of IMs. The department heads and SPC coordinators in collaboration with biology teachers should plan and work for IMs preparation in addition to the utilization of the available once.
- The study revealed that the directors' emphasis of cooperation is given less and there is no more involvement of students in the production of IMs in the school's pedagogical center using time scheduled. Therefore, school directors should work a lot in helping of SPC and initiate the teachers to make their students participate in pedagogical center having a club of interested students in the art of picturing.
- Without sources of raw materials and reasonable amount of budget allocated to the school pedagogical center it is difficult to make effective teaching process. Concerning the provision of financial and material support to SPCs, the result of the study shows that

there was no significant support. So the teachers and the principal of the school should generate school income by writing a project to the nearby NGOs and to the local community.

- The study indicated that there is a gap between the ordered lists of teaching materials in the syllabus to be used by the teachers in classroom and they apply having their lesson plans. Therefore, the biology teachers should go beyond the usual use of these materials from SPCs because the result implied that there is a mismatching of the teaching materials written in the syllabus and the teachers carry out in the class room.
- School administrators should make effort in providing instructional materials by buying model IMs and monitor teachers in process of teaching and learning how far they are exercising or **using IMs in class.**
- Finally, it is recommended that the cluster and school based supervisors and department heads with collaboration of the school principal should give emphasis to make students learning more concrete, meaningful, dynamic, creative and problem solving by integrating adequate IMs in the teaching learning process.

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Appendix A
Addis Ababa University
College of Education
Department of Curriculum and Teachers
Professional Development Studies
A questionnaire to be filled by biology teachers

The main purpose of this questionnaire is to gather relevant information about the availability, preparation and utilization of instructional materials for Biology teaching at the second cycle of some selected primary schools in North Gonder Zone of Amhara regional state. The information you provide will be only for the research purpose. Hence, you are kindly requested to fill out this questionnaire, genuinely and responsibly. Truthfulness of the response give contributes a lot to the study. No need of writing your name

Thank you for your cooperation

Part I. Background Information

Direction: please fill in the blank space with the right response

1. Name of the school _____
2. Sex _____
3. Age _____
4. Educational qualification _____
5. Years of experience in teaching _____
6. Grade level you teach _____

Direction: the question given below is followed by possible alternative responses. Please indicate your responses by selecting the appropriate

alternative for each item. For items with out alternative responses, please supply short written responses as appropriate.

I. Preparation of instructional materials

1. Do you prepare teaching materials for biology instruction?
A. Yes B. No
2. If your response to question No_1 is yes, how often?
A. always B. sometimes C. never
3. How often do you assign students to produce Biology Instructional materials to help them learn by doing?
A. always B. sometimes C. never
4. To what extent do school directors help you in producing instructional materials?
A. very high B. High C. Low D. Very low
5. How do you rate the cooperation of school pedagogical center coordinators for the producing of Biology Instructional materials?
A. Very high B. high C. Low D. Very low

II Availability of instructional materials

6. Is there pedagogical center in your school?
A. Yes B. No

III. Utilization of instructional materials

7. Do you use locally available materials for the purpose of biology instruction?
A. Yes B. No
8. If your response to question No_7 is yes, how often?
A. always B. sometimes C. never

9. Where did you obtain the Biology Instructional materials required in the teaching learning process?

- A. From school libraries
- B. From others schools found near by
- C. From school pedagogical center
- D. From community
- E. If others, specify _____

10. How do you evaluate the significance of school pedagogical center in facilitating Biology teaching?

- A. very high
- B. high
- C. medium
- D. low
- E. very low

11. Do teachers evaluation on utilization of IMs strong enough?

- A. yes
- B. No

IV. Factors affect utilization and preparation of instructional materials

12. Have you faced problems in preparing and using instructional materials?

- A. Yes
- B. No

13. If your answer No 12 is yes, which of the following do you think to be an acute problem in your school? Indicate your choice by ordering them from highest to lowest

- A. In adequate of training
- B. Lack of time and equipment
- C. Lack of teachers interest
- D. Lack of financial and material support
- E. Problem for the manipulation of instructional materials
- F. Others, specify _____

14. Have you taken any training on how to produce and utilize of biology Instructional materials in the teaching learning process?

A. Yes

B. No

15. If your response for question number '7' is yes when (specify the _____ year),
how many times and how long did you take the training? _____

16. Do you have guide material in your school on how to prepare and use
of instructional materials?

A. Yes

B. No

17. Is there trained school pedagogical center coordinator in your school?

A. yes

B. No

18. In general, if you have any additional idea and suggestion regarding to
availability, preparation and utilization of instructional materials and
problems related to this, please specify here _____

Part VI. Likert Attitude Scale

Direction: Below are given a list of items about biology instructional materials. Read each statement carefully and show the number of your choice that best represents your response by putting a tick mark (✓) on the space provided

Use the following scoring key

Strongly agree	5
Agree	4
Undecided	3
Disagree	2
Strongly disagree	1

Remember: UBIMS: Utilization of Biology instructional materials

BIMS: Biology instructional materials

No	Statement	5	4	3	2	1
1	Biology IMS are good supplement to teachings learning process					
2	UBIMS simplifies the difficulty of biology teaching					
3	BIMS stimulates students interest					
4	Biology IMs are little use in regular class room					
5	I am happy that my teaching is supported by IMS					
6	BIMS provide a more direct form of experience to facilitate hearing, seeing, doing and trying					
7	Pupils can best learn with out UBIMS					
8	UBIMS do not bring change in the achievement of students					
9	Preparing BIMS is wasteful of my free time					
10	Taking training on UBIMS increased my confidence					
11	BIMS do not facilitate active leaning method					
12	IMS help the teacher in capturing the attention of his students					

Appendix -B

Addis Ababa University

Department of Curriculum and

Teachers Professional Development Studies

A questionnaire to be filled by students

Part: I Basic Information

Please fill in the blank space with right responses

1. Name of the school _____
2. Sex _____
3. Grade level _____
4. Section _____

Part II

Direction: Below are given a list of items about Biology instructional materials (BIMS) Read each statement carefully and show your choice that best represents your level of agreement by putting a tick mark (✓).

Use the following scoring key

- | | |
|-------------------|----------------------|
| 5- Strongly agree | 3- Undecided |
| 4- Agree | 2- Disagree |
| | 1- Strongly disagree |

No	Statement	5	4	3	2	1
1	I really like biology					
2	I hate biology instructional materials					
3	Using biology instructional materials makes learning enjoyable					
4	Using biology instructional materials waste valuable time					
5	Using Biology instructional materials help me to be more actively participate in the practical activities					
6	I like using biology instructional materials because they help us to visualize concepts and principles by observation					
7	I always pleased when biology class comes to using biology instructional materials					
8	We can best learn with out using Biology instructional materials					
9	using Biology instructional materials help me to stimulate and maintain interest in Biology					
10	I cannot see much value on biology subject					

Part III

Direction: for the questions having alternatives put your choice by circling and for those do not having an alternative, write your answer on the space provided

- Do you produce teaching materials as an assignment in order to learn by doing? A. Yes B. No
- How often biology teachers use instructional materials in teaching biology?
 A. Always B. Sometimes C. rarely D. never
- Do you have a biology text book? A. Yes B. No
- If you have any Additional ideas specify here

APPENDIX - B

አዲስ አበባ ዩኒቨርሲቲ

የካሪኩለምና የመምህራን ሙያ ዕድገት ጥናት ትምህርት ክፍል

የድህረ ምረቃ ፕሮግራም

በተማሪ የሚሞላ መጠይቅ

ክፍል አንድ፡ መሠረታዊ መረጃዎች

1. የትምህርት ቤቱ ስም _____ 3. የክፍል ደረጃ _____
 2. ጾታ _____ 4. ሴክሽን _____

ክፍል ሁለት

ትዕዛዝ፡ ከዚህ በታች ዝንባሌን የሚጠይቁ ዓረፍተ ነገሮች ቀርቦታል። በያንዳንዱ ጥያቄ የእናንተን መስማማትና አለመስማማት የሚያመለክቱ አማራጮች ተሰጥተዋል። በመሆኑም ጥያቄው በማንበብ በይበልጥ የምትስማሙበትን ምርጫ በአረፍተ ነገሩ ፊት ለፊት በተሰጠው ክፍት ቦታ ላይ ይህን (✓) ምልክት በመጠቀም አመልክቱ።

በጣም እስማማለሁ - 5

ለመወሰን እችላለሁ - 3

እስማማለሁ - 4

አልስማማም - 2

በጭራሽ አልስማማም - 1

ተ.ቁ	ዐረፍተ ነገር	5	4	3	2	1
1	የስነ ህይወት ትምህርትን በጣም እወደዋለው					
2	የስነ ህይወት መርጃ መሣሪያ አልወድም					
3	የስነ ህይወት መርጃ መሣሪያ መጠቀም ደስተኛ ያደርገኛል					
4	የስነ ህይወት መርጃ መሣሪያ መጠቀም የመማሪያ ጊዜ ያባክናል					
5	የስነ ህይወት መርጃ መሣሪያ በተግባር ስራ ይበልጥ እንድሳተፍ ያደርገኛል					
6	የስነ ህይወት መርጃ መሣሪያ መጠቀምን እወዳለሁ፣ ምክንያቱም የትምህርቱን ፅንሰ ሀሳብና ስልቱን በማየት					

	መገንዘብ ስለሚያስችለን					
7	የስነ ህይወት ትምህርት ሁል ጊዜ በመርጃ መሣሪያ ተደግፎ ሲቀርብ እደሰታለሁ					
8	ያለመርጃ መሣሪያ በደንብ መማር እችላለሁ					
9	የስነ-ህይወት መርጃ መሣሪያዎችን በመጠቀም ለትምህርቱ ያለኝን ፍላጎት በቀጣይነት የማነሳሳት ባህሪን ይፈጥርልኛል					
10	የስነ ህይወት ትምህርት ጥቅም አይታየኝም					

ክፍል ሦስት

ከዚህ በታች ለቀረቡት ጥያቄዎች አማራጭ ላላቸው ትክክለኛውን መልስ በማክበብ እንዲሁም አማራጭ ለሌላቸው ደግሞ በተሰጠው ባዶ ቦታ መልሳችሁን ግለፁ።

1. የስነ ህይወት መምህራችሁ እየሰራችሁ እንድትማሩባቸው የሚያገለግሉ የመርጃ መሣሪያዎችን እንድትሰሩ ያደርጓችኋል?

- ሀ. አዎ
- ለ. አይደለም

2. የስነ ህይወት መምህራችሁ የመማር ማስተማሩ ሂደትን ተግባራዊ በሆነ መልኩ ለመደገፍ ለምን ያክል ጊዜ መረጃ መሳሪያዎችን ይጠቀማሉ?

- ሀ. ሁል ጊዜ
- ለ. አንዳንድ ጊዜ
- ሐ. አልፎ አልፎ
- መ. በፍፁም አይጠቀሙም

3. የስነ ህይወት መማሪያ መፅሐፍ አለህ/ ሽ?

- ሀ. አለኝ
- ለ. የለኝም

4. በተጨማሪ መግለፅ የምትፈልጉት ነገር ካለ ከዚህ በታች ባለ ክፍት ቦታ ግለፁ?

Appendix: C

Interview for school directors

Part: I personal information

1. Woreda _____
2. Name of the school _____
3. Sex _____
4. Age _____
5. Qualification _____
6. Years of experience as a principal _____

Part II: Open ended items

1. Do teachers prepare and use instructional materials in their lesson?
2. If your answer for question No_ 2 is No; why?
3. Who assign the school pedagogical coordinator and in what criteria?
4. How do you assess biology teacher commitment and self initiation in preparing and using instructional materials?
5. Does the provide incentive systems for teachers who prepare and use instructional materials in class room? If yes; what are the incentive systems?
6. How much budget do your schools allocate for the purpose of pedagogical center activities?
7. How do you evaluate the budget allocation and system of utilization in pedagogical center activities?
8. What major factors do you think would affect the availability, preparation and utilization of instructional materials?

Appendix – D

Interview for school pedagogical center coordinators

Part I basic personal information

1. Woreda _____
2. Name of the school _____
3. Sex _____
4. Age _____
5. Years of experience as a head of pedagogical center _____

Part II open ended items

1. How do you evaluate biology teachers commitment and self initiation in preparing and using instructional materials?
2. Do you have a guide material in your school on how to prepare and use instructional materials?
3. How do you evaluate the school principals' cooperation to the pedagogical center?
4. What are the main problems that biology teachers face in preparing and using instructional materials?
5. Do biology teachers use the available instructional materials in biology teaching?
6. How much budget does your school allocate for the purpose of pedagogical center activities?
7. How do you explain the contribution of school pedagogical center in facilitating the biology teaching learning process?
8. In general if you have any additional idea regarding to the availability, preparation and utilization of biology instructional materials, please specify here?

Appendix – E

Observation check list at school level

I. Observation at the school pedagogical center

1. Woreda _____ 2. Name of the school _____
3. Does the school have pedagogical center? _____
A. Yes B. No
4. Annual school pedagogical center budget for it's a activities _____
5. Is there a guide material for the production and use of IMS?
A. Yes _____ B. No _____
6. Arrangement of biology instructional in the school pedagogical center?
A. Poor B. Good C. Very good. D. Excellent
7. Availability of biology curricular materials in the school

Curricular materials	Grade	Available	Not available
Syllabuses	7		
	8		
Teacher Guides	7		
	8		
Student text book	7		
	8		

8. Record of frequency of biology teachers' instructional materials utilization in school pedagogical center (borrowing list)
A. Available B. Not available
9. Is there, daily and weekly follow up sheet for teachers in preparation of instructional materials?
A. Yes B. No
10. Types of biology instructional materials available at the school pedagogical center

No	Type	Teacher made	Student made	Purchased or donated	Quantity
1					
2					
3					
4					
5					
6					

11. Other observed variables _____

Appendix F

Grade and units		Required IMs by the syllabus	Shahura	Gomauber	Atede Marian	Denglber	Atuga	Delgi	Kolladuba	Salig	Chohayte
7	1	4	1	-	1	-	-	2	1	-	-
	2	14	2	3	1	-	4	2	1	3	1
	3	9	-	-	-	-	-	-	-	-	-
	4	6	-	2	2	1	2	3	-	1	2
	5	16	4	2	5	3	1	2	3	4	3
	6	10	-	-	1	-	2	-	1	-	-
	7	28	5	3	6	4	3	1	2	5	4
8	1	22	3	2	5	3	6	2	4	3	2
	2	15	-	-	-	-	1	-	-	1	-
	3	12	2	-	3	1	2	1	3	1	1
	4	12	-	1	-	-	2	1	-	-	-
	5	9	3	3	1	2	1	2	3	1	-
	6	4	2	1	-	3	2	-	2	1	3

Appendix G

Important values of the proper use of instructional materials

Important values of Instructional Materials	Illustration
Antidote to the disease of verbal instruction	They help to reduce verbalism. They help in giving clear concepts and thus help to bring accuracy in learning.
Best motivators	They are the best motivators; the more the students work with more interest and zeal, they are more attentive.
Clear images	Clear images are formed when we see, hear, touch, taste and smell as our experience are direct, concrete and more or less permanent. Learning through the senses becomes the most natural and consequently the easiest
Vicarious experiences	it is beyond doubt that the first-hand experience is the best type of educative experience but it is neither practicable nor desirable to provide such experience to pupil's substituted experiences may be provided under such conditions.
Variety	Mere chalk and talk do not help. Audio visual aids give variety and provide different tools in the hands of the teacher
Freedom	when instructional materials are employed, there's a great scope for children to move about, talk, laugh and comment up on.
Opportunities to handle and manipulate	Many visual aids offer opportunities to students to handle and manipulate things
Retention	Audio visual aids contribute to increased retention as they stimulate response of the whole organism to the situation in which learning takes place
Based on maxims of teaching	According to Aggarwal (1996), the use of audio visual aids enable the teacher to follow the maxims of teaching like concrete to abstract known to un known and learning by doing
Helpful in attracting attention	Attention is a true factor in any process of teaching and learning. Audio visual aids help the teacher in providing proper environment for capturing as well as sustaining the attention and interest of the students in the class room work

Helpful in fixing up new learning	What is gained in terms of learning needs to be fixed up in the minds of students'. Audio visual aids help in achieving this objectives by providing several activities, experiences and stimuli to the learners.
Realism	The use of audio visual aids provides a touch of reality to the learning situation
Saving of energy and time	A good deal of energy and time of both the teachers and students can be saved on account of the use of audio visual aids as most of the concepts and phenomena may be easily clarified, understand, and assimilated through their use
Vividness:	Instructional materials give vividness to the learning situation
Meeting individual difference	There are wide individual differences among learners some are ear oriented, some can be helped through visual demonstrations, while others learn better by doing. The use of variety of audio visual aids helps in meeting the needs of different types of students.
Encouragement to healthy classroom interaction	Audio visual aids, through their wide variety of stimuli, provision of active participation of the students, and vicarious experiences encourage healthy class room interaction for the effective realization of teaching learning objectives.
Spread of education on a mass scale	Audio visual aids like radio and television help in providing opportunities for education to people living in remote areas. They also help in promoting adult education
Promotion of scientific temper	In place of listening to facts students observe demonstrations and phenomena and thus cultivate scientific temper
Development of higher faculties	Verbalism promotes memorization. Use of audio- visual aids stirs the imagination, thinking process and reasoning power of the students, and calls for creativity and inventiveness and other higher mental activities on the parts of students and thus helps the development of higher faculties among the students
Reinforcement to learners	audio visual aids prove effective reinforces by increasing the probability of re-occurrence of the response associated with them and thus render valuable help in the teaching learning process

Sources Aggrawal 1996

DECLARATION

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

Name: Hailay Gebreslassie

Signature: 

Date: April 2011

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

Name: Akalewoled Eshete (Assistant Professor)

Signature: 

Date: April 12, 2011

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