ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

AN ASSESSMENT OF THE IMPLEMENTATION OF DISTANCE SECONDARY EDUCATION FOR THE ARMY, WITH PARTICULAR REFERENCE TO GRADE-10 BIOLOGY COURSE

Kitaw Kassie Engida

July, 2007

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A THESIS PRESENTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY

IN PARTIAL FULFILMENT FOR THE REQUIREMENTS OF THE DEGREE OF MASTER OF ARTS IN CURRICULUM AND INSTRUCTION

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Acknowledgement

I would like to express my heartfelt gratitude to my advisor, Dr. Dessu Wirtu, for his proficient, unreserved guidance and constructive advice throughout the entire course of my thesis work.

I would also like to express my gratitude to my brothers, Yohannes and Temesgen, for their diligent and critical comments from the beginning to the end of this study.

I am also thankful to Academic Education Department in the MOND for its financial assistance, without which the completion of this study would have not been possible. I also passionately acknowledge Colonel, Negash Legesse, Head of the Academic Education Department, for his keen assistance and cooperation in collecting the data. L/ Colonel, Tadege also shares unreserved thanks for helping me to collect data.

Last but not least, I would like to thank the academic staff members of the DEMD for the precious time they spent in collecting the data from students.

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Acronyms

ACE: American Council of Education

DCS: Directorate of Correspondent Studies

DEMD: Distance Education Main Division

EGSECE: Ethiopian General Secondary Education Certificate Examination

EMA: Educational Media Agency

GDLN: Global Distance Learning Network

GDLNC: Global Distance Learning Network Center

ICCE: International Council of Correspondence Education

ICDE: International Council of Distance Education

IDL: Interactive Distance Learning

IGNOU: Indra Gandhi National Open University

MOE: Ministry Of Education

MOND: Ministry Of National Defense

P.U.C: Punjab University, Chandigarh

TMD: Training Main Department

Abstract

The purpose of this study was to assess the appropriateness of the modular text, provision of learning materials, accessibility of supportive services, and the efforts made by the key players.

For the study, descriptive survey was employed whereby first hand information were gathered using multiple instruments. Accordingly, 324 students, who were selected by cluster sampling, have filled in the questionnaires; and interviews were made with purposefully selected 5-biology tutors, 3-unit coordinators and a DEMD principal. Moreover, 3-tutorial centers, which were selected by convenience sampling, were observed.

The quantitative data were analyzed using percentages. The qualitative data were interpreted by narrating and supplemented to quantitative results.

Some of the major findings were: delay in arrival of modular text, absence of electronic instructional media and other supplementary printed texts, lack of information about the tutorial session and exam date, lack of training, inconsistency of the tutorial schedule, little time gap between the tutorial and exam date, long turnaround time for feedback, absence of comments on students' assignment work, and lack of close follow-ups. It was also noted that other supporting services like: library, laboratory and counseling services were inaccessible. Administrators and students were found to be less committed to their respective duties and responsibilities.

It is concluded that students' learning was affected by problems in the provision of learning materials, inadequacy of supportive services, lack of coordination and minimal engagement of the key players. Finally, timely delivery of learning materials, utilization of electronic media, timely and constructive feedbacks, in-service trainings, and providing necessary supportive services are recommended.

Chapter One

The Problem and its Approach

1.1. Background to the Study

It is quite clear that education is significant in enabling the individual to keep in touch with the changing social and physical environment. That is why people in every corner of the world are increasingly dependent on knowledge that could be gained through education. To this effect, educational institutions are modifying and re-modifying their educational systems to adapt with the changing science and technology. The formulation of the 'Academic Education Policy for the Army' by the Training Main Department (TMD) in the MOND is part of this of keeping in touch with the development of science and technology.

The Academic Education Policy for the Army was formulated in 2002. The policy aims at providing the army with the primary and secondary academic education with the purpose of improving the army's academic knowledge that helps them to cope up with the ever developing technology and to accomplish their military missions successfully. The policy document also underlines that educating the army helps them acquire scientific knowledge and skills that serve as a pre-requisite for further study in higher education and training institutions (TMD, 2002, translated from Amharic version).

For the realization of the policy objectives, the TMD has designed a distance education program for the army, and the program has been started to be offered for grades 7-10 since 2002/03. Since then, its contribution in ensuring the educational opportunity for the armies who

have been deprived of conventional face-to-face schooling due to inconvenience of time and place can be considered promising. As it is shown in the table-1 below, for example, currently about 16,756 army students are enrolled.

Table 1: Army distant learners enrolled in the year between 2004/05-2006/07

Academic Year	Grade				
	7th	8th	9th	10th	Total
2004/05	2517	2617	1537	724	7395
2005/06	2358	3184	4281	1043	10866
2006/07	3153	3514	5906	4183	16756

Source: Distance Education Main Division (DEMD) Record Office

According to Marew (2002: 365) "...because of the growing demand for education by increasing number of youths and adults, and the severe resource constraints, the conventional face-to-face mode of delivery is facing problems". To alleviate these educational problems, as Marew informed, several countries have started to use distance education program. Similarly, Ethiopia has started to use the distance education system since 1967 in the form of "Correspondence Study" with the purpose of the provision of secondary education for adults working in various ministries, factories and military organizations in general and teachers in particular (Teshome and Tilson, 2004). In spite of this long time duration of the program, its development and expansion in the country has not been seen remarkable (Wossenu and Befekadu, 1999).

As can be learned from history, there has been a high demand for distance education by the army since it started to be practical in the country. For instance, Demissew (2002) indicated that in the distance secondary education offered to different groups of people in between the years 1978-1989, 27% of the participants by profession were the army, which was the second largest group next to teachers. In this same

program offered up to 2001 (i.e., between the years 1978-2001) 18%, which was the largest group of the participants were the army (Teshome and Tilson, 2004). This indicates that distance secondary education program has been chosen as an appropriate alternative education system to meet the demands of adult soldiers that are not being met by conventional schooling. Therefore, the launching of the distance education program for the army was found reasonable

However, questions like: How well the program is being implemented? What factors are there those impede on the implementation process of the program? And what remedial measures need to be taken to alleviate the problem of implementation? did not get answered so far. As to the knowledge of the researcher, there is no single study or research conducted to see how far the implementation of this program has been successful. Even the program was not evaluated or assessed in the tryout stage and no necessary improvement was made before it has been used in a large scale implementation. As explained by Academic Education Department (2006) in its 2005/06 annual report on academic education activities in the army, there were some problems like delay in arrival of modular texts, typographic errors in examination and assignment questions and lack of clarity of some concepts in modules. This initiated the researcher to assess the implementation practice of distance secondary education for the army.

The implementation of distance education can be seen from different aspects. Aruna Goel and S.L.Goel (2001), for example, emphasized on the appropriate design and use of alternative media as a key for the success or failure of distance education program. As written by Ejeta (2005: 17) in his M.A Thesis, "Teshome had studied the implementation of educational radio broadcast in Ethiopia in the context of decision making authority, autonomy, leadership, financial and manpower allocation,

procuring facilities, program development, program production, transmission, human resource development and linkage roles". Manjulika and Reddy (1996) saw implementation of distance education in terms of: preparing self-instructional materials, dispatching of learning materials, supportive services, face-to-face contact sessions, correction of assignments, and examination systems. Taking a lesson from these scholars, the implementation of distance secondary education for the army with a particular reference to grade – 10 biology course is studied in the context of: the design of grade – 10 biology modular text, the provision of learning materials, the supportive services, and the work efforts of the concerned bodies in the implementation process.

1.2. Statement of the Problem

Nowadays, distance education is becoming popular and widely used in most of the developed and developing countries, but it is still in its infancy stage in Ethiopia (Wossenu and Befekadu, 1999). The distance education program for the army, which is currently in progress, would be expected to be similar to the country's context in its experience and implementation capacity.

It is a reasonable measure for TMD to launch such a cost effective and a flexible mode of educational delivery system for the army. However, as partly revealed in the 2005/06 annual report on the general practice of the distance education for the army, the implementation process has got limitations like delay in arrival of modules and lack of clarity in some concepts of modules, and that students are not being treated properly (Academic Education Department, 2006). This might be because of problems in the design of the course materials, or in the provision of the learning materials and supportive services, or lack of commitment and coordination among the concerned parties involved in the implementation process.

The implementation process or the overall practice of the program is still not studied (evaluated), if not neglected. This leads one to say that adequate adjustments and inputs have not been added so far to improve the practice of the program. The researcher, who is the DEMD member, also noted that grade-10 biology modular text lacks in some important pictures. In order to add some inputs for its improvement and adjustment, it is found worth to assess the implementation of the distance secondary education for the army with a particular reference to grade-10 biology course. To this end, this study is supposed to give the answers for the following basic research questions:-

1. Is the grade-10 biology modular text appropriately designed in such a form that the army distance learners can study it independently or with less help from their teachers?
2. Are the necessary distance learning materials (print and electronic media) provided to the distant learners?
3. Are there adequate and convenient supportive services available to the students?
4. Do the concerned bodies such as administrators, teachers (tutors) and students discharge their respective roles and responsibilities?

1.3. Objectives of the Study

The study is generally aimed to reveal the current practices of the implementation of distance secondary education for the army, with a particular reference to grade-10 biology course. Specifically it is aimed to examine:-

- the appropriateness of the design of grade-10 biology modular text;

- ❖ the provision of the necessary distance learning materials to the distance learners;
- ❖ the availability and convenience of learner supportive services such as tutorial services, assessment services, guidance, library, etc;
- ❖ whether or not the concerned bodies in the implementation process are carrying out their duties and responsibilities.

1.4. Significance of the Study

This study is hoped to be useful in looking into the strengths and weaknesses of the program in order to pinpoint the major constraints and to provide a comprehensive picture of the current practice of the implementation process of the program. The findings of the study, which is supposed to be an indicative of what remained to be done at all levels of the implementation process, specifically will help:

1. the TMD education policy makers, the program administrators, the course developers and implementers to be aware of the basic constraints in the implementation of distance secondary education, so that they can make the necessary adjustments and improvements of the program for future use;
2. other distance education providing institutions to adjust and improve the mechanisms of the distance education delivery mode;
3. the university and college students or any other interested body to use it as a starting point for further research.

1.5. Delimitation of the Study

The scope of the study was delimited to examining issues related to the design of grade-10 biology course material, the learning materials (print and electronic instructional media), the learner supportive services and the roles and responsibilities to be played by personnel involved in the

implementation process. Thus, the grade-10 biology course material (Modular text) and the implementation activities of the course were the focus of the study.

The study tried to include data from the army students, tutors and administrators who are involved in the implementation of grade-10 biology distance course for the army. The army students and other concerned bodies were selected from 4-Military Commands (Central Command, Western Command, Northern Command and Sub-Command), 5-Training Centers (Awash-Arba, Bilate, Airforce, Tollay and Bir-Sheleko), and other offices. Eastern Command and Hurso Training Center are not included in the study because the learning-teaching process in these sites was temporarily interrupted during the time of data collection.

1.6. Operational Definitions of Related Terms

Appropriateness of the modular text design: - refers to the suitability of modular text to be studied and understood by distance learners. In this study, a modular text is said to be appropriately designed if it is prepared in self-instructional mode and that beneficiaries (students) approved it and prefer to study it independently.

Distance Secondary Education for the Army- refers to a distance education program set by the Training Main Department (TMD) in the MOND in 2002 to provide the army with secondary education.

Educational technologies - refer to the electronic media like the radio, TV, computer, internet, audio - video cassette, etc. that serve as instructional media to facilitate two-way communication in the distance secondary education program for the army.

Learner supportive services - are services like face-to-face tutorial, counseling, registration, assessment, library, etc. to be provided for the distant learners to compensate inaccessibility of educational facilities due to lack of time and physical proximity.

Tutorial center – refers to the site (it may be in the traditional school compound or in the military camp) where face-to-face contact / tutorial session takes place.

Unit Coordinator – refers to a person who is assigned to coordinate the programs planned for implementation of distance course at the selected center. In this study, unit coordinators refer to the Command Education Heads who facilitate activities such as registration, face-to-face contact programs, exams, etc. under the command.

1.7. Organization of the Study

This study is presented in five chapters. The first chapter deals with the problem and its approach, consisting of background of the study, statement of the problems, objectives, significances, delimitation, limitations, operational definitions and organization of the study.

Chapter two contains the review of related literature. Under which the concept of distance education, implementation of distance education, distance learning materials, media in distance secondary education in Ethiopian context, student supportive services, roles of distance education institution and roles of the different parties in the distance education implementation process are discussed.

Chapter three contains the research design and methodology. In this chapter, design, data source, source population, sampling techniques

employed, data collection instruments used, and data management and analysis methods are presented.

Chapter four deals with the presentation and analysis of data gathered from the different sources followed by discussions on the findings. The last chapter presents summary of the study, conclusions and recommendations based on the findings.

Chapter Two

Review of Related Literature

Under this section, an attempt is made to revise and find out theories, experiences, and findings related to the research problem

2.1. Definition of Distance Education

Different scholars defined the term 'Distance Education' at different times, although these definitions have got many similarities. Some of the definitions, which the researcher believed that they can conceptualize the meaning of distance education, are given below:

P. Portway and C. Lane (1994), cited in Keegan (1996: 43) defined distance education as...

> *The Learning and teaching situations in which the instructor and the learner are geographically separated, and therefore, rely on electronic devices and print materials for instructional delivery.*

Manjulika and Reddy (1996: 3) defined distance education broadly as "a system of education in which education is imparted to students from a distance." They emphasized on two basic elements of the definition; "the physical separation of learners and teachers," and the dependence of the system on instructional materials including print and electronic media, otherwise with a limited involvement of teachers only in giving tutorial and counseling.

Berg (2002) has suggested the following five basic defining elements of distance education:

- *physical separation between teacher and learner;*
- *administration by an educational organization;*
- *use of various media, including print, video, film, computer, and audio;*
- *communication between student and teacher, synchronous or asynchronous;*
- *often an administrative focus on the non traditional learner.(p.xvi).*

As quoted by Verduin and Clark (1991), Keegan (1986) has proposed five criteria in defining distance education:

- *the separation of teacher and learner;*
- *the influence of an educational organization;*
- *the use of technical media, print, audio, video, or computer, to unite the teacher and learner and carry the course content;*
- *the provision of two-way communication;*
- *the separation of the learning group throughout the learning process, with a possibility of occasional meeting.(See p.10)*

Of the definitions given above, Keegan's (1986) definition is found to be more comprehensive, because it depicts the possibility that students could come in contact with their teacher. It is, therefore, taken for granted for the purpose of this study.

2.2. Historical Development of Distance Education

Distance education traces its origins to mid- 19th century in Europe and America. The pioneers of distance education used the best technologies of their day, the postal system, to provide educational opportunities to people who wanted to learn but with various reasons were not able to attend conventional schools. Isaac Pitman who begun teaching short hand (where students were instructed to copy brief Bible passages in

short hand form and return them for grading via postal system) by correspondence in England in 1840, is credited as an early pioneer (Manjulika and Reddy, 1996; Verduin and Clark, 1991). According to Verduin and Clark (1991), in 1856 language correspondence school was founded in Germany; and in 1874 distance education at the university level was founded in America at Illinois Wesleyan University, where bachelors and graduates could be obtained in Absentia.

As Manjulika and Reddy (1996) and Verduin and Clark (1991) confirmed, by the end of the 19th century the systematic use of two-way communication by post for educational purposes over a wide range of subjects become popular in many parts of Europe, America, Canada and Australia. This led the educational planners to be critical in the presentation of instructional materials and delivery systems.

In the first half of the 20th century, the invention of educational technologies like Radio, Television and Telephone system created important new forms of communication for use in distance education. Educators used these technologies to broadcast educational programs to millions of learners in several countries (Manjulika and Reddy , 1996).In this period ,distance education took deep roots in many countries and showed significant developmental change. For example, the foundation of the International Council of Correspondence Education (ICCE) in 1938 was an indicative of the great emphasis of educational planers on distance education.

Historically, the primary means of communication between the learner and the teacher separated by time and space had been the printed word, and this was termed as 'Correspondence Education'. Later, with the development of communication technologies, the printed instructional material became supplemented by audio-visual media. In the recognition

of these changes, the International Council of Correspondence Education (ICCE) changed its name in 1982 to International Council for Distance Education (ICDE), and there by the term 'Distance Education' replaced the expression 'Correspondence Education' (Keegan, 1996; Manjulika and Reddy, 1996; Verduin and Clark, 1991).

Today, distance education is becoming popular throughout the world. It increasingly uses combination of different communication technologies to enhance the abilities of teachers and students to communicate with each other. With the spread of computer network communications, people can gain accesses to computer linked to telephone lines, allowing teachers and students to communicate in conference via computers. Distance educations also make use of computer conferencing on the World Wide Web, where teachers and students present text, pictures, audio and video.

2.3. Is Distance Teaching as Effective as Conventional Teaching?

At the early stage of developing distance education, there was a fear by educators, and they questioned whether distance students can learn as much as the regular education in school students in face-to-face instruction. These educators claimed, as Wossenu and Befekadu (1999: 20) put, "Distance learning leads to the deterioration of academic standards in the subjects and in the quality of teaching". Later, this question got answered by many comparative analyses between distance and conventional teaching which revealed no differences in competencies between distance students and conventional school students. In line with this, Verduin and Clark (1991) have made a meta-analysis or review on the studies comparing academic achievements of students in conventional school and in distance education, and they confirmed that

there are no statistically significant differences between the academic achievements of students in the distance and conventional education. This indicates that distance education can be as effective as conventional teaching.

However, scholars agreed that teaching and learning in distance can be as effective as traditional instruction when appropriate technologies and methods are used; when there is a suitable situation in which student-to-student interaction is possible; and when there is a timely teacher-to-student feedback (Verduin and Clark, 1991).

2.4. Implementation of Distance Education

Fullan (2001: 69) defined curriculum implementation as "... the process of putting a program in to practice." Similarly, Ornstein and Hunkins (2004: 299) also defined implementation as "...the process of putting a planned curriculum in to effect." Curriculum implementation is one of the major components of curriculum development by which the plan is changed into practice. Hence, curriculum planning is a necessary pre-requisite for implementation which could address the needs and resources required to carryout the intended actions. Derebesa (2004) suggested that to ensure effective implementation the plan should be carefully considered.

Successful implementation involves a great deal of materials and manpower (Shirley, 1995). As to Ornstein & Hunkins (2004), effective implementation requires personal interaction and contacts, in-service training, and other supports. Based on these scholars, implementation of distance education involves the learning materials, teachers /tutors, students, administrators and other concerned bodies who are involved in the innovation process.

Robert (1993) emphasized on the importance of cooperation among the personnel in the institution for the success of its implementation. Thus, if the concerned bodies are participating actively and play their roles and responsibilities in a cooperative manner, they would contribute much for the effectiveness of the implementation process.

According to Vertecchi (1993) cited in Ejeta (2005: 16) distance education implementation includes: "dispatching of the materials, correction of assignments, processing data, correcting and compensatory communication to be sent to students". Manjulika and Reddy (1996) revised the implementation of distance education in India in the context of: preparation of self- instructional materials, dispatching of the learning materials, supportive services, contact /counseling sessions, evaluation of assignments and examination systems.

To sum up, implementation of a particular course at a distance needs various considerations like: careful design of the course material, dispatching of the learning materials, effective communication, provision of supportive services, cooperation and commitment of the responsible bodies in carrying out their tasks.

2.5. Learning Materials in Distance Education

2.5.1. Design of Distance Learning Materials

It is easy to assume that implementation is directly affected by the design of the course material, because the learning experiences in the course package determine the engagement of the students in their learning. In support of this, Verduin and Clark (1991:155) described the instruction of distance education as "the planning for and delivering of learning experiences for distant students". Robinson (1994) also advocated the

influence of the design of the course material on the presentation (all aspects of delivery and operation) of a course. Robinson argued that the relationship between the design of learning package and the teaching learning process is crucial. The appropriately designed and packaged course materials are particularly important in distance learning where students are studying away from immediate physical contact with their teacher (Gachuhi and Matiru, 1989). What the ideas of these scholars indicate that the implementation of a particular course in the distance education can be seen in the context of the design of the course material. Thus, it is important to revise the major components of the distance education course material and how they should be organized and presented to the learners for successful implementation.

Scholars (Rogers,1989; Rowntree, 1994; and Verduin and Clark, 1991), agreed that appropriately designed course material for distance learners consists of the major elements such as the objectives, contents, learning tasks, interactive media and assessment methods. These elements need to be incorporated and designed properly in such a way that they can complement each other.

Instructional objectives are the actual expressions of what students will be able to do after the instructional session is completed. They are expressions of new behaviors resulting from learning including: knowledge, skills and attitudes. They should be clear or meaningful, useful, and feasible (achievable) for learners (ACE, 1996).

Contents, learning tasks, interactive media and assessment methods are dependent on the objectives (Rogers, 1989). They should be geared to the learning styles and preferences of students. Varied learning experiences should be provided to allow students select those best suited to their learning styles (Melton, 2002). Melton also suggested the inclusion of

activities that help students to monitor their own progress, to check their understanding, to develop specific skills and to relate issues studied to real life situations.

Lawless (1994) has discussed about two basic models for course structure in distance teaching. The first one is a simple model, which is straightforward in which students move in a linear fashion from one teaching text unit to the next. Where as, the second model is complex and wide ranging in which teaching texts (units) are complemented by a range of other media: television, audio cassettes, computer, text books, home experiment kits, tutorials, assignments, etc. (Ibid).

According to Gachuhi and Matiru (1989) different subjects need different designs in order to be taught effectively. Lawless (1994: 57) added that "the structure of a course is determined by the nature of its contents i.e., there is a 'natural' order in which topics should be presented" to be understood better. Lawless further explained that some subject areas like mathematics, science and technology contain elements which are clearly hierarchical i.e., one topic, concept or skill has to be mastered in order to understand the next; whereas in social sciences, subject maters are rarely linear. This indicates that the way contents of a course are ordered and organized depends on the nature of the content. The appropriateness of the course design, therefore, has to be seen in the context of the subject mater.

2.5.2. Provision of Learning Materials

Distance education learning materials are materials put together in such a way that users can learn from them satisfactorily with less help than usual form of teacher (Rowntree, 1994). "The distance learning course is heavily determined by the learning materials."(Freeman, 1994:48).

Freeman refers to Hodgson to outline the 'using of learning materials' as one of the major characteristics of distance learning. These implied that distance students' learning rely on the utilization of learning materials.

According to Aruna Goel and S.L. Goel (2001: 64), "the quality of distance education depends up on the quantity and quality of instructional material provided to the learners in regular and timely installments". These scholars give much emphasis on the use of adequate and relevant learning materials with out which the distance learning process would not be effective. Thus, it would be instructive to consider issues of access and distribution of learning materials to the army distant learners, because it doesn't matter what smart the strategy is, how good the teaching material or how much you have spent in producing them, if the learner can't get access to these learning materials.

Manjulika and Reddy (1996) confirmed that delay in the arrival or inadequacies in the provision of the course material create uncertainty and anxiety in the minds of the distance learner and demotivate the learner at the very out set. The reason behind the great emphasis on the use of adequate and relevant learning material is to increase the flexibility the distance learning offers in terms of when and where the study takes place. Thus, it is necessary to make sure that distant learners have enough access to suitable learning material and equipments to interact with.

2.5.3 Print Instructional Material

Aruna Goel and S.L. Goel (2001) refer to Satyapal Anand to call the print instructional material 'a lecture script' for distance education system. They explained that this lecture script covers the entire course in such a way that the students can depend entirely on it or can supplement it with other material depending up on the ability and interest of students.

Therefore, print instructional materials are the basic components in the distance education program for students to use, either in combination with other media or alone, in their entire course of study.

Manjulika and Reddy (1996) regarded the printed instructional material as a master medium when they compare it with other media for delivering distance education in India. Many scholars agreed that print instructional materials are the most important mode of delivery and the most used media in the large majority of distance education program. Although the reasons for this are complex, some of them could be: "the pedagogical effectiveness of printed material for conveying abstract ideas and for serving as references" (Teshome, 2001: 8), the suitability of the print media for the presentation of new ideas and information, and their flexibility to be used by students at their own pace (Bates cited in Verduin and Clark, 1991).

Satyapal Anand stated that the material in print is "the back bone of correspondence teaching which is sent to students in regular installments and without any oral supplementation" (quoted in Aruna Goel and S. L. Goel, 2001: .63). This indicates that the print instructional materials are thought to replace teachers (oral or face–to-face-presentation by teachers); and are expected to be self- explanatory in a way that the learners can seek explanation themselves without any outside help. Since distant students are required to study mostly on their own and away from their teachers, they need to primarily depend on the printed course material supplied to them. It is therefore necessary that the printed course material should be carefully developed in the self-instructional distance education format. In line with this, Aruna Goel and S.L. Goel (2001) recommended that the self-instructional material should be comprehensive, self – learning and evaluating, self – explanatory, and

motivating to learn more. And some of the special features of the quality print instructional materials for distance learning are:

- useful, achievable and clearly stated objectives;
- user- friendly you and I style of writing;
- shortish, manageable chunks of learning;
- simple, direct language which avoids sexiest or racist stereotype;
- preference to the learners' experience and needs;
- interactive style which provide the learners with the opportunity to answer problems, carryout activities and draw up conclusions;
- links to other media where appropriate
- readable, supported by illustrations, figures, etc.; and
- feed back to help learners cheek their own progress (ACE, 1996; Aruna Goel &S.L Goel 2001; Rowntree, 1994).

These features of the print instructional material are supposed to serve as bench mark to examine the appropriateness of the modular text under study.

2.5.4 Electronic Educational Media

There is no doubt that the self-instructional print materials are the foundation of any academic course, but according to Aruna Goel and S.L. Goel (2001) the exclusive dependency on these materials leads to a mode of education considered passive, devoid of interest and enthusiasm leading to boredom. Thus, to keep the learner motivated, well informed and move towards independent (Self-learning) practices, these scholars recommended the use of electronic instructional media.

Other scholars Kirkwood (1994), and Manjulika and Clark (1996) also noted that electronic educational media such as radio, television,

computer, audio and video tapes etc. are used to supplement printed material and to promote motivation, and provide illustrations in the delivery process of distance education. Many of these media can be combined into multimedia packages that appeal to students with different learning styles. Multi-media learning package is one of the major concerns, which an effective teaching strategy for distance education program should address (Pillai, 1999).

For the purpose of this study, some of the electronic instructional media are briefly highlighted below, referring to Heinich, et al. (1996), Kirkwood (1994), Melton (2002), and Teshome (2001).

Radio

Because of its low cost and widely owned medium in rural and remote areas, radio is the frequently used medium to offer distance education in developing nations. It is known to provide educational access to a large, dispersed audience who are deprived of conventional schooling. Mostly radio talks are available to student as a supplemental part of the course material (printed text). However, the lack of visual component, its non-interactive nature and its fixed transmission time that may not suit the target audience (distance learners) are noted as its major shortcomings.

Television

Television is very effective medium as it is highly expressive and attracts students' attention. It can provide students with vicarious experiences by demonstrating complex or expensive experiments; making possible visits to locations that would be too costly or dangerous to achieve in any other ways; reinforcing learning through visual cues and triggering discussion among learners.

However, in developing countries, it is costly and difficult to reach the rural people. Moreover, its production and transmission is dependent on a separate broadcasting organization, which makes the use of educational television difficult.

Audio and videocassettes

These have similar educational qualities to broadcasts (radio and television) but not ephemeral. They have educational advantages over broadcasts. This is because students can stop the tape to allow discussion or repetition of the material; and students can also attend (use the material) in their convenient time and place.

Audiocassette, because of its cost effectiveness when compared to videocassette, is becoming popular and widely used in developing countries.

Computer

Computer provides good opportunities for distance education for it facilitates self-pacing, individualized learning with immediate reinforcement and feedback. Sitting at home, learner can take the advantage of the large material stored in it, and can learn at his convenience with latest material. Especially, the Internet is useful for exchange of information between the teacher and distant learners, for counseling, tutoring, provision of updated references and for controlling and evaluating the work of the learner. However, its high cost of the hard ware and scarcity of appropriate software are the major impediments to use it in the distance education.

To sum up, the communication between learners and teachers must be provided by instructional media; and it appears that instructional media can play a crucial role in the development of distance education when they are appropriately used. No hard and fast rule can be made to determine which instructional material is the best, for each of them has its own weaknesses and strengths. However, the administrators and teachers have to consider the merits and demerits of the instructional media in delivering the subject matter, and in facilitating interaction between teachers and learners. It is also important to note that the combination of instructional media (multimedia approach) will always produce better results than any single media (Melton, 2002; Verduin and Clark, 1991).

2.6. Media in Distance Secondary Education in Ethiopia

One of the important features of distance education is that it depends on the use of media (Keegan, 1996), because teaching is pre-recorded and delivered through media like print and audio-visual devices. Since different media have different strengths, it is recommended to use the multi-media approach (a combination of media) that appeal to students with different learning styles.

Distance secondary education in Ethiopia started in 1967 in the form of correspondence education by the MOE and AAU. It was targeted to upgrade unqualified elementary teachers. But, it also benefited other individuals working in various ministries. That time the delivery was through printed (modular text, exercises and study guides) materials (Teshome & Tilson, 2004).

In 1978, distance secondary education began in better form than before with the purpose of providing education to school dropouts and other

adults who have no access to traditional schooling. It was organized and administered by EMA. Up to 2001, the program has reached 13, 426 students (Teshome & Tilson, 2004). The delivery was using multi-media approach where print was supplemented by radio broadcasts and face-to-face tutorials, but most of the subjects were delivered through print only (Teshome & Tilson, 2004).

Since 1990s, coined with due emphasis given by the current education policy, distance education has become a widely used alternative means of addressing equity in education. Many government and non-government institutions have started offering distance education to the broad masses in all levels. For example, private institutions like Alpha, Pan- African and Ethiopis are emerging to provide distance education program to the secondary level learners, although the delivery in most of them dominantly depend on print media and tutorial sessions (Fisseha, 2006).

Ethiopia has long experience of educational broadcasting through TV and radio to supplement schools and non-formal education (EMA, 2002). Educational TV broadcasting began in 1965; and radio broadcasting began in 1971 by EMA. Recently, the country has increased its potential to use communication technologies for distance teaching. EMA has increased its radio and TV broadcast coverage through agreement with World Space and Ethiopian Telecommunication, and it can manage an extensive broadcasting infrastructure dedicated to support education (EMA, 2002) That means, with the existing EMA infrastructure, it is possible to produce and transmit TV and radio broadcasting programs, and to produce audio and videocassettes for the distance teaching (Yared, 2002). Yared also mentioned that there are some encouraging beginnings in introducing Interactive Distance Learning (IDL) applications and networking services in the country. The Ethiopian Global Development Learning Network Center (GDLNC), which is

furnished with advanced educational technology (Teshome and Tilson, 2004), and an ever expansion of internet center in many cities and institutions of the country also showed that there is a possibility for distance education offering institutes to deliver education supported by technological media.

In spite of all these, the delivery of distance education in our country is found to depend mainly on print. The use of audio-visual materials is unsatisfactory. As to Zenebe (2006), the use of multi-media delivery system by distance education institutions in Ethiopia is at its infantile stage.

2.7. Student Support Services

Mills (2003: 104) described student supportive services as "...the totality of the provision of the instruction to support the learners, other than generic teaching materials produced by instructional designer". Similarly, Mehta (1999: 64) described student support services as "... any thing other than the actual course materials which an institution provides to students". These services can be academic or administrative. They promote harmonious relationships between students and the distance education system (Aruna Goel and S.L. Goel, 2001; Mehta, 1999). From these scholars, one can infer that student supportive services can complement limitations of distances learners due to lack of physical proximity from their teacher, lack of adequate infrastructure, shortage of time, fear of examination etc.

Mills (2003) and Thorpe (1994) believed on the need for extra support and help for distance students to make them feel secure and stable. Manjulika and Reddy (1996) also recommended that adequate and

appropriate supportive services should be provided to distance learners to help them overcome the feeling of isolation and to facilitate learning.

Scholars have proposed many components of learner support system. For the purpose of this study, some major supportive services such as tutorial, assessment, library, laboratory and counseling service, which are expected to be available to the army distance learners, are reviewed.

2.7.1. Face-to-face Tutorial Service

The face-to-face contact program denotes the assembly of distance students and teachers for a specific period with the intention of teaching, motivating, creating a sense of belongingness, solving students difficulties and anxieties and supplementing distance learning materials (Manjulika and Reddy, 1996). It is important to narrow the gap between the aspiration of students and the institution and make students feel sense of belongingness to the institution (Aruna Goel and S. L. Goel, 2001). Face –to-face tutorial is used to meet many needs distance students may have in their learning through class room instructions, guidance and counseling, cooperation with other students for peer-group tutoring, motivating and encouraging to study, resolving students' problem related to their assignment and project works, and instill confidence (EMA, 2004; Gachuhi and Matiru, 1989; Teshome, 2001).

Based on the above scholars, personal contact program is different from conventional teaching, and it involves in revision of lessons already covered by students, supplementing materials and introducing students into the portions to be covered so as to motivate them to read further. It is beneficial to generate harmonious relationships between distance education system and students, and to enhance students' satisfaction and remove many of inherent and self- created tensions. It is clear that

after attending the face–to-face tutorial program, distance students will feel secure, comfortable, and be motivated to learn and move a head.

2.7.2. Assessment and Feedback

"Assessment has not simply been the end point of learning but has been an important component in the learning process it self, an essential tool in facilitating learning" (Raggatt, 1994: 137). Raggatt explained formative assessment to indicate that assessment is not only for certification, but also to aid learning. Formative assessment is designed to uncover the learners' difficulties, and to ensure feedback and improve their understanding.

Lockwood (1994) argued that questions in the self-instructional texts are the major learning activities that encourage active learning. Lockwood further explained that activities (self-assessment questions, in-text questions, exercises, etc.) promote students engagement in learning, help them to come up with their own explanation, help to apply their learning, and encourage self-learning. As Rowntree (1994) added, self-assessment questions contribute to the active involvement of students in their learning, by inviting them to respond and check their work against the comments.

Assignments

It is common for many distance education institutions to provide students with written assignments, believing that assignments help students in the process of learning and in their preparation for examinations. Rowntree (1994) suggested that regular tests or assignments can be used to pace students' learning and reduce falling behind their studies.

Assignments are important to maintain a link between the teacher and the students in that: the teacher prepares the assignments and send to students, the students do and submit them to be corrected by the teacher, and then the teacher marks and gives the necessary comments on students' work and send back to students (Rogers, 1989). However, many distance students don't complete and submit their assignments regularly, and teachers/tutors don't offer useful comments to students on their assignment work. Studies on Directorate of Correspondence Studies (DCS) and Panjab University, Chandigarh (P.U.C) in 1995 confirmed that students are not motivated to do the assignments as they are not provided with proper feedback, and guidance to carryout assignments (Aruna Goel and S.L. Goel, 2001).

Questions of the assignments need to be based on the course materials provided to students in order to know whether the students have studied and understood the course, and to assess the learners' progress at different stages of the course (Aruna Goel and S.L. Goel, 2001; Manjulika and Reddy, 1996). Assignments should not be too difficult at the beginning, and should gradually increase in difficulty and insure that the learners build up the necessary skill (Gachuhi and Matiru, 1989).

Feedback

Giving feedback and criticism, praising and commenting on students' work is so important in learning. Lentell (2003: 68) refers to Jackson (2001) to write "careful reading of a students' work and giving the appropriate comments is the core of distance teaching". Rogers (1989) emphasized on the importance of feedback to learning and claimed that lack of the right amount and quality of feedback are the main reasons many distance learners fail. Scholars (Reed and Stoll, 2000; Rogers, 1989) recommended that distance students should be given a timely and

effective feedback in response to their work on assignments, exercises, etc.

Wills (1992) mentioned that a system of successive feed back and reinforcement as the learner progressively responds to each learning tasks and self-assessment exercises is a very important variable for motivating distance students for better learning.

Rogers (1989) discussed the major guidelines to offer feedback to the learners. Some of them he focused on are praising the good points before criticizing the bad, giving feedback quickly, encouraging students and suggesting extra reading. From this scholar, one can infer that offering feedbacks to students based on these guidelines could make students feel secure and enable them to learn more from their mistakes.

2.7.3. Library Service

Library, which provides reading, lending, reference, and information facilities to students who are studying independently and to staff members, is important to facilitate distance-learning process. Aruna Goel and S.L. Goel (2001: 164) said, "library and other information technology have a central place in the process of distance education". They recommended that there is a need to set up a good library in the distance institute with proper borrowing facilities for students.

The study centers of many open universities in India are equipped with library facilities audio-video players, reading rooms and information centers (Manjulika and Reddy, 1996).

After having studied the library services in Japan distance higher education, Mizoue (2003) recommended that the Open University

libraries should make links with public libraries to increase library service access to distance students and to facilitate the teaching process. This gives a lesson to the distance education institutions to make collaboration with public and school libraries found in students' proximity so that students can have access to library services.

2.7.4. Practical Work

Science can best be taught when supported by practical work that help students to develop a deeper understanding and to develop their scientific skills. According to Melton (2002), home experiment kits, field studies, computer aided experiments and laboratory work to be undertaken in residential school/ or in the study centers are among the major components of practical work to be considered in teaching science in distance mode. He said that experiment kits provide students with the opportunity to gain deeper understanding of concepts, principles and theories through gathering related evidences; and to develop practical scientific skills such as manipulating apparatuses, observing, collecting data, interpreting data, drawing conclusions and developing theories. Therefore, it is common to include experiment kits for science courses and dispatching them to study centers, so that either students use them to conduct experiments by themselves, or tutors use them to demonstrate experiments to the students.

However, due to various constraints, science in our country has not been taught using practical work even in the regular school (Samual, Bekalo and Welford, 2001; Temechegn, 2000), let alone in distance education. Science teaching in our country's context is still much focused on rote learning of factual knowledge.

2.7.5. Guidance and Counseling Service

Distance students also need to be provided with supports to recognize and solve non-academic problems that may arise. As distance students are usually on their own in their study with anxiety and problems they encounter, distance education institutions have to help them in this respect (Holmberg, 1981). As to Melton (2002), distance students need guidance and counseling services to help them solve problems related to emotional and other personal issues. Students seek advice on course and career- in choosing courses and programs, and in pre-requisite requirements. They also need help in solving problems affecting their studies such as work related problems, health problems, financial problems, etc.

The counseling service to help students deal with such problems may be provided by specialized counselors or by tutors who are trained in counseling. In any case, counselors need to be "good listeners, easy to talk to, open, friendly, approachable and able to help students and clarify issues" (Melton, 2002: 119).

2.8. Roles of Personnel in Distance Education

Educational development is not a mechanical process, but it is a human enterprise and its success will depend ultimately on the skill, quality and motivation of persons associated with it (Panda, 2004). It is unlikely for the distance education institution to succeed unless the personnel working in it have the required skills and be committed to achieve its goals. There fore, individuals in the institutions need to be aware of and carry out their roles and responsibilities for the successful implementation of distance education.

Even though the staff categorization, placement and nature of work vary accordingly (Panda, 2004), for simplicity, the personnel's roles are reviewed by broadly categorizing the staff into administrative and academic staff.

2.8.1. Roles of Personnel in Administrative Staff

"The success or failure of distance education depends to a great extent, up on the administrative capability and motivation of its leadership" (Aruna Goel and S.L. Goel, 2001: 204). What makes the leadership variables so crucial in the implementation process is its dynamic, not passive, quality, i.e., its capability to act and react on the critical inputs. Thus, for the purpose of this study, the major roles to be played by the administration and the quality of leadership that could significantly determine the implementation of distance teaching are reviewed.

Shirley (1995) noted that principals' action convey the message as to whether a planned change is to be taken seriously or not. The major actions to be taken by the administrators include: developing organizational arrangements, arranging trainings, consultation and reinforcement, monitoring and evaluating. Fullan (2001) added that the supply of material resources, incentives to the implementers, good communication with other staff members, and following up of the processes are important for effective implementation, which should be carried out by the administrators. These actions will indirectly affect the willingness and dedication of teachers and other concerned bodies.

It is true that staff training is a useful strategy for implementation. The distance education panel in the EMA, for example, organized a training work shop in 2004 and trained tutors to help them manage the face-to-face contact session effectively (EMA, 2004). Panda (2004) viewed staff

development as organizational change; and he suggested five staff training models: induction, orientation, refresher, thematic and specialized (see page 92). Similarly, Aruna Goel and S. L. Goel (2001) recommended two types of trainings: refresher and orientation, to be given to distance education teachers/tutors.

Shirley (1995) claimed that many implementation efforts fail, because staffs have not been trained in new skills. Seemingly, teachers/tutors may fail to utilize the best procedures of teaching at a distance due to lack of in-service trainings. The offering of trainings for performance appraisal of staff members that could help them to work with a sense of understanding and dedication calls for the commitment of the administrators.

Different distance education institutions carryout many administrative activities ranging from specific to general. Some of them, which are supposed to be important for this study, are dispatching leaning materials, training manpower, coordinating tutorial, registering and giving orientation. (Gachuhi and Matiru, 1999; Panda,2004; and Verduin and Clark, 1991).

To sum up, the administrators' effort with sense of purpose and devotion to ensure good administrative support, promotes students' satisfaction and create motivation and energy to excel in their per suit of education forgetting the inherent limitation of their stride (Aruna Goel and S.L. Goel, 2001).

2.8.2. Roles of Personnel in Academic Staff

In addition to administrative personnel, distance institution also needs to have academic personnel whose major responsibility of course design

and development and other academic issues. As explained above, the administrative activities affect the willingness and dedication of academic personnel including teachers or tutors. In line with this, Aruna Goel and S.L. Goel (2001) recommended that fruitful coordination between the two should be ensured, for nothing in the distance education system could be achieved without the mutual support of these two staffs.

Panda (2004: 87) realized that "... it is the course packages with high academic merit, designed to promote effective student learning, that bring credibility to the distance education institution". Thus, maintaining academic standards with high academic integrity and commitment is essential to the success of the institution.

The researcher suspects that the academic members in DEMD are not clearly aware of their roles. Thus, to assess whether the academic members are discharging their duties and responsibilities, some common academic activities are outlined referring to Panda (2004), Rowntree (1994), and Verduin and Clark (1991).

- Preparing, vetting, editing the lecture scripts
- Preparing the learning materials through different media
- Preparing exams and students' assignments
- Preparing broadcasts for students
- Conducting tutorial program
- Contact students for any academic help and solve students' difficulties.
- Evaluating exams and assignments, and give necessary feedback
- Revising courses and conducting researches etc.

2.9. The Roles of a Tutor

The major role of a tutor is to facilitate and guide students' learning in distance education (Panda, 2004; Verduin and Clark, 1991). Subject tutors are not required to deliver the curriculum content, but to facilitate learning by checking students' difficulties and giving remedial help (Rogers, 1989). Most of the tutors efforts, as to scholars (Aruna Goel and S.L. Goel, 2001; Gachuhi and Matiru, 1999; Lentell, 2003; Thorpe, 1994), are concentrated on: counseling, teaching /running tutorials, evaluating assignments / exams, and giving feedback on students' written work.

Thorpe (1994) viewed tutors as facilitators or mediators between students' learning and the learning materials. He explained two major roles of tutors, specialist and generalist roles, although it is not easy to separate one from the other distinctively. As to Thorpe, a tutor is said to play a specialist role when s/he teach a certain elements in a course which is felt can be taught using the human teachers in a system. A tutor is said to play a generalist role, when s/he provides a support, and facilitates a relationship with learner (s), which other materials can't provide.

An effective tutor, according to Rogers (1989: 88) "... has a warm personality, generates and uses learners' ideas, is skilled in resolving learners' problem, and is enthusiastic". Therefore, tutors are expected to have knowledge of the subject, communicate effectively and be committed to their roles and responsibilities.

However, it is frequently claimed that since tutors in most distance education institutions are part-time employees, there is a problem on the part of the tutors in carrying out their duties effectively. In support of this, Paul (1990) noted that the overall commitment of the part-time tutors is not as strong as that of full-time permanent staff, and their full-time involvement may be to other institution. Rogers (1989) added another problem in which some tutors are trying to give all the information to students, with out giving students a chance to participate.

It is important to note that teachers in many cases, in addition to preparing courses and assignments, scripting for audio- video programs, and the likes, they can also carryout tutorial activities (Panda, 2004).

2.10. The Roles of the Distance Learners

Learners are the decisive subjects for the failure or the success of distance education, because distance education is based more on the students' independent work. Ejeta (2005) referred to Lewis to say that learners are the most important elements either for accepting or rejecting what is to be taught. Therefore, difficulty of the course, delay of feedback, lack of necessary supportive services, etc. may affect learners either to continue or discontinue the program.

Fisseha (2006) referring to Keegan (1993) indicated that learners are one of the four essential elements, which any teaching- learning situation possesses. Thus, students' interest, motivation, their pre-requisite educational level and their participation have a paramount important for the success of the distance education system.

As a conclusive statement, effective distance education takes place when students process the material they received, complete the assignments

and assimilate the tutors' responses /comments as essential part of their learning (Lentell, 2003).

Chapter Three

Research Design and Methodology

3.1. Design

In this study, it is tried to reveal the current practices of the implementation of distance secondary education for the army in the context of the design of the modular text, the provision of learning materials and supportive services, and the commitment of the concerned bodies in the delivery process. The study was made by taking grade–10 biology course as a reference. Thus, the descriptive survey research method was used for this study. This method was selected because it helped the researcher to obtain information (data) at a time and to have many ways of gathering data.

3.2 Data Source

The major data sources for the study were primary sources such as grade-10 army distance students, grade-10 biology tutors, Unit Coordinators or Command Education Heads, Distance Education Main Division Head and tutorial activities. The secondary sources were documents such as Academic Education Policy for the Army and Army Distance Students' Guide

3.3 Source Population

The distance secondary education is offered to the army students in the five commands (namely: Western Command, Central Command, Northern Command, Sub-Command and Eastern Command), in six training centers (Debre-Zeit, Awash-Arba, Bilate, Bir-Sheleko, Tollay and Hurso), and in different offices of the MOND. This study didn't include

the Eastern Command and Hurso Training Center because the teaching learning processes in these sites were interrupted temporarily. Based on this, grade-10 distance students from the remaining four commands, five training centers and other offices were taken as a source population. The questionnaire was administered during the 1st semester final examination period because it was the convenient time to get students gathered together. Totally 2,823 grade-10 students were assigned to take the examination in 47 examination centers.

3.4. Sampling Technique

3.4.1. Sample Selection for Qualitative Data

5 biology tutors (i.e., 3 from the DEMD, 1 from Northern Command and 1from Sub-command), 3 command education heads (1 from Central, 1from Northern and 1 from Sub–command), and the DEMD principal were selected purposefully with the assumption that relevant data could be obtained from these individuals.

3 tutorial centers were selected by convenience sampling technique to observe the tutorial activities. Since these centers were located in the near by places, the researcher assumed that observing these centers would save time and money. Moreover, documents such as 'Academic Education Policy for the Army' and 'Army Distance Students' Guide' were taken purposefully to examine the intended delivery strategy.

3.4.2. Sample Selection for Quantitative Data

Since students were found clustered in to 47 examination centers during the time of data collection, a total of 340 students were selected by cluster sampling technique. In this case:

1st.From the 47 examination centers, 32 centers were selected by using simple random sampling technique.

2nd. Since the number of students in each center is different, the sample size (340) was distributed to each of the 32 centers based on probability proportionate to size technique to determine the number of study subjects in each center.

Finally, respondents from each site were selected by systematic random sampling technique. (See Table-2 on the next page)

Table-2. The number of students and sample size in selected examination centers

Command/Training Center	Exam centers	No. of students	Sample size
Central Command	Adinebri	75	11
	Adidaro	85	12
	Biyara	124	17
	Adihagri	163	23
	Shiraro	263	37
	Adiawala	135	19
Northern Command	Shire	51	7
	kuha	69	10
	Adigrat	119	17
	Adawa	38	5
	Axum	35	5
	Edagarobe	64	9
	Enticho	49	7
	Agulae	68	10
	wukro	59	9
	Zalanbesa	68	10
Sub-Command	Dessie	57	8
	Bure	81	11
	Elidar	74	10
Training Center	Bilate	68	10
	Birsheleko	57	8
	Awasharba	68	9
	Tollay	22	3
	D/zeit	68	9
Agazy and others	Awasa	37	5
	Addis Ababa	59	8
Western Command	Dansha	103	14
	Baeker	79	11
	Azezo	73	10
	Chilga	20	3
	Bahir Dar	83	11
	Gambela	21	3
Total		**2435**	**340**

3.5. Data Collecting Instruments

Basically, quantitative data collection instrument was employed; however, some qualitative data collection instruments were also employed to complement the data obtained through quantitative method. Accordingly, questionnaire was employed to collect quantitative data, whereas interviews, document analysis and observation were used to acquire relevant qualitative data. Most of the questionnaires and interview guides were adapted from an article 'Distance Learning Evaluation Guide' by ACE (1996) and a book 'Distance Education in the 21st Century' by Aruna Goel & S.L. Goel (2001).

3.5.1. Questionnaire

The questionnaire was focused to get students' ideas concerning the appropriateness of grade -10 biology modular text, the provision of learning materials, the adequacy and convenience of student supportive services and the work efforts of the concerned bodies in the distance education implementation process. Questionnaire written in Amharic was used. Both close-ended questions (in which respondents were offered a set of alternatives and asked to choose the one that closely represent their views) and open-ended questions (which invited the respondents to provide their thoughts freely and to explain their feelings further) were employed.

The questionnaires were distributed to the respondents and collected by the exam center supervisors (who are the distance education panel members under the DEMD) during the 1st semester final examination period. Out of 340 questionnaire papers distributed to the respondents, 324 (93.3%) of them were filled and collected back.

3.5.2. Interview

Interview was focused to generate relevant information from experts (biology tutors, unit coordinators and the DEMD principal) concerning the implementation practice of distance secondary education. Semi-structured interview guide was employed. It was used to complement and obtain relevant data that could not be handled by questionnaire. It was also found to be essential to triangulate the information already obtained through questionnaire.

3.5.3. Document Analysis

Documents such as Academic Education Policy for the Army and Army Distance Students' Guide were analyzed. The analysis was focused to see the type of instructional materials intended to be used for the delivery of distance education for the army.

3.5.4. Observation

Tutorial activities in three selected tutorial centers were observed using observation checklist (see Appendix -E). This observation was made to get first hand information that help to describe the tutorial activities. It was focused mainly on distant learners' regular attendance on the face-to-face tutorial session, presence and use of necessary teaching aids, tutors' teaching mode, and students' activities. The tutorial sessions in each of the three centers were observed twice.

3.6. Pilot-testing the Instruments

The questionnaires were pre-tested to check whether they can generate the expected information and whether they have internal consistency. In this case, the questionnaires were distributed to 20 students who are selected by simple random sampling technique from Agazy Military Division found in Addis Ababa. The data obtained from students were

analyzed to determine the internal consistency of the questionnaires. Based on the responses obtained from the pilot-test and the comments and suggestions given by the advisor, the questionnaires were modified and improved.

3.7. Data Management and Analysis

The frequencies of the closed-ended questionnaire responses against the given alternatives were tallied and tabulated in the table. These quantitative data from questionnaire were analyzed using percentages and word expressions. The written responses to the open-ended questions were translated into English, summarized and supplemented to the quantitative description.

Qualitative data obtained from interviews, document analysis and observations were summarized and made manageable. Interview responses were translated in to English. These qualitative data were interpreted by narrating and supplemented to the main interpretation. In the interpretation of the interview results, simple codes using letters such as SC, ST, NC, NT, CT, ATA, ATB and ATS are used to denote interviewee in order to keep their anonymity.

Chapter Four

Presentation and Interpretation of Data

This section deals with the presentation and interpretation of data gathered from the different sources followed by discussion on the findings. The presentation begins with the brief description of the background information of the respondents. The quantitative data are presented in tables using percentages. The results in tables are described in words and are supplemented by qualitative results.

4.1. Background Information of the Respondents

Under this section, the background information of the major data sources (i.e., student respondents, interviewed tutors and unit coordinators, and observed tutorial centers) is briefly described.

4.1.1. Student Respondents

The distance students in this study are the army members who are found in different areas of the country, ranging from the border (remotest) to the center (urban). Of the questionnaire administered to 340 students, 324 of them were collected back. Thus, the analysis was made using 324 respondents.

Table–3. Sex, age and service in year of the student respondents

	Sex			Age						Service Year					
Response	Male	Female	Total	Below 26	26-30	31-35	36-40	Above 40	Total	Below 6	6-10	11-15	16-20	Above 20	Total
N	302	-	302	41	112	84	50	16	303	58	117	80	27	30	312
%	100	-	100	13.5	37	27.7	16.5	5.3	100	18.6	37.5	25.6	8.7	9.6	100

Respondents by sex

Out of 324 respondents, 302 (93%) of them have marked their sex, and all (100%) of them are males (see table – 3). This is because most of the army members are males.

Respondents by age

Out of 324 respondents, 303 (94%) of them have marked their ages. As indicated in table- 3, the highest proportion (37%) of the respondents were aged from 26 to 30; 28% of them were aged from 31 to 35; and the smallest proportion (5.3%) of them were aged above 40 years old. Thus, distance education for such adult population can be considered as the best alternative.

Respondents by service year

Out of 324 respondents, 312 (96%) of them have marked their service year. As indicated in table –3, the highest proportion (38%) of the respondents had 6 to 10 years service in the MOND; 26% of them had 11 to 15 years service; and the smallest proportion (8.7%) of them had 16 to 20 years service.

4.1.2. Tutors

All of the five tutors are males. They all have first degree in biology, however they have never taken any training concerning tutoring. Three of them are permanent employees in the DEMD who conduct tutorial session in some tutorial centers, in addition to other academic activities. Two of them are par-timers, who are high-school biology teachers. These par-time tutors may not be as strongly committed as the full-time tutors, because their full-time involvement would be in the institution for which they are permanently employed.

4.1.3. Unit Coordinators (Command Education Division Heads)

The major responsibilities of the command education division heads are managing, organizing and coordinating educational programs under the commands. Therefore, these principals run the coordinating of distance education process. As revealed through the interview, all of the three principals are recruited from the armies based on their educational level and experience. However, it is learned that they have never taken special trainings that could help them coordinate distance education program.

4.1.4. Observed Tutorial Centers

The tutorial sessions in three tutorial centers such as Meskerem -2 Elementary School, Ethiopian Defense Command and Staff College and Tatek Military Camp tutorial centers were observed

i). Meskerem-2 Elementary School: - The school is found in Abuarie. By asking the school administrators cooperation, this school served as a tutorial center. The tutorial activities in this center were coordinated by the Military Division education principals. The session was scheduled in the weekends. About 29 grade-10 students were enrolled to attend the

tutorial session, but with a two days observation it was learned that only about 7-9 students have attended the session.

ii). Ethiopian Defense Command and Staff College: - This college is situated in Jan-Meda. The dean of the college coordinated the tutorial program. About 31 grade-10 students were enrolled to attend the tutorial session. With a two days observation it was learned that about 22-25 students have attended the session.

iii). Tatek Military Camp: - the Military division education principals coordinated the tutorial program in this center. About 14 grade-10 students were enrolled to attend the tutorial session, but with a two days observation it was learned that only about 6-7 students have attended the session.

In all of these three tutorial centers it is realized that there were no teaching aids to be used for the tutorial session. It is also noted that students' interest to tutorial session is found to be low.

4.2. Appropriateness of Grade-10 Biology Modular text

As discussed in the literature review section, the design of the course material has much influence on the distance learning-teaching process where students are studying being separated from their teachers. As to Pillai (1999), course material development is one of the major concerns that an effective teaching strategy for distance education program should address. A course material for distance learning needs to be designed in self-instructional mode for which students can learn with little help from their teachers (Rowntree, 1994). Since the printed instructional materials are the basic mode of delivery in the distance secondary education for the army, the researcher found it important to see if the grade-10 biology modular text is designed in the self-instructional format and if it is

suitable for students. Accordingly, the respondents were provided with questions that are supposed to measure the appropriateness of its design (see table-4).

***Table*-4 Appropriateness of grade-10 biology Modular text**

No.	Items	Responses					
		Yes		No		Total	
		N	%	N	%	N	%
1	Are objectives simply stated and understandable to you?	264	86.3	42	13.7	306	94.4
2	Do the objectives in the course reflect your personal interest and needs?	234	77	70	23	304	93.8
3	Are the objectives achievable?	182	60.5	119	39.5	301	93
4	Are contents written in simple and direct language with no sexist or racist stereotyping?	275	89.6	32	10.4	307	94.8
5	Are the contents comprehensive enough to enable you achieve the course objectives?	267	87.8	37	12.2	304	93.8
6	Are the contents written readable and understandable to you?	225	74.3	78	25.7	303	93.5
7	Is the course designed in the interactive style where you have the opportunity to answer problems, carry out tasks, supply your personal interpretations, and draw up conclusions?	184	61.7	114	38.3	298	92
8	Does the course provide you with the opportunity to interact and collaborate with other students?	101	33.6	200	66.4	301	100
9	Are contents and learning activities presented hierarchically or are they sequenced appropriately taking the pre-requisite knowledge and skills in to account?	185	61.7	115	38.3	300	100
10	Are the course contents and learning activities supported by illustrations, diagrams, pictures, etc?	186	60.6	121	39.4	307	100
11	Do the elements of the course: learning contents, instructional methods, learning materials (print and /or electronic media), and context complement each other?	157	52.5	142	47.5	299	100
12	Are self-assessment questions closely linked to the course objectives included in the modular text?	208	68.6	95	31.4	303	100
13	Do you generally believe that the modular text is designed in such a form that you can study it independently?	237	76.7	72	23.3	309	100

As indicated in table-4, the majority, 264 (86.3%) of the respondents replied that the course objectives were simply stated and understandable. The majority, 234 (77%) of them agreed that these objectives reflected their personal interests and needs. Majority, 182 (60.5%) of them responded that these objectives were achievable. Generally, the responses for items 1-3 showed that the objectives stated in grade-10 biology modular text were appropriately formulated.

Similar to responses for objectives, the responses concerning the course contents (Items 4-6) show that respondents were satisfied with the contents' appropriateness in terms of their clarity, comprehensiveness and readability. As shown in table 4, 275 (89.6%) of the respondents agreed that the contents were written using simple and direct language without sex or race bias; 267 (87.8%) of them said that they were comprehensive; and 225 (74.3%) of them replied that they were readable and understandable.

The result obtained concerning learning activities in the modular text (Items 7& 8) was different from what was obtained so far. As indicated in the table, 184 (61.7%) of the respondents replied that the modular text provided them with the opportunity to answer problems, to carryout tasks, to supply their own personal interpretations, and to draw conclusions by themselves. But, 200 (66.4%) of them replied that this text did not give them a chance to interact and collaborate with each other. This indicates that even though the modular text encourages students' interaction with their learning, it lacks in the activities that encourage interaction and collaboration among students. In support of this result, the interview made with the tutors (ATB, ATS & ATA) revealed that in the modular texts, the inclusion of activities like: group assignments, group projects and individual assignments which require consultation and discussion with other students was overlooked.

The response from DEMD principal also showed that the modular text has not been revised and improved. As he said: "of course, it was started to revise and update the modular text. But it could not be finalized because of overburden of work on academic staff members" (April 30, 2007).

With regard to the organization of contents and learning activities (Items 9-11), the majority, 185 (61.7%) of the respondents agreed that the contents and learning activities were appropriately sequenced. 186 (60.6%) of them replied that the contents and learning activities were supported by illustrations and diagrams, but 121 (39.4%) of them were not satisfied with these illustrations. ATB also reported that modular texts did not include some important pictures (April 23, 2007). When 157 (52.5%) of the respondents agreed that the contents, methods, learning materials (print and electronic media) and context complement each other, 142 (47.5%) of them did not agree. Such result might be due to the complete exclusion of electronic media in the delivery process (discussed more in section 4.3).

Concerning assessment (Item-12), the majority, 208 (68.6%) of the respondents replied that the modular text included self-assessment questions that are used to assure the attainment of the stated objectives.

Finally, the last question was presented with the assumption that the responses for it would give the whole picture of the design of the modular text. As indicated in the same table, the majority, 237 (76.7%) of the respondents believed that the modular text was designed appropriately in such a form that can be studied independently. The interview result from the tutors also strengthened this idea. Most of the tutors (ATB, ATS, ST & NT) agreed that the modular text had a quality of inviting and

motivating students to read more. With regard to this ST said: "I found the modular text very important and interesting. Honestly Speaking, I am using it for my regular teaching" (April 10, 2007).

Generally, on the basis of the results presented so far, it is possible to say that distance students did not face a serious problem on their study due to a defect in the design of grade-10 biology modular text. More importantly, the majority of the respondents felt that the modular text suited them in their learning. However, some deficiencies on the part of the learning activities and illustrations were noted which call for further evaluation and revision of the text.

4.3. Provision of Distance Learning Materials

As it is discussed in the Literature Review section, the distance learning-teaching process is greatly affected by the quantity and quality of learning materials made available to distance students on time. Since distance teaching is pre-recording and delivering through media like print and audio-visual devices, the distance education offering institutions need to supply the necessary delivery materials to the students. For example, the proposal document by EMA (2000: 44) to train Primary Second Cycle Teachers lists out the learning materials such as references, teaching aids (models, charts, maps, etc.) and electronic media (radio, audio-video recorders, audio-video cassettes and TV monitor) that need to be available in distance learning centers to supplement the modular texts. Thus, the army distance students are expected to have access to such types of learning materials, in addition to the modular texts. In this regard, the respondents were provided with questions and their replies are tabulated in table-5 below. Besides, interview was made with unit coordinators and the DEMD Head.

***Table*-5. Provision of Learning Materials.**

No.	Items	Responses					
		Yes		No		Total	
		N	%	N	%	N	%
1	Do you get all modular texts of the course?	210	68.9	95	31.1	305	94.1
2	Do you get the modular texts on time?	52	17	253	83	305	94.1
3	Do you have access to reference books, textbooks, handouts, manuals?	34	11.3	268	88.7	302	93.2
4	Do you get the 'Army Distance Students' Guide'?	20	6.4	291	93.6	311	96
5	Do you get electronic instructional media (like radio, audio-video cassettes, etc)?	13	4.2	297	95.8	310	95.7

As shown in table-5, even though 210 (68.9%) of the respondents agreed that they did get all the modular texts of the course, still 95 (31.1% of them did not agree- showing that there was a problem in dispatching of the modular texts.

Concerning the time the modular texts distributed to the learners, the majority, 253 (83%) of the respondents replied that they did not get the modular texts on time. Most the respondents' written responses to the open ended questions also showed that the modular texts mostly arrived about two months after the semester had begun. Moreover, the researcher learned from the interview made with the Unit Coordinators that delay in arrival of the modular texts was common.

As NC said:

> *The modular texts mostly arrive 1-2 months after the students are enrolled. The DEMD takes the greatest share of accountability for this problem, although our command education division and its sub divisions have some contributions due to various factors like lack of transportation and lack of coordination (April 12, 2007).*

Similarly, SC said:

> *Generally, there was a problem in distributing the modular texts at each level starting from the DEMD till they are handed over to the students. This could be alleviated if the DEMD distributed them to each command in advance (April 10, 2007).*

The DEMD principal also admitted that there was a delay in the distribution of the modular text due to different factors. When he reason out, he said: "Since the budget was not released on time, the modules were printed lately. Moreover, there was shortage of transport vehicles." (April 30, 2007).

Such a situation where distance students are not provided with the necessary learning materials on time brings about uncertainty and anxiety in the minds of the learners and demotivates them (Manjulika & Reddy, 1996).

As the researcher analyzed the 'Army Distance Students' Guide', the textbooks, which could serve as references and to supplement the print instructional module, would be distributed to distance learners. But as indicated in table-5, 268 (88.7%) of the respondents claimed that they had no access to reference books textbooks, handouts or manuals. The interview result from the unit coordinators strengthened the students' response. All of the unit coordinators said that no textbooks or any other supplementary printed materials were supplied to students.

The 'Army Distance Students' Guide' generally consists of important information which make distance students aware of what they are expected to carryout throughout their career as distance student. It was supposed to be handed over to each student at the time of admission. However, 291 (93.6%) of the respondents replied that they did not get this guide. The interview made with coordinators also revealed that most of the unit coordinators were not aware of the importance of this guide and they did not tried to dispatch it to students. They said that the DEMD did not send enough amounts of these guides to them nor told them to take and distribute to the learners. On the other hand, the DEMD principal said: "Each Command and Training Center Education Offices have got at least a copy of the guide. And it is their responsibility to duplicate and distribute to students" (April 30, 2007).

One of the unit coordinators (NC), of course believed on the need to distribute this guide and he said: "The guide is under revision and is going to be dispatched to students for the next academic year." (April 12, 2007).

Thus, it seems that due to the concerned bodies' lack of clarity on their responsibilities or being not aware of its importance, students were not made use of this guide. In such a situation, distance students may lack in the awareness on what they are expected to perform like: why and when they need to work and submit their assignments, when they need to start and finish the semester, how to study, when they need to take exam etc. (Melton, 2002).

Concerning the electronic instructional materials, the policy document ('Academic Education Policy for the Army') showed that the distance education for the army was intended to be delivered mainly through the

printed instructional materials in combination with other electronic instructional materials such as radio broadcasts, audio-videocassettes etc. However, as indicated in table-5, 297 (95.8%) of the respondents replied that they did not get and use electronic instructional media. The interview result also confirmed that students had never been made use of electronic instructional materials. Regarding the interview guide focused if the institution has educational technology plan, the principal replied as follows:

> *Actually, it is believed that the use of educational technologies like radio broadcasts, audio-videocassettes and the likes would enhance the educational delivery to our distance learners. But due to budgetary constraints and shortage of man power, no emphasis is given to these media, and no plan is made to incorporate them in the delivery process. (April 30, 2007).*

Therefore, no audio-video cassettes or any other electronic media were prepared by the institution so far and no plan was made to use them for the future. The result showed that the army distance students were devoid of interacting with their learning and communicating with their teachers through electronic media, but they were simply provided with the printed modular text only. Of course the printed self-instructional materials are the foundation of any academic course, but such a situation in which students are made to depend only on these materials excluding the electronic materials leads them to a mode of education considered to be passive, devoid of interest and enthusiasm leading to boredom (Aruna Goel & S.L. Goel, 2001).

As discussed in Chapter-2, the term 'Distance Education' replaced the term 'Correspondence Education' for the reason that the printed word, which was the primary means of communication between the teacher and the learner, became supplemented by the communication technologies like radio broadcasts and audio-video media. Moreover, the

definitions given to the term 'Distance Education' by many scholars underline the utilization of different electronic media as one of the essential characteristic feature of distance education. Thus, this made of education in which the army distance students' learning depends exclusively on print-instructional material with out being supplemented with the electronic instructional materials cannot characterize distance education, but correspondence education.

4.4. Availability and Convenient of Supportive Services

Student supportive services are important to complement distance learners' limitations and promote harmonious relationship between students and the distance education system. In this regard, the availability and convenience of the major supportive services such as face-to-face tutorial service, assessment service, library service, laboratory, guidance and counseling service to the army distance students are discussed below.

4.4.1. Face-to-face Tutorial Service

As discussed in Chapter–2, face-to-face tutorial is face-to-face contact session between teachers (tutors) and distance students for the purpose of teaching, motivating, creating a sense of belongingness, solving students' difficulties and anxieties. It is known to remove students' self-created tensions, to make them feel secure and comfort, to enhance their satisfaction, and motivate them to learn and move a head. To make this in to effect, issues like advance planning of dates and contents to be covered and informing these to students, making effective communication among the concerned parties, well trained tutors and so on are required. In line with this, questions were presented to the respondents in order to know the overall tutorial practices of the army students and the benefits they gained from the tutorial. Their replies are tabulated in table-6 below.

***Table*-6. Responses to the Tutorial Program**

No	Items	Responses					
		Yes		No		Total	
		N	%	N	%	N	%
1	Do you get information about the dates for tutorial session in advance?	90	29.4	216	70.6	306	94.4
2	Do you know the topics to be covered by the tutorial session in advance?	61	19.9	245	80.1	306	94.4
3	Is the tutorial schedule consistent, and are the classes held regularly as per the time table provided to you?	102	34.2	196	65.8	298	92
4	Do you believe the duration of tutorial session is enough to get sufficient exposure?	79	25.8	227	74.2	306	94.4
5	Are you satisfied with the coverage of contents at the tutorial program?	93	30.7	210	69.3	303	93.5
6	Do you find your teachers (tutors) effective and enthusiastic?	183	59.8	123	40.2	306	94.4
7	Does your level of confidence increase after the tutorial class?	178	58.9	124	41.1	302	93.2
8	Do the tutorial programs help you to prepare yourself for exam?	211	69.9	91	30.1	302	93.2
9	Is the overall impact of the tutorial program positive?	224	73.2	82	26.8	306	94.4

Informing students the dates and the contents to be covered before the session would make them prepared for better understanding and appreciation. But, as indicated in table-6, 216 (70.6%) of the respondents replied that they did not know the dates for tutorial session; and 80.1% of them did not know the topics to be covered before they attended the tutorial session. Thus, the study shows that the majority of the students were not made aware of the tutorial session in advance. It

30 periods per subject for Mekelle tutorial center and 5 days for Shire tutorial center were allotted. This indicates that the army students were not treated equally in terms of the time duration they are engaged in the tutorial session.

Concerning the quality of the tutors, even though 183 (59.8%) of the respondents agreed on the effectiveness of their tutors, 123 (40.2%) of them did not agree on- showing that there are tutors who lack in the required characters of effective tutor. The interview result confirmed that tutors have never got any training and/or orientation on how they need to manage tutoring. As it is learned from the interview and tutorial classroom observation, most of the tutors were running for delivering of the contents through lecturing (dictating) rather than starting from problems students face in their entire study. Little or no emphasis was given for guiding or directing students to solve problems by themselves, and there was less encouragement for self-learning. Tutors' reasons why they focused on such a method were to cover large amount of contents with in short time and also because students were interested in such methods. As tutors (ATB and ATA) also said, students still had a sense of dependency on tutors with no improvement in their interest towards independent learning- indicating that much effort is left undone by the tutors to encourage students to learn more by themselves. All these might be due to tutoring was run by untrained tutors. The reason why the larger proportion of respondents agreed on the effectiveness of tutors could be because students expect tutors to deliver lectures and conduct sessions as traditional classroom fashion. In such cases where the tutorial sessions are reduced to mere lectures, it is difficult to break away from traditional teacher centered approach which discourages students' adjustment to distance mode of learning (Manjulika & Reddy, 1996).

178 (58.9%) of the respondents felt that their level of self-confidence was increased as a result of tutorial session, but 41.1% of them felt that the tutorial session still did not bring about any increment in their level of confidence. This might be associated with the short time and inconsistent schedule they claimed.

The majority, 211 (69.9%) of the respondents believed that the tutorial program helped to prepare them for examination. Moreover, 224 (73%) of them replied that the tutorial program had an overall positive impact on their learning process. These indicate that even though the tutorial program has got a number of limitations that require serious adjustments (improvements), many of the students agreed on the fact that it adds some inputs in their learning and they wanted it to continue.

4.4.2. Assessment Services

Assessment is not only used to measure students' performance (achievement), but also it can play a role in enhancing students' participation in their learning. As discussed in Chapter-2, formative assessment (using assignments, self-test questions, in-text questions and exercises) promote students' engagement in learning, improve their understanding by inviting them to respond and check their work against the comments, and encourage self-learning.

In this study, the respondents were provided with questions in order to know the practices of assessment services available to the army students and to know if they are benefited from the services. Their replies are tabulated in Table-7 below.

***Table-7* Responses to the Assessment Services.**

No	Items	Responses					
		Yes		No		Total	
		N	%	N	%	N	%
1	Do you get informed in advance about the exam date and when to submit your assignment?	141	45.2	171	54.8	312	96.3
2	Do the assessment methods (exams, assignments and self-assessment exercises) measure the achievement of the announced course objectives and learning outcomes?	219	70.2	93	29.8	312	96.3
3	Does the number of questions in the exams, assignments and self-test exercises adequately cover the learning contents of the course?	255	82.3	55	17.7	310	95.7
4	Are the questions clear and simple to understand with no typographic error?	149	47.8	163	52.2	312	96.3
5	Do you find the answers easily available in your modular text?	277	89.6	32	10.4	309	95.4
6	Do you find the assessment methods generally useful and relevant?	239	77.6	69	22.4	308	95.1

As indicated in table-7, the larger proportion, 171 (54.8%) of the respondents did not get information in advance about the dates for examination and for submission of assignments. This indicates that there was a loose communication between the distance students and the concerned bodies. If students are not aware of the dates for submission of assignments and exams, they may not complete and submit their

assignments on time, and they may fail to prepare for exams. As a result students may fall behind their studies.

It is clear that appropriately constructed assessment questions measure the achievement of the instructional objectives and adequately cover the course contents. In this regard, the majority, 219 (70.2%) of the respondents agreed that the assessment methods could measure the achievement of the objectives, and 255 (82.3%) of them agreed that these questions adequately covered the course contents.

With regard to clarity of questions, 163 (52.2%) of the respondents replied that the questions lack clarity and have typographic errors. Similarly, for the open-ended question which invited them to mention problems (if any more) concerning the assessment services, respondents mentioned that some questions in exams and assignments had conceptual and type errors and they were difficult to be understood. But, it is suggested that questions should not be vague and should be vetted and edited so as to avoid typographic and conceptual errors (Rowntree, 1994).

It is recommended that the answers for assessment questions should be available in the self-instructional material to encourage students read and do more on the material. Concerning this, the majority, 277 (89.6%) of the respondents confirmed that the answers for questions were found in the modular texts given to them. Finally, 239 (77.6%) of the respondents found out that the assessment questions provided to them were generally relevant and useful.

Feedback to Assignment Work

Comments and criticisms for students' written work on assignments are essential to facilitate distance learning. Lentell (2003) recommended that students' written work on assignments should be evaluated thoroughly by giving detailed comments and explanations to their faults and lapses in unambiguous manner so that they can learn more from their mistakes. Accordingly, the respondents were provided with questions to know if appropriate feedbacks were given to them. Their replies are tabulated in Table-8 below:-

Table-8. Feedbacks (comments) to Students' work

Items	Alternatives	Responses	
		N	%
Have you ever got your evaluated assignments back?	yes	176	56.6
	no	135	43.4
	total	311	96
How long do you wait for to get your evaluated assignment back?	a month	3	1
	1-3 months	116	39.3
	more than 3 months	176	59.7
	total	295	91.1
Do you get comments and suggestions on your assignments?	yes	30	9.9
	no	273	90.1
	total	303	93.5
Are the comments and suggestions constructive and important to you?	yes	12	4.3
	no	265	95.7
	total	277	85.5

As shown in table 8, 176 (56.6%) of the respondents replied that their assignment works were evaluated and returned to them, where as 135 (43.4%) of them responded that they did not get their assignments back. 176 (59.7%) of the respondents got these evaluated assignments back after 3 months. 116 (39.3%) of them got with in 1-3 months time, and only 3 (1%) of them got with in a month time. As some respondents also replied to the open-ended question, the evaluated assignments were returned to them after the final exam and that they could not make use of feedbacks to prepare for examination.

This indicates that the interaction between the teachers (tutors) and students through assignments was limited. Assignments' role in maintaining a link between students and tutors, especially in distance education like ours with no interaction between teachers and students through communication technologies, is crucial. This can be realized when students are provided with appropriate feedback on time. However, the study shows that the majority of students did not get the evaluated assignments back on time. As a result they could not discover their errors while the subject is fresh in their mind. Similar result was obtained from the interview made with unit coordinators.

Concerning comments on assignments, the majority, 273 (90.1%) of the respondents replied that no written comments and suggestions were given on their assignment works; and 265 (95.7%) of them replied that the comments were not constructive. The later result may be because no comments were given at all.

As it was learned from the interview made with tutors and coordinators, tutors were focused mainly on marking the points without giving comments on students' assignment work. This was because tutors were

assigned to evaluate assignments of large number of students and thus it would be difficult for them to finish on time if they wrote comments.

In this mode of teaching where students are separated in place and time from their teachers, students are expected to be provided with constructive and encouraging comments and suggestions on their assignment works that could help them learn more from and give direction for further study. However, the army distance learners were not benefited from timely and constructive feedback. Such lack of the right amount and quality of feedback may result in failure of distance learners (Rogers, 1989).

Some other Supportive Services

Under this section, some major supportive services, which are expected to be available to the army distance students, were listed and the respondents were requested to indicate the extent of their availability. Their replies are tabulated in table-9 below.

***Table*-9. Availability of Student Supportive Services**

No	Supportive services	Responses							
		Medium		Low		None		Total	
		N	%	N	%	N	%	N	%
1	Library Service	3	1	31	10.1	272	88.9	306	94.4
2	Practical work/ Laboratory Service	2	0.7	36	11.8	267	87.5	305	94.1
3	Guidance and Counseling Service	100	33.3	144	47.8	57	18.9	301	93

As indicated in Table -9, the majority, 272 (88.9%) of the respondents replied that they did not have access to the library services. As it was also realized from the interview made with the unit coordinators, students did not get access to library services, or there was no any means by which students can borrow and use the supplementary learning materials. Experiences of many distance education institutions showed that library services have a central place in the education process, and there was a possibility in which institutions made links to public or other institutions' libraries to increase the library service access to distance students (Manjulika and Reddy, 1996; Mizoue, 2003). But, no effort was made by the unit coordinators or by any concerned body in the distance education for the army, either to set up a library or to facilitate situations where students can use public or conventional school libraries.

Laboratory or practical work is essential in teaching science such as biology in order for students to conceptualize and develop their scientific skills. As it is discussed in the literature section, it is a common practice in the study centers of distance education institutions to provide students with the opportunity to involve in science practical activities. However, this study showed that laboratory/ or practical activities were totally ignored. As indicated in the table, 267 (88%) of the respondents replied that they did not utilize laboratory practical. All of the tutors also confirmed that it was unthinkable to conduct or to demonstrate experiments to their students, or to let their students involve in any practical activities for the reason that there was no laboratory workshop with the necessary laboratory equipments. From the interview, the researcher realized that tutors and / or other concerned bodies did not aware of / or were ignorant of the alternative practical activities that can be done outside the laboratory using locally available materials, as suggested by Temechegn (2000).

Concerning guiding and counseling of students, 100 (33.3%) of the respondents replied 'medium', 144 (47.8%) said 'low' and 57 (18.9%) of them said 'no'. That means the majority of the respondents were not satisfied in guiding and counseling services provided to them. It was also realized from the interview made with the unit coordinators and tutors that no emphasis was given for guiding and giving directions to distance students to adjust themselves with the distance mode of learning and to encourage self-learning. Most of the tutors did not deny that their duties during face-to-face contact were focused more on delivering the content, giving little or no emphasis for guiding and counseling students. However, it is suggested that tutors are not expected to deliver all the curricular contents, but should focus mainly on guiding students and facilitating their learning (Rogers, 1989). If distance students do not get the opportunity to come in contact with a person who can help them and show directions so as to come up with solutions to the problems related to their learning, they may feel insecure and may fail to adjust themselves with their learning.

4.4.4. Convenient of Support Services

Manjulika and Reddy (1996) recommended that adequate and appropriate support services should be provided to distance learners to help them overcome the feeling of isolation and to facilitate learning. However, no matter how appropriate and highly available the supportive services are, it would be meaningless if they are not properly utilized by students due to inconvenience of time and place. Thus, to know if the time was convenient for the army distance students to make use of tutorial and exam, questions were administered to the respondents (see table-10).

***Table* –10 Convenient of the Support Services**

Items	Alternatives	Responses	
		N	%
To what extent was the time convenient to use tutorial and/or exams	Much convenient	-	-
	Convenient	32	10.8
	Fairly convenient	66	22,2
	Less convenient	199	67
	total	297	91.7
Was there a time you missed tutorial and/or exams	yes	103	34.4
	no	196	65.6
	total	299	92.3

As indicated in table-10, the majority, 199 (67%) of the respondents replied that the time to utilize tutorial services and exams was less convenient for them. In support of this, many written responses to the open-ended question, which requested them to specify if they have any more suggestions about the tutorial program, revealed that there was little time gap between the tutorial session and the exam date. The researcher also got similar result from the tutors. Tutors (NT, ST & ATB) said that since the tutorial sessions and examinations were offered in almost the same time, students could not get time to revise and internalize what they grasped in the tutorial classroom before they sat for examinations. Similar response was obtained from coordinators (NC and CC). Here, the study shows that the time for tutorial and/ or exam is found inconvenient.

As indicated in the same table, 196 (65.6%) of the respondents did not miss any of the tutorial and/or exam sessions, but 103 (34.4%) of them missed. That means the majority of the respondents attended the services offered. For the question: "List out the reasons why you missed

the tutorial and/or the exams", "I have been assigned to go to the other site for work" was the most frequently written response. Hence, the nature of their duties was one of the factors which affect their attendance in the tutorial/exam sessions.

4.5. Are the Concerned Bodies Discharging their Duties and Responsibilities?

4.5.1. The Administrative Body

As discussed more in the literature review section, distance education is more administrative dependent and needs responsive administration so as to solve students' difficulties promptly and efficiently. Thus, the administrative personnel need to carryout their duties with sense of purpose and devotion for the success of the implementation process. In this regard, the respondents were invited to evaluate the distance education administrative body along the activities it needs to carryout. The responses are tabulated in table-11 below.

***Table*-11. Evaluative Responses to Administrative Activities.**

No	Major Activities to be carried out by the administrative body	Responses							
		High		Medium		Low		Total	
		N	%	N	%	N	%	N	%
1	giving the necessary information (orientation) to the students?	24	8	76	25	205	67	305	94.1
2	facilitating of sites for study, exam, etc., and scheduling	49	15.9	92	29.9	167	54.2	308	95.1
3	arranging and coordinating tutorial programs	21	6.9	116	37.9	169	55.2	306	94.4
4	dispatching of learning materials (modular text and evaluated assignments) to the students	58	19.1	72	23.7	174	57.2	304	93.8
5	registering and recording results and informing to students on time	41	13.4	121	39.5	144	47.1	306	94.4
6	supervising and monitoring students' activities and solving their problems	10	3.2	60	19.2	243	77.6	313	96
7	facilitating communication of students with their tutor/ teacher and with each other	19	6.1	28	9	263	84.8	310	95.7

Based on table-11 above, the evaluative responses of the respondents against the performance of the administrative body are presented as follows:

The majority, 205 (67%) of the respondents replied that the coordinators performed 'low' with regard to giving the necessary information /orientation to them. 167 (54.2%) of them evaluated the performance of the coordinators in facilitating sites for study and exam as 'low'. 169 (55.2%) of them replied 'low' against the performance of coordinators in arranging and coordinating tutorial programs. In support of these responses, one of the tutors (NT) claimed that there was a case when some of his students did not attend the session because they were not informed about the venue where the tutorial was conducted. It is also learned from the observation and interview that there were no teaching aids like diagrams, charts, models etc. in the tutorial centers. "We are expected to conduct the session using only chalk and board" ATS said (April 23, 2007).

The majority, 174 (57.2%) of them responded that the distributors performed 'low' in dispatching modular texts and evaluated assignments. 144 (47%) of them replied that the record officers performed 'low' in registering, recording their results and informing the results to them. 243 (77.6%) of them evaluated the performance of the supervisors in supervising and monitoring the learning processes and solving students' problems as 'low'. 263 (84.8%) of them evaluated 'low' against the performance of the institution in facilitating communication of students with their teacher and with each other. Moreover, "No emphasis is given to our education", was the most frequently written response to the question which requested them to specify problems if any more on the side of the administration

As it was realized from the interview made with the coordinators, most of the personnel who are involved in the implementation process were non-professionals recruited from the armies. Most of these personnel in each respective level were not well aware of their roles and responsibilities due

to lack of capacity building trainings (workshops). In support of this, Shirley (1995) claimed that many implementation efforts fail because staffs have not been trained in new kills.

The coordinators claimed that the DEMD had never supervised and monitored them so far, and had never given them comments and directions to take the necessary adjustments. To quote what one of the coordinators (SC) said: "Even they did not ask me to submit a quarterly and a half-year work report" (April 10, 2007). The DEMD Principal also admitted that there was a weakness with regard to giving refresher courses or capacity building trainings, supervising and monitoring, and conducting detailed evaluation study to make the necessary improvements. As discussed in Chapter-2, the principals' action conveys the message as to whether or not a planned change is to be taken seriously. That means, if the responsible personnel in the DEMD office show less devotion to the implementation process, it would be unlikely to expect more willingness and dedication from other staff members in each commands and divisions to carryout their respective tasks.

"Distance learning initiatives must be backed by an organizational commitment to quality and effectiveness in all aspects of the learning environment" (ACE, 1996). However, the study showed that the administrative body in the distance education for the army was not committed and has got serious weaknesses in giving the necessary orientations, in arranging and coordinating tutorials, in supplying of learning materials, in arranging trainings, in facilitating communication among the concerned parties and in monitoring and evaluating the learning process to take the necessary measures.

4.5.2. Army Distance Students

As discussed in the literature review section, since distance learning depends more on students' independent effort, students are taken as a decisive subjects for the distance education process. Effective distance education takes place when students are aware of their roles and carryout their activities with sense of devotion. In line of this issue, respondents were supplied with questions, which help to know how much they were involved in carrying out their roles and responsibilities.

To the question: "Do you know your roles and responsibilities as a secondary distance student?" the majority, 249 (82.7%) of the respondents replied 'Yes', but still 52 (17.3%) of them replied 'No'. Moreover, the commonly written responses to the question, which invited them to list out their major roles, were: "studying, doing assignments and submitting to the coordinators, attending tutorial session and taking examinations". Thus, it seems that the majority of students were aware of their duties. But, tutors claimed that most students asked them to deliver all the contents of the modular text like what the teacher do in regular classroom. Here, the reason why students want their tutor to deliver all the contents may be because they were accustomed to pass through lecturing method only.

Respondents were also requested to evaluate the effort they made along their major activities. Their replies are tabulated in table-12 below.

***Table*-12 Evaluative Responses to Students' Activities**

NO	Activities	High		Medium		Low		Total	
		N	%	N	%	N	%	N	%
1	Your learning interest and initiation in studying	268	87	40	13	-	-	308	95.1
2	Your effort to communicate with your tutor/ teacher, to ask & to get the necessary information and learning resources	54	17.5	211	68.3	44	14.2	309	95.4
3	Your effort in attending tutorial and preparing your self for examinations.	181	59.5	103	3.9	20	6.6	304	93.8
4	Your effort in working on your assignments and submitting on time and regularly	167	54.9	137	45.1	-	-	304	93.8

As the table shows, the majority, 268 (87%) of the respondents replied that they had 'high' learning interest and initiation in studying. The majority, 211 (68.3%) of the respondents evaluated their own effort in communicating with their tutor/teacher and in asking to get the necessary information and learning materials as 'medium', 44 (14.2%) of them evaluated it as 'low' and only 54 (17.5%) of them evaluated their effort as 'high'. This indicates that students did not try their best with this regard.

181 (59.5%) of the respondents replied that they made 'high' effort in attending tutorial sessions and in preparing themselves for examinations, while 103 (34%) of them evaluated their effort 'medium'. 167 (55%) of the respondents replied that their effort in working on their

assignments and submitting on time and regularly was 'high', while 137 (45%) of them replied 'medium'. Generally, the evaluation responses showed that there was no serious weakness in students in carrying out their duties and responsibilities.

However, the interview made with tutors and unit coordinators revealed many limitations of distance students in carrying out their activities.

For example, ATA said:

> *Students do not perform assignments by themselves. They send their assignments only up to the mark, by copying the work of the others. Some students send blank sheet with no answers by writing their name only.(April 24, 2007)*

ATS added:

> *It is common to get the same answers (even with the same hand writing) in the assignment sheets coming from the same locality. We are fading up of correcting the same type of answers in many assignment sheets (April 23, 2007).*

As NC said:

> Many *students submit their assignments after the submission date. They do not have interest to learn and attend tutorials; they need only to be promoted to the next grade* (April 12, 2007.)

CC added:

> *Some students strive for the tutorial time to come out of their Camp and to spend the time for recreation instead of attending the tutorial session (April 16, 2007)*

The result obtained from students' own evaluative responses concerning the engagement of students in their duties was different from what was obtained from the interview. But, from tutorial class observation, it was learned that some students were not devoted to their learning. Some students' readiness to learn, their involvement in asking and answering questions and their punctuality in attending the classes were generally low. Thus, tutors' and coordinators' claim on lack of commitment or

reluctance of students seems to be true, although it needs further investigation.

For the next question, which was read as: "Is there any discouraging situation in your study?" 254 (83.3%) of the respondents replied 'yes', but only 51 (16.9%) of them replied 'no', which shows that there were discouraging situations against their studies. Following this, respondents were requested to specify these discouraging situations. For this question the most commonly written responses were:

> *The place is uncomfortable to study. The modular texts arrived lately. No tutorial is given and this leads us to lose hope. Marked assignments are not given to us i.e., no feedback is given. There is no enough time to study due to overburden of work.*

Similarly, tutors suggested that delay in arrival of the modular text, long turnaround time of assignments, inaccessibility of study centers (libraries), students' lower prior learning level and lack of proper information were the major factors which could affect the academic performance of students.

Thus, it would unlikely for students to discharge their roles and be active participant under such circumstances. Rather such discouraging situations may cause students to be dispirited and gave up processing (studying) and completing the assignments which eventually may result in failure of their learning (Lentell, 2003).

Chapter Five

Summary, Conclusions and Recommendations

5.1. Summary

The major objective of this study was to find out the current practice of the implementation of distance secondary education for the army, with a particular reference to grade–10 biology course. Specifically, the study was focused on the appropriateness of grade–10 biology modular text, the provision of distance learning materials to the students, adequacy and convenience of student supportive services, and the efforts of the key players to their duties. Since no study was conducted so far concerning the distance secondary education program for the army, this study is believed to contribute much for the program's improvement.

For the theoretical bases, related literatures on distance education definition, historical development and effectiveness; the implementation of distance education; the distance learning materials: print and electronic media; media for the distance secondary education in Ethiopian context; supportive services such as face-to-face tutorial, assessment, library, practical work and counseling services to be accessible to distance learners; and the roles and responsibilities to be played by the concerned parties in the implementation process were reviewed.

To carryout the intended study, descriptive survey research method was employed. This method helped the researcher to get first hand information using multiple data collecting instruments such as questionnaire, interview, observation and document analysis. The major

data collecting instruments of this study (i.e., questionnaires) were pre-tested and there by slightly modified.

Grade–10 army distance students were taken as the major data source from whom quantitative data through questionnaire were collected. Questionnaires, which embrace items about the overall implementation process, were administered to 340 respondents selected by cluster sampling technique. Out of 340 respondents, 324 of them had filled and returned the questionnaire. The analysis was made based on these 324 respondents.

The quantitative data obtained from student respondents were supplemented and triangulated by using qualitative data. To this end, relevant data were generated through the interview made with the purposefully selected 5-biology tutors, 3-unit coordinators and a DEMD principal. In addition, tutorial activities were observed in 3-tutrial centers selected by using convenience sampling technique; and relevant documents were analyzed.

Major Findings:-

Based on the analysis, the major findings of the study are summarized as follows:

- In this study, the backgrounds of the major data sources (i.e., students, biology tutors, unit coordinators and the selected tutorial centers) were briefly described. It is found out that all the student respondents were males and all of them were above the age of 18. Most of them were 26 to 35 years old, and had 6 to 15 years work experience in the MOND. All of the biology tutors have B.Sc. in

biology, but they have never taken any training concerning how to manage tutoring.

- The appropriateness of grade-10 biology modular text was examined in terms of its objectives, contents, learning activities, assessment methods and organization. In this regard, the responses of students and tutors showed that the biology modular text has appropriately formulated objectives. The majority of the respondents were satisfied with the clarity, comprehensiveness and readability of the contents; with the organization of the contents and learning activities; and with the assessment methods included in the text. However, the responses pointed out some shortcomings of the modular text. These were shortage of illustrations (diagrams and pictures) and lack of learning activities such as group assignments, group projects and individual assignments that invite students to interact with each other and with other persons.

- As distance teaching is pre-recording and delivering through learning materials (like print and audio-visual devices), the distance learning process can be affected by the quantity and quality of these materials available to distance students on time. Concerning this, the study revealed that the majority (83%) of the students did not get the modular texts on time. Most (89%) of them did not have access to reference books or textbooks; and most (94%) of them did not get the 'Army Distance students' Guide'.

- From the document ('Academic Education Policy for the Army'), it is learned that distance education for the army was intended to be delivered through printed media in combination with other electronic media. However, this study revealed that the army

distance students had never been made use of any electronic instructional media. They were simply provided with modular texts only, being devoid of interacting with their learning and communicating with their teacher through electronic media.

- Concerning the face-to-face tutorial program, it is realized that most of the students were not made aware of the dates for the tutorial session and the contents to be covered by the session in advance. The majority (66%) of them claimed that the tutorial schedule was not held regularly as per the time table. Most (74%) of them were not satisfied with the time duration for the session and with the coverage of contents by the tutorial. Tutors did not take training concerning on how to conduct tutorial session and that they were focused on delivering the curricular contents through lecturing.

- Concerning assessment (exam. and assignment), most of the students found it generally useful and relevant. The majority of them agreed that the assessment questions were inline of the announced learning outcomes; the number of questions covered the learning contents; and the answers to questions were available in modular text. However, it is found out that the majority of the students did not get information in advance about the dates for examination and for the submission of assignments; and the exam and assignment questions lack clarity due to conceptual and typographic errors.

- Feedback to students' assignment work is essential to facilitate distance learning. However, this study showed that there was a problem in dispatching the evaluated assignments to students. The majority (60%) of them waited for more than 3-months to get their

marked assignments back, and thus they could not learn from their mistakes. Most (90%) of them were not supplied with comments and/or suggestions on their work. They were provided with the marks only, with no constructive comments or criticisms that could help them learn more.

- With regard to convenience of supportive services, it is realized that the time was less convenient for students to attend tutorial programs and examinations. As most of them claimed, little or no time gap was given between the tutorial session and the exam date and that they couldn't get enough time to revise what they learned from the tutorial session.

- Regarding the discharging of duties and responsibilities, this study showed that the concerned bodies were found to be reluctant and were not that much devoted to their roles and responsibilities. Generally, the administrative body performed low in giving the necessary information; in dispatching the learning materials; in arranging workshops or trainings; in coordinating tutorials; in registering, recoding results and informing to student on time; in monitoring students' activities and solving their problems; and in facilitating communication among the concerned parties.

- Since distance learning depends more on students' independent effort, effective distance education can take place when they are aware of their roles and responsibilities and when they carryout their activities with sense of purpose. But, due to various discouraging conditions, students' effort was generally low. Based on the study, the major weaknesses seen on the side of the students were: not working and submitting their assignments regularly and on time; submitting assignments by copying the

work of the others; absenteeism from the tutorial session; lower prior learning level; and being dependent on tutors and expecting them to deliver all the contents of the modular text.

5.2. Conclusions

Based on the research findings, the following conclusions were drawn.

1. Concerning the design of the modular text, the study indicated that students did not face serious difficulties in their study for they found it appropriate. However, it is noted that the modular text has got some short comings regarding the learning activities and illustrations to be included. This leads one to say that the modular text was not revised and updated and that students might not be benefited from the necessary learning activities and illustrations.

2. Distance learning depends essentially on the necessary instructional materials provided to learners in regular and timely installments. But, this study clearly shows that the provision of distance leaning materials has got serious constraints which affected students' learning. Delay in the arrival of modular texts and absence of supplementary printed texts (such as references and handouts) creates anxiety and uncertainty in the minds of students and may cause lose of learning interest. Moreover, due to the absence of study guides, students lack in the information about what they are expected to perform like: how to study, why and when they need to work and submit their assignments, when they need to start and finish the semester, when they need to take exam etc.

3. The utilization of educational technologies to facilitate two – way communication at a distance and to move students towards self-learning practices has become an essential characteristic feature of

distance education. However, this study clearly indicated that no educational technology plan was made to use electronic media so far, and the delivery was found to depend exclusively on the printed material (modular text). One medium (i.e., the modular text alone) may not provide everything that all learners need. Thus, it is possible to conclude that the interaction of students with their learning and with their teacher was limited. This mode of education can said to be passive, and it cannot characterize distance education.

4. Face-to-face tutorial, if properly implemented, is important in distance learning to remove students' self-created tension, to make them feel secure and comfort, and to motivate them learn more and move a head. However, this study indicated that the tutorial programs for the army students have got many limitations which lead to conclude that the tutorial program for the army was not properly implemented.

5. This study also pinpointed serious constraints in the practice of assessment and feedback to students. Lack of prior information about the dates for exam and for the submission of assignments, conceptual and typographic errors in exam and assignment questions, long turnaround time of marked assignments, and lack of constructive comments and criticisms in response to students' work on assignments were some of the major problems noted. From these, one can draw the conclusion that students did not get proper assessment and feedback services, and thus they could not learn from their mistakes.

6. Distance students are expected to be provided with adequate supportive services to overcome their inherent limitations they may encounter. However, this study clearly shows that they did not get library, laboratory and counseling services. Hence, it can be said that

adequate supportive services were not made available to the army distance students. In such cases, students' inherent limitations could not be overcome.

7. The success or failure of distance education depends on the administrative capability and motivation of its leadership. However, this study indicated that there were serious weaknesses in the provision of the necessary administrative support. Based on the study, one can say that the administrative body did not discharge its duties and responsibilities properly, which may negatively affect the success of the implementation process.

8. From the study, it can also be concluded that students' engagement in discharging their educational duties and responsibilities was not satisfactory.

5.3. Recommendations

Based on the major findings of the research, the researcher would like to suggest the following points:

1. Concerning the modular text:-

The concerned bodies (course developers) need to revise the modular text and thereby incorporate the necessary pictures and the learning activities that enhance students' interactions with each other and with other persons.

2. Concerning the provision of distance learning materials

2.1. Since self-instructional printed texts (i.e., modular texts) are the foundation of the academic course, the material distribution section has to take care in dispatching of the modular text, and has to make sure that each student is provided with all the modular texts on time.

2.2. Because of inaccessibility of the study guide, students were not aware of how to learn or what to do and how to treat the material effectively. Therefore, the unit coordinators should distribute the 'Army Distance Students' Guide' to the students.

2.3. Electronic media are of great importance to make distance learning more effective and interesting to students by supplementing print-instructional material and by facilitating two-way communication at a distance. More importantly, combination of media (Multi-media approach) increases the chance of addressing different learning styles of students. Therefore, the institution has to plan to develop and make use of electronic media in combination with the printed media.

2.4. Other printed texts (like references, textbooks and handouts) that can supplement the modular text should be made accessible to the distance learners. To this end, these texts may be displayed in the study centers so that students can borrow and make use of them.

3. Concerning the support services

3.1. For students are not aware of the dates for tutorial and of the contents to be covered by the session in advance, they could not be prepared for better understanding and would be passive in the class.

Thus, the coordinators should provide students with the necessary information in advance so as to make them ready. Students should also be informed in advance about the dates for exam and for submission of assignments so that they would not fall behind their studies.

3.2. Since the tutorial session is not conducted as per the time scheduled, students may fail to retain their learning interest. Therefore, the tutorial activities should be managed as per the schedule so as to attain the purpose of the tutorial program.

3.3. Delivering the contents to the distance students through lecturing discourages students' adjustment to the distance mode of learning. Thus, tutors should focus on facilitating students' learning by identifying their difficulties and giving the remedial help. They should direct and encourage students to learn by them selves rather than attempting to deliver all the curricular contents.

3.4. The tutorial session should be scheduled in such a way that there is enough time gap between the exam and the tutorial session, so that students can have time to internalize what they learned from the tutorial before they sat for examination.

3.5. Since questions in exams and assignments lack clarity, due consideration should be given and that they should be vetted and edited.

3.6. Long turnaround time for giving learners feed back has a negative correlation with successful learning. Therefore, marked assignments

should be returned to the students promptly so as to enable them discover their errors while the concept is fresh in their mind.

3.7. In distance education, like ours where there is no communication between students and teachers through educational technologies, the role of feedback in response to students' work on assignments is crucial to maintain a link between teachers and students. To make this into effect, tutors need to write constructive comments and/or suggestions on students' assignment work so as to encourage and direct them to study further.

3.8. Library has a central place in the education process by providing reading and borrowing services to students who study independently. Therefore, the concerned body should either set up a library or facilitate situations where by students can use public or conventional school libraries.

3.9. Science (e.g. biology) can best be learnt using enquiry approach that emphasizes on students' involvement in scientific investigation through laboratory and fieldwork. Thus, the institution should not be totally ignorant of the laboratory/practical work. For this case, either a laboratory kit should be dispatched to the study centers so that tutors may demonstrate the experiment to their students; or alternative practical activities by using locally available materials should be practiced.

3.10. Since distance students may face non-academic problems that may affect their study, there should be counseling service that can help them to solve their problems and there by adjust themselves with their learning.

4. Concerning the performance of administration and students:-

Awareness of each party involved in the implementation process to their respective duties and responsibilities, and discharging these duties properly contributes much for the successful implementation of distance education. To make this into effect:

4.1. Necessary administrative supports should be provided to the students

4.2. Each party in the implementation process need to be provided with clearly and specifically defined tasks. And each of them need to carryout their tasks properly with sense of purpose and devotion

4.3. Trainings/ or workshops should be organized to build the capacity of both administrative and academic staff members. Especially, tutors need to take trainings on how to manage/ conduct the face-to-face tutorial and on how to give comments on students assignment work.

4.4. Students should be made to know that their independent effort has a paramount importance in such mode of educational delivery, and thus they should process the materials they received, complete the assignments by themselves, attend the tutorial and assimilate the tutors' comments as essential parts of their learning.

5. Finally, there should be constant monitoring and evaluation of the implementation of this program in order to make the necessary adjustments.

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Appendices

Appendix-A

Addis Ababa University

School of Graduate Studies, College of Education

Department of Curriculum and Teachers Professional Development Studies

Questionnaire to be filled by grade-10 distance students

Objective:-

The general objective of this questionnaire is to gather relevant information from the grade-10 distance students for the research to be conducted on the implementation of distance secondary education for the army, with a particular reference to grade-10 biology course.

This questionnaire paper has four sections. Each section has its sub-sections and specific instructions. You are kindly requested to give your response based on the instructions.

Dear grade- 10 distance students, the data to be obtained from you is valuable and vital. Therefore, the questionnaire is prepared believing that you would give your honest and truthful response.

Thank you in advance for your cooperation!

Personal Data:-

1. Sex: Male ☐ Female ☐

2. Age: Below 26 ☐ Between 31-35 ☐

Between 26-30 ☐ Between 36- 40 ☐

Above 40 ☐

3. Total service in years: 1-5 ☐ 11-15 ☐

6-10 ☐ Above 15years ☐

Section-1: **The Appropriateness of the Design of the Grade-10 Biology Modular text**

The following questionnaires (1-13) are supposed to measure the appropriateness and relevance of grade-10 biology modular text designed for teaching the army distance learners. Please choose the answer from the alternatives in the table and make a tick [√] in the appropriate grid

No.	**Questions**	**Response**	
		Yes	No
1	Are the course objectives simply stated and understandable to you?		
2	Do the objectives in the course reflect your personal interest and needs?		
3	Are the objectives achievable?		
4	Are contents written in simple and direct language with no sexist or racist stereotyping?		
5	Are the contents comprehensive enough to enable you achieve the course objectives?		
6	Are the contents written readable and understandable?		
7	Is the course designed in the interactive style where you have the opportunity to answer problems, carry out tasks, supply your personal interpretations, and draw up conclusions?		
8	Does the course provide you with the opportunity to interact and collaborate with other students?		

9	Are contents and learning activities presented hierarchically or are they sequenced appropriately taking the pre-requisite knowledge and skills in to account?		
10	Are the course contents and learning activities supported by illustrations, diagrams, pictures,?		
11	Do the elements of the course: learning content, instructional methods, learning materials (print and /or electronic media), and context complement each other?		
12	Are self assessment questions closely linked to the course objectives included in the course material?		
13	Do you generally believe that the course material is designed in such a form that you can study it independently?		

***Section*-2: The Provision of Learning Materials**

2.1. The next questions (A-E) are supplied to know the provision of learning materials (print and electronic instructional materials) to you. Please tick [√] in the appropriate grid

No	**Questions**	**Responses**	
		Yes	No
A	Do you get all modular texts of the course?		
B	Do you get the modular texts on time?		
C	Do you have access to reference books, textbooks, handouts, manuals?		

D	Do you get the 'Army Distance Students Guide'?		
E.	Are electronic instructional media (like radio, audio-video cassettes, etc) provided to you?		

2.2 Are there any other problems concerning the provisions of learning materials connected to the army's living and working conditions? Please specify them with their possible solution.

A.Problems_____

B. Solutions_____

***Section* -3: The Availability and Convenience of Student Supportive Services**

3.1. Face-to-face Tutorial Program

The following questions (A-J) are supplied to know the practices of the tutorial activities and the benefits you gained from. Please choose the best alternative and make a tick [√] in the appropriate grid.

No	Items	Responses	
		Yes	No
A	Do you get information about the dates for tutorial session in advance?		
B	Do you know the topics to be covered by the tutorial session in advance?		
C	Is the tutorial schedule consistent, and are the classes held regularly as per the time table provided to you?		
D	Do you believe the duration of tutorial session is enough to get sufficient exposure?		

E	Are you satisfied with the coverage of contents at the tutorial program?		
F.	Do you find your teachers (tutors) effective and enthusiastic?		
G	Does your level of confidence increase after the tutorial class?		
H	Do the tutorial programs help you to prepare yourself for exam?		
I	Is the over all impact of the tutorial program positive?		

J. If you have any other suggestions about the tutorial program please specify _____

3.2. Assessment Services

3.2.1 The following questionnaire are provided to measure the relevance of the course assessment methods used and the benefits you gained from. Please indicate your answer by making a tick [√] in the grid.

No	Items	Responses	
		Yes	No
A	Do you get informed in advance about the exam date and when to submit the assignment?		
B	Do the assessment methods (exams assignments and self-assessment exercises) measure the achievement of the announced course objectives and learning outcomes?		
C	Is the number of questions in the exams assignments and self-test exercises adequately		

	cover the learning contents of the course?		
D	Are the questions clear and simple to understand with no typographic error?		
E	Do you find the answers easily available in your modular text?		
F	Do you find the assessment methods generally useful and relevant?		

3.2.2 .The following questionnaire are provided to know if appropriate comments (feedbacks) for your written work on assignments are given. Please choose the answer and encircle the letter of your choice.

I. After you worked out and submitted your assignments, have you ever got your evaluated assignments back? A. Yes B. No

II. If your answer for question I is 'Yes', how long do you wait for to get your evaluated assignment back?

A. a month B. 1-3 months C. more than 3 months

III. Do you get written comments and suggestions on your assignments?

A. Yes B. No

IV. Are the comments and suggestions given by your tutor (teacher) on your assignment works constructive and important to you?

A. Yes B. No

3.2.3. If there are any other problems concerning the exams and assignments, please specify with their possible remedial solutions

A. Problems _____

B. Solutions_____

3.3. Some other supportive services to be available to distant learners are listed below (A-C). Please indicate the extent of their availability to you by making a tick [√] mark in the grid.

No	Supportive services	Responses			
		High	Medium	Low	No
A	Library Service				
B	Practical work/Laboratory Service				
C.	Guidance and Counseling Service				

3.4. The following 3 questions are used to know if the time to utilize the supportive services is convenient for you.

I. To what extent is the time convenient for you to use tutorial services, exams and other supportive services?

A. Much convenient C. Fairly convenient

B. Convenient D. Less convenient

II. Was there a time you missed any of the tutorial sessions and/or exams?

A. Yes B. No

III. If your answer for question number II is 'Yes', would you please list out the reasons why you missed the program?_____

_____

***Section-4*: Involvement of the Administrative Body and Students in the Distance Education Process**

4.1. Please try to evaluate the performance of the distance education program administrative body along the activities it needs to carryout by making a tick [√] in the grid.

No	Major Activities to be carried out by the administrative body	Responses			
		High	Medium	Low	Very low
A	giving the necessary information(orientation) to the students?				
B	facilitating of sites for study, exam, etc., and scheduling				
C	arranging and coordinating tutorial programs				
D	dispatching of learning materials (modular text and evaluated assignments) to the students				
E	registering and recording results and informing to students on time				
F	supervising and monitoring students' activities and solving their problems				
G	facilitating communication of students with their tutor/ teacher and with each other				

H. Is there any other problems concerning the distance education administration? Please specify with their remedial solutions

Problem_____

Solution _____

4.2. The following questions (I-IV) are supplied to know if the distant learners are discharging their duties and responsibilities.

I. Do you know your roles and responsibilities as a secondary distant student?

A. Yes B. No

II. If your answer for question I is 'Yes', could you please list some of them?

_____

III. How do you evaluate your activities (involvements) in your study? Please tick [√] the appropriate grid.

NO	Activity	High	Medium	Low	Very low
A	Your learning interest and initiation in studying				
B	Your effort to communicate with your tutor/ teacher, to ask & to get the necessary information and learning resources				
C	Your effort in attending tutorial and preparing your self for examinations.				
D	Your effort in working on your assignments and submitting on time and regularly				

IV. Is there any discouraging situation in your study?

A. Yes B. No

IV. If your answer for question number IV is 'Yes ', would you please specify _____

Appendix-B

Guides to Interview Made with Biology Tutors in Distance Education for the Army

Objective:

The purpose of this interview guide is to gather relevant information from distance education tutors for the research to be conducted on the implementation of distance secondary education for the army with a particular reference to grade -10 Biology course.

It is important that you answer each question as thoughtfully and frankly as possible.

All the information you may provide will be hold confidential.

Thank you in advance for your cooperation!

1. How many students are there in your tutorial group?
2. How do you evaluate the design of the modular text with regard to:
    A. Clarity, simplicity and feasibility of the course objectives?
    B. Relevance, clarity, comprehensiveness of contents?
    C. Use of illustrations, pictures, diagrams, etc?
    D. Appropriateness of the learning activities?
    E. Self-assessment questions?
    F. Overall organization of the course elements (objectives, contents learning activities and assessment methods)?
3. How do you explain the availability of teaching aids in the tutorial center?
4. What factors do you think could affect the academic performance of your students?

5. Please describe the adherence of your students to the following requirements of learning.
    A. Completing the assignments by themselves and submitting on time
    B. Attending face-to-face tutorial session
    C. Their attempt to participate, to ask and get the necessary information
6. What kind of strategy do you use to provide your distance learners with appropriate feedback?
7. Have you ever conducted or demonstrated practical laboratory experiments for your students? Please give your suggestion.
8. Which instructional methods do you employ often when you provide tutorials?
9. Have you ever taken any training to develop your capacity on face-to-face tutorial approach? Please give your suggestions.
10. Do you think the tutorial session promoted students' interest and ability to study independently?
11. What are your main duties and responsibilities as a tutor?
12. What should be done in your tutorial center to provide more effective tutoring /counseling/ to students?

Thank You!

Appendix-C

Guides to Interview Made with Unit Coordinators (Education Heads of the Commands)

Objective:-

The purpose of this interview guide is to gather relevant data for the study on the Implementation of Distance Education for the Army with a

particular reference to Grade -10 students. Therefore, it is believed that important data will be obtained from you.

Thank you in advance for your cooperation!

1. How do you evaluate the provision of learning materials (like: modular texts, reference books, guides etc.) in terms of time and quantity?
2. Would you please explain to me the situation of face-to-face contact program in terms of :
    - Its delivery time?
    - Its duration?
    - Its focus area?
3. Would you please explain to me about assignments in the teaching-learning
   process in terms of:
    - submission time?
    - correcting and commenting?
    - feedback?
    - other?
4. Would you say any more about the accessibility of other supportive services like: library, counseling service, information service, etc.?
5. Would you tell me your major roles and responsibilities as a coordinator?
6. How do you explain the follow up and support provided by the DEMD?
7. What do you suggest to improve the overall process of implementation?

Appendix-D

Guides to Interview Made with Distance Education Main Division Head

Objective:-

The purpose of this interview guide is to gather relevant data for the study on the Implementation of Distance Education for the Army with a particular reference to Grade -10 students. Therefore, it is believed that important data will be obtained from you.

Thank you in advance for your cooperation!

1. How do you evaluate the role-relationships among the different parties involved in the implementation process and their commitment in carrying out their roles and responsibilities?
2. How could you describe the measures taken by the DEMD in line of:
    A. Distributing the learning materials?
    B. Supervising, monitoring and follow up the distance education process?
    C. Upgrading the capacities of teachers, tutors and other personnel through on-job trainings like workshop, orientation, refresher courses, experience sharing etc.?
    D. Preparing and giving clear directives and information?
    E. Revising or editing the self instructional materials?
    F. Evaluating or studying the process and making the necessary adjustments?
3. Do you think only the print instructional material (modular text) would bring about success in distance education? Is there educational technology plan (i.e., a plan to include electronic media like radio

broadcasts, audio-video cassettes etc.) for the delivery of distance education?

4. Finally, do you have any more to add about the implementation process?

Appendix-E

Tutorial Classroom Observation Checklist

Date_____
Location_____
No. of attendants: Male___ Female___

No.	Classroom Activities		Low	Medium	High
1	Necessary facilities				
2	Classroom suitability in terms of light and noise				
3	Tutor's readiness				
4	Use of teaching aids				
5	Tutor's facilitative role in encouraging and motivating				
6	Punctuality and time management by tutor				
7	Tutoring method:	Lecture			
		Discussion			
		Question and answering			
		Other			
8	Learners' punctuality				
9	Learners' readiness				
10	Learners' active involvement in asking and answering.				

1. ዓላማ፡ የመጠይቁ ዋና ዓላማ ስለሠራዊቱ የ2ኛ ደረጃ የርቀት ትምህርት አጠቃላይ እንቅስቃሴ የ10ኛ ክፍል የሥነ-ህይወት ትምህርትን እንደ አብነት በመውሰድ ለሚደረገው ጥናት ከተማሪዎች መረጃ ለመሰብሰብ ነው።

2. ይህ ጥራዝ አራት ክፍሎች አሉት። እነሱም፡-

ክፍል 1. ስለኮርሱ አዘገጃጀት (ዲዛይን)

ክፍል 2. ስለትምህርት መሣሪያዎች አቅርቦት (ስርጭት)

ክፍል 3. ስለድጋፍ ሰጪ አገልግሎቶች አቅርቦት

ክፍል 4. ስለትምህርት አመራሩና ተማሪዎች የስራ ተነሳሽነት ናቸው።

ውድ የ10ኛ ክፍል የርቀት ትምህርት ተማሪዎች! ከእናንተ የሚገኘው መረጃ ስለትምህርቱ እንቅስቃሴ ለሚደረገው ጥናት ቁልፍ ሚና አለው። ስለሆነም ለቀረቡት መጠይቆች ተገቢና ትክክለኛ መረጃ እንደምትሰጡ በማመን ለምታደርጉት ቀና ትብብር በቅድሚያ አመሰግናለሁ።

3. እባክዎት የሚከተሉትን መረጃዎች በትክክል ይሙሉ። ስም መጻፍ የለብዎትም!

ሀ. ፆታ ፡ ☐ ወንድ ☐ ሴት

ለ. እድሜ: ☐ ከ26 ዓመት በታች ☐ ከ36 - 40 ዓመት
☐ ከ26 - 30 ዓመት ☐ ከ40 ዓመት በላይ
☐ ከ31 - 35 ዓመት

ሐ. የአገልግሎት ዘመን በዓመት: ☐ ከ1 - 5 ☐ ከ6 - 10
☐ ከ11 - 15 ☐ ከ15 ዓመት በላይ

ክፍል 1- የባዮሎጂ ትምህርት ሞጁል አዘገጃጀትና ዲዛይን ተገቢነትን በተመለከተ

ከዚህ በታች የተዘረዘሩት መጠይቆች የአስረኛ ክፍል የሠራዊት የርቀት ት/ት ተማሪች የባዮሎጂ ትምህርት አዘገጃጀትን (ዲዛይን) ለመመዘን የቀረቡ ናቸው። እባክዎ ከቀረቡት አማራጮች መልስ ይሆናል ያሉትን መምረጥ በመጠየቁ ፊት ለፊት ባለው ሣጥን የ 'x' ምልክት ያድርጉ።

		አዎ	በከፊል	አይደሉም
1	የኮርሱ ዓላማች ግልፅና ለመረዳት የሚቻሉ ናቸውን?			
2.	የኮርሱ ዓላማች የእናንተን የተማሪዎችን ይሁንታና ፍላጐት የሚያንፀባርቁ ናቸውን?			
3.	የኮርሱ ዓላማች ተጨባጭና ተግባራዊ መሆን የሚችሉ ናቸውን?			
4	የኮርሱ ይዘቶች የጸታ ወይም የዘር መድልኦ ሣይታይባቸው በቀላልና በቀጥተኛ ቋንቋ የተዘጋጁ ናቸውን?			
5.	የይዘቱ ሥፋትና ጥልቀት (Comprehensiveness) በቂና የተነደፉ ዓላማችን ለማሣካት የሚያስችል ነውን?			
6.	የኮርሱ ይዘቶች በግልጽ የሚነበቡና ለመረዳት ቀላል ናቸውን?			
7.	ኮርሱ አሣታፊ በሆነ (ማለትም ጥያቄ ለመጠየቅና ለመመለስ፣ መልመጃችን ለመሥራት፣ የራሳችሁን ግንዛቤና ሃሣብ ለመሰንዘር እና ማጠቃለያ ላይ ለመድረስ በሚያስችል) መልኩ የተዘጋጀ ነውን?			
8.	የኮርሱ አዘገጃጀት ከሌሎች ተማሪች ጋር ትምህርታዊ ግንኙት (ውይይት)ና ትብብር ታደርጉ ዘንድ እድል ይሰጣልን ?			
9.	የኮርሱ ይዘቶችና መልመጃች እንደክብደትና ቅለታቸው ቅደም ተከተላቸውን ጠብቀው ወይም የእናንተን የተማሪ-ችን እውቀትና ችሎታ መሠረት አድርገው የቀረቡ ናቸውን?			
10.	የኮርሱ ይዘቶች በስዕሎች፣በቻርቶችና በገላጭ ምሣሌች በበቂ የተደገፉ ናቸውን?			
11.	የኮርሱ ይዘት፣ የማስተማሪያ መንገዶች፣ የመማር ማስተማር መሣሪያች (የህትመትና የኤሌክትሮኒክ ሜዲያች) የመማር ማስተማር አውዱ እርስ በእርሳቸው የሚደጋገፉ (የሚተጋገዙ) ናቸውን?			
12.	ከኮርሱ ዓላማች ጋር የተዛመዱ ራሳችሁን ለመመዘን የሚረዷችሁ መልመጃች (Self-test exercises) በኮርሱ ተጠቃልለዋልን ?			

13	እንደ አጠቃላይ የሞጁሉ አዘገጃጀት (ዲዛይን) ብቻን /ያለ አስተማሪ/ ለመማር የሚያስችል ነውን?			

ክፍል 2 - የመማሪያ መሣሪያችን አቅርቦት በተመለከተ

2.1. የሚከተሉት መጠይቆች ደግሞ ለእናንተ ለተማሪች የሚቀርቡ የመማሪያ መሣሪያችን አቅርቦት ለመገምገም የቀረቡ ናቸው። እባክዎ አንዱን ብቻ በመምረጥ በመጠይቁ ፊት ለፊት የ 'x' ምልክት ያድርጉ።

ቁጥር	መጠይቆች	መልሶች		
		አዎ	በከፊል	የለም
ሀ	ሁሉም የመማሪያ ሞጁሎች በትክክል ይደርሷች□ልን ?			
ለ	ሞጁሎች በተገቢው ጊዜ /ሠዓት/ ይደርሳች□ል?			
ሐ.	የማጣቀሻ መፃሕፍት፣ የመማሪያ መፃሕፍት፣ሀንድአውትና ማኑዋል በበቂ ታገኛላችሁ?			
መ	የርቀት ተማሪች መመሪያ /ጋይድ/ ታገኛላችሁ /ትጠቀማላችሁ/?			
ሠ	የኤሌክትሮኒክ የትምህርት መሣሪያች /ሬዲዮ፣ የድምጽና የምስል ካሴቶች/ የመሣሠሉትን ትጠቀማላችሁ?			

2.2 ከሠራዊቱ የአኗኗር የሰራ ሁኔታ ጋር በተያያዘ በመማሪያ መሣሪያች አቅርቦት ላይ ያጋጠሙ ሌሎች ችግሮች አሉ? እባክዎ መፍትሔ ይሆናሉ ከሚሏቸው ነጥቦች ጋር ይዘርዝሯቸው።

ችግሮች ----------

መፍትሔ ----------

ክፍል 3 - የተማሪች ድጋፍ ሠጭ አገልግሎቶች መኖርና አመቺነታቸውን በተመለከተ

3.1. የፊት ለፊት ገለፃ

የሚከተሉት መጠይቆች በፊት ለፊት ገለፃ አማካኝነት ተማሪች ሊያገኛቸው የሚችሏቸውን ጠቀሜታች ለማወቅ የቀረቡ ናቸው። እባክዎ ተስማሚ መልስ የሚሉትን ይምረጡና የ 'x' ምልክት ያድርጉ።

ቁጥር	መጠይቆች	መልሶች		
		አዎ	በከፊል	የለም
ሀ	ስለፊት ለፊት ገለፃ ፕሮግራሞች መረጃችን በቅድሚያ ታገኛላችሁን?			
ለ	በፊት ለፊት ገለፃች ጊዜ በእለቱ የሚቀርቡትን ርዕሶች ታውቋቸዋላችሁን?			
ሐ.	የፊት ለፊት ገለፃ ፕሮግራሙ በታቀደለት ክፍለ ጊዜ ሣይቋረጥ የሚከናወን ነውን?			
መ	የፊት ለፊት ገለፃው ቆይታ በቂ ነውን?			
ሠ	በፊት ለፊት ገለፃው መሸፈን ያላባቸው ይዘቶች ይሸፈናሉ?			
ረ	የፊት ለፊት ገለፃ አስተማሪው ብቁ ነው ይላሉ?			
ሰ	የፊት ለፊት ገለፃው በኋላ በራስ መተማመናችሁ ይጨምራል?			
ሸ	የፊት ለፊት ገለፃ ፕሮግራሙ ራስዎን ለፈተና እንዲያዘጋጁ እገዛ አድርጐልዎታል?			
ቀ	የፊት ለፊት ገለፃ ፕሮግራሙ አጠቃላይ ተጽዕኖ አወንታዊ ነው ይላሉ?			

በ. ስለገጽ ለገጽ ገለፃ ፕሮግራሙ ተጨማሪ አስተያየት ካለዎት ይግለጹ

3.2 <u>የምዘና አገልግሎት</u>

3.2.1 የሚከተለት መጠይቆች የቀረቡት ደግሞ የምዘና ዘዴዎችን ብቃት ለመገምገም ነው፡፡ እባክዎ በጥያቄች ፊት ለፊት የ 'x' ምልክት በማድረግ ይመልሱ

ቁጥር	ጥያቄዎች	መልሶች		
		አዎ	በከፊል	አይደሉም
ሀ	የፈተና ቀን መቼ እንደሚሆን፣ የተሠጡትን ንዑስ ፈተና መቼ ሠርተው ማስረከብ እንደሚገባዎት፣ የመሣሠሉትን ጉዳዮች በተመለከተ በቅድሚያ መረጃ ያገኛሉ?			
ለ	የምዘና ዘዴዎች /ፈተናዎችና ንዑስ ፈተናዎች/			

	የተነደፉት ዓላማች መሣካታቸውን ለመመዘን ብቁ ናቸው?			
ሐ.	የፈተና ፣ንዑስ ፈተናና የቤት ስራዎች ጥያቄዎች ብዛት የኮርሱን ይዘቶች በበቂ ያዳርሳሉ /ይሸፍናሉ/?			
መ	ጥያቄዎች ግልጽ፣የትየባ ስህተት የለሌላቸዉና ለመረዳት ቀላል ናቸውን?			
ሠ	የጥያቄ መልሶችን ከተሰጥዎ ሞጁል ማግኘት ይችላሉን?			
ረ	የምዘና ዘዴዎችን በአጠቃላይ ጠቃሚና ተስማሚ ናቸው?			

3.2.2. የሚከተሉት 4 መጠይቆች ተማሪች ለሚሠሯቸው ንዑስ ፈተናዎች ተገቢ የሆኑ እርማቶችና ገንቢ የሆኑ አስተያየቶች ስለመሠጠታቸው ለማወቅ ቀርበዋል። እባክዎት ትክክለኛ መልስ የያዘውን ፊደል መርጠው ያክበቡ።

1.ንዑስ ፈተናዎች ሠርታችሁ ካስረከባችሁ በኋላ ታርመው ይመለሱላችኋል?

ሀ. አዎ ለ አይመለሱም

2. ለጥያቄ ቁጥር 1 መልሰ 'አዎ' ከሆነ ታርመው ለመመለስ የሚፈጀው ጊዜ ምን ያህል ይሆናል?

ሀ 1ወር ጊዜ ለ ከአንድ ወር እስከ ሶስት ወራት ጊዜ ውስጥ

ሐ ከሶስት ወራት በላይ

3. ታርመው በሚመለሱላችሁ ንዑስ ፈተናዎች ላይ አስተያየተና ማስተካከያዎች በጽሑፍ ይገለፀላችኋልን?

ሀ. አዎ ለ. አይገለፀም

4. የሚሠጡት አስተያየቶችና ማስተካከያች ገንቢና ጠቃሚ ናቸው?

ሀ. አዎ ለ. በከፊል ሐ. አይደሉም

3.2.3. ፈተናዎችንና ንዑስ ፈተናዎችን በተመለከተ ሌሎት ችግሮች ካሉ ከነመፍትሔ ሀሣቦቻቸሁ ይዘርዝሩዋቸው።

ሀ. ችግሮች ----------

ለ. መፍትሔቻቸው ----------

3.3. የርቀት ትምህርት ተማሪች ማግኘት ያለባቸው ሌሎች አገልግሎቶች ከዚህ በታች ተዘርዝረዋል። እባክዎ የአገልግሎቶችን ተደራሺነት (ማለትም የማግኘትና የመጠቀማችሁን ደረጃ) የ 'x' ምልክት በማድረግ ይግለፀ።

ቁጥር	አገልግሎቶች	መልሶች			
		ከፍተኛ	መካከለኛ	ዝቅተኛ	የለም
ሀ	የቤተመፃህፍት አገልግሎት				
ለ	የላብራቶር /ቤተሙከራ/ አገልግሎት				
ሐ	የምክርና አቅጣጫ ማስያዝ /ካውንስል እና ጋይዳንስ/ አገልግሎት				

3.4. የሚከተሉት ሶስት ጥያቄች ደግሞ እነዚህ አገልግሎቶች ተማሪዎች በአመቺ ሁኔታ /ጊዜና ቦታ/ እየተጠቀመባቸው እንደሆነ ለማወቅ የቀረቡ ናቸው።

1. የፊት ለፊት ገለፃ፣የፈተና እና ሌሎች አገልግሎቶች የሚሰጠበትን ቦታና ጊዜ አመቺነት እንዴት ይገልፀታል?

   ሀ. በጣም አመቺ ሐ. መጠነኛ

   ለ. አመቺ መ. አመቺ ያልሆነ

2. የፊት ለፊት ገለፃች ወይም ፈተና አልፎት ያውቃል?

   ሀ. አዎ ለ. የለም

3. ለጥያቄ ቁጥር 2 መልስዎ አዎ ከሆነ ለምን እንዳለፈዎት ምክንያትዎትን ይዘርዝሩ

ክፍል 4 - የርቀት ትም/ቱን የአመራር አካልና የተማሪችን ቁርጠኝነት በተመለከተ

4.1. ከተሠጡት አማራጮች አንዱ ላይ ምልክት በማድረግ የርቀት ት/ት ፕሮግራሙ ኃላፊዎችና የሚመለከታቸው ክፍሎች ያላቸውን ተነሳሽነትና ቁርጠኝነት ለመገምገም ይማክሩ።

ቁጥር	በአስተዳደር አካላት የሚከናወኑ ተግባራት	መልሶች			
		ከፍተኛ	መካከለኛ	ዝቅተኛ	የለም
ሀ	ለአዲስ ገቢ ተማሪች አስፈላጊውን መረጃ (Orientation) መስጠት				
ለ	የማጥኛና የመፈተኛ ማዕከሎችን ማዘጋጀትና ፕሮግራሞች ማውጣት				
ሐ.	የገጽ ለገጽ ገለፃ ፕሮግራሞችን ማዘጋጀትና				

	ማስተባበር				
መ	የመማሪያ መሣሪያችን ለተማሪች ማሠራጨት				
ሠ	መመዝገብ፣ውጤት መያዝና ለተማሪው በወቅቱ ማሣወቅ				
ረ	የተማሪችን የእለት ከእለት እንቅስቃሴ መከታተልና ችግሮቻቸውን መፍታት				
ሰ	ተማሪች እርስ በርሳቸውም ሆነ ከመምህሮቻቸው ጋር ያላቸው ትምህርታዊ ግንኙነት እንዲጠናከር ሁኔታዎችን ማመቻቸት				

ሸ. በርቀት ት/መት አስተዳደሩ አካላት ሰለሚከናውኑ ተግባራት በተመለከተ ችግሮች ካሉ እባክዎ ከነመፍትሐጮቻቸው ያስፍሯቸው::

ሀ. ችግሮች ----------

ለ. መፍትሐዎቻቸው ----------

4.2. የሚከተሉት መጠይቆች ደግሞ የርቀት ት/ት ተማሪች ለተሠጣቸው ኃላፊነት ያላቸውን ቁርጠኝነትና ተነሳሽነት ለመለካት የቀረቡ ናቸው::

1. እንደ ሁለተኛ ደረጃ የርቀት ት/ት ተማሪነታችሁ የተሠጣችሁን ሚናና ያለባችሁን ኃላፊነት ታውቃላችሁን?

ሀ. አዎ ለ. አላውቅም

2.ለጥያቄ ቁጥር 1 መለስ 'አዎ' ከሆነ እባክዎ ጥቂቶችን ይጥቀሱ::

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3. በትምህቱ ላይ ያልዎትን ተሳትፎና እንቅስቃሴ እንዴት ይገመግሙታል? የ 'x' ምልክት በማድረግ ይመልሱ::

ቁጥር	ተግባራት	መልሶች			
		ከፍተኛ	መካከለኛ	ዝቅተኛ	የለም
ሀ	ለመማር ያልዎት ፍላጐትና ተነሳሽነት				
ለ	ከመምህራን ጋር ት/ታዊ ግንኙነት ለማድረግ፣ ጥያቄዎች ለመጠየቅ፣ አስፈላጊ መረጃዎችንና የመማሪያ መሣሪያዎችን ለማግኘት የሚያደርጉት ጥረት				

	የመማሪያ መሣሪያዎችን ለማግኘት የሚያደርጉት ጥረት				
ሐ	መልመጃችንና ንዑስ ፈተናዎችን ለመስራት፤ለፈተና ራስዎን ለማዘጋጀት የሚያደርጉት ጥረት				
መ	የንዑስ ፈተናዎችን ሠርተው በወቅቱ ለማስረከብ የሚያደርጉት ጥረት				

4 ትምህርትወትን በአግባቡ ለማከናወን እንቅፋት /የማያበረታታ/ የሆነብዎ ነገር አለ?

ሀ. አዎ ለ. የለም

5. ለጥያቄ ቁጥር 4 መልስዎ አዎ ከሆነ ሊጠቅሱት ይችላሉን?

አ መ ሰ ግ ና ለ ሁ !

የአዲስ አበባ ዩንቨርሲቲ ድኅረ ምረቃ ት/ቤት

የስነ - ትምህርት ፋኩልቲ

የሥርዓተ - ትምህርትና መምህራን ትምህርት ክፍል

1999 ዓ.ም

ከየዕዝ የርቀት ትምህርት ክፍል ኃላፊዎች ጋር የሚደረግ የቃለ - መጠይቅ መምሪያ

ዓላማ፡- የቃለ-መጠይቁ ዋና ዓላማ ስለሰራዊቱ የ2ኛ ደረጃ የርቀት ትምህርት አጠቃላይ እንቅስቃሴ ለሚደረገዉ ጥናት መረጃ ለመሰብሰብ ነዉ።

ለሚሰጡኝ መረጃ ሁሉ በቅድሚያ አመሰግናለሁ!

1. የመማሪያ መሳሪያዎችን ማለትም (ሞጁሎች፣ ማጣቀሻ መጻሕፍት፣ የተማሪዎች መመሪያ ወዘተ...) አቅርቦት እንዴት ይገልጹታል? በተገቢዉ መጠንና ጊዜ ለተማሪዎች ይዳረሳሉ?
2. እባክዎ ስለገጽ - ለገጽ ገለፃው አጠቃላይ እንቅስቃሴ ማለትም
   - የሚሰጥበት ወቅት ተስማሚነት
   - የሚወስደዉን የጊዜ መጠን
   - የሚያተኩርበትን በተመለከተ ይግለፀልኝ
3. በሚከተሉት ነጥቦች ዙሪያ ስለንዑስ ፈተናዎች ያለዎትን አስተያየት ሊሰጡኝ ይችላሉን?
   - ተማሪዎች ሠርተዉ ስለሚልኩበት ጊዜ
   - አስተራረሙ፣ አስተያየትና ማስተካከያ አሰጣጡ
   - የታረሙትን መልሶች ለተማሪዎች ማድረሱ (feedback)
   - ሌላ ካለ
4. ስለ ሌሎች ድጋፍ ሰጭ አገልግሎቶች ማለትም የቤተመጻሕፍት፣የመረጃ አገልግሎት፣ የምክር አገልግሎት፣ ወዘተ... አቅርቦትና ተስማሚነት የሚሉት ካለ?
5. እባክዎ እንደ የዕዝ የርቀት ትምህርት ክፍል ኃላፊነትዎና አስተባባሪነትዎ ያለብዎትን ኃላፊነትና ተግባር ቢገልፀልኝ
5. በርቀት ት/ት ዋና ክፍሉ የሚደረገውን ክትትልና ድጋፍ እንዴት ይገልጹታል?
6. የመማር ማስተማሩን ሒደት ለማሻሻል ምን መደረግ አለበት ይላሉ?

ከርቀት ትምህርት ዋና ክፍል ኃላፊው ጋር ለሚደረግ ቃለ - መጠይቅ መምሪያ

ዓላማ፡- የቃለ-መጠይቁ ዋና ዓላማ ስለሰራዊቱ የ2ኛ ደረጃ የርቀት ትምህርት አጠቃላይ እንቅስቃሴ ለሚደረገዉ ጥናት መረጃ ለመሰብሰብ ነዉ።

ለሚሰጡኝ መረጃ ሁሉ በቅድሚያ አመሰግናለሁ!

1. በየደረጃዉ ያሉት ክፍሎች ማለትም የአ□ዳሚክ ትምህርት መምሪያ፣ የርቀት ትምህርት ዋና ክፍል፣ የዕዝና ክ/ጦር ትምህርት ክፍሎች ያላቸዉን የስራ ግንኙነትና ኃላፊነታቸዉን በአግባቡ ለመወጣት የሚያደርጉትንቁርጠኝነት እንዴት ይገመግሙታል?
2. በሚከተሉት ጉዳዮች ዙሪያ እየተደረጉ ያሉ እንቅስቃሴዎችን ቢገልጹልኝ
   ሀ. የትምህርቱን ሒደት ሱፐርቫይዝ በማድረግ በመከታተልና በመቆጣጠር ዙሪያ
   ለ. የሰራተኞችን አቅም በማሳደግ ወይም የስራ ላይ ስልጠና በመስጠት ለምሳሌ ወርክሾፕ፣ ሰሚናር፣ አዲስ አሰራር በማስተዋወቅ፣ ሙያ ማሻሻያ (refresher course) በመስጠት፣ ከሌሎች ተቋማትጋር ልምድ በመለዋወጥ ወዘተ...
   ሐ. ግልጽ መረጃና ተገቢ የሆነ መመሪያ በማዘጋጀትና በመስጠት ዙሪያ
   መ. የመማሪያ ሞጁሎችን በመከለስ አሻሽሎና ወቅታዊ አድርጎ በማቅረብ ዙሪያ
   ሠ. የመማሪያ መሣሪያዎችን በማሰራጨት ዙሪያ
   ሠ. የትምህርት ሒደቱን በመገምገምና በማጥናት አስፈላጊ የሆኑ እርምቶችን (ማስተካከያዎችን) በማድረግ ዙሪያ
4. የህትመት የመማሪያ መሣሪያዎች (ሞጁሎች) ብቻ ለርቀት ትምህርቱ ስኬታማነት በቂ ናቸው ይላሉ? ከሞጁሎች በተጨማሪ ትምህርቱን በኤሌክትሮኒክስ ሜዲያዎች ማቀትም በሬዲዮ፣ በድምጽና በትዕይንት ካሴቶች ለማስተማር የታቀደ እቅድ (Educational Technology plan) ነበር?
   4. በመጨረሻም ሌላ የሚጨምሩት ካለ?