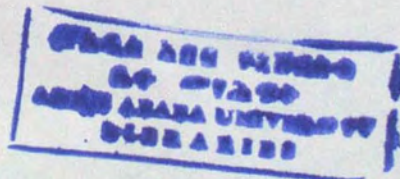


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SCHOOL OF GRADUATE STUDIES

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BY
ENDRIS ABERA

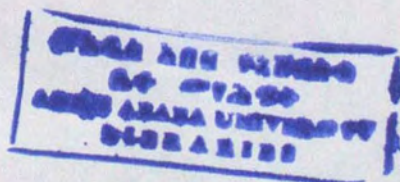


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**A THESIS PRESENTED TO THE SCHOOL OF
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DEGREE OF MASTER OF ARTS IN CURRICULUM AND TEACHER
PROFESSIONAL DEVELOPMENT STUDIES**

BY

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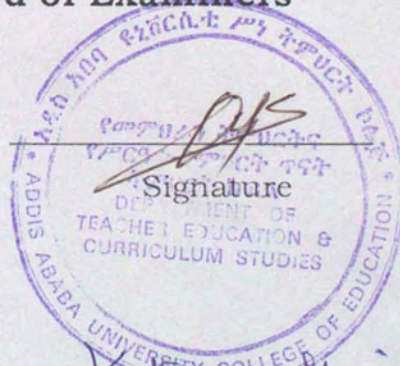
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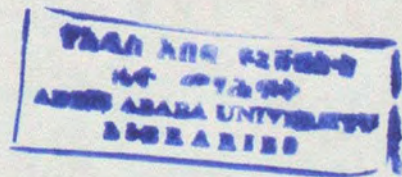


Table of Contents

	Page
Acknowledgements.....	i
Table of Contents.....	ii
List of Tables	iv
List of Acronyms	vi
Abstracts.....	vii
CHAPTER ONE: INTRODUCTION	
1.1. Background of the Study	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	6
1.4 Significance of the Study	7
1.5 Delimitation of the Study	8
1.6 Limitation of the Study	8
1.7. Definition of Key Terms	9
1.8. Organization of the study	10
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
2.1. Population Issues and Problems in Developing Countries	11
2.1.1 Population Problems and Policies in Ethiopia.....	14
2.1.2 The National Population Policy of Ethiopia.....	17
2.2 The Concepts of Population and Family Life Education.....	19
2.2.1 Historical Development of Pop/FLE	21
2.2.2 Goals and Purposes of Pop/FLE	23
2.3. Modes of Inclusion for Pop/FLE.....	24
2.3.1 Scope and Content of Pop/FLE	25
2.3.2 Teaching Methods for Pop/FLE.....	27
2.3.3 Problems of Imparting Pop/FLE.....	28
2.4 The Situation of Pop/FLE in Ethiopia	30
2.5 Knowledge and attitude of Adolescents on Pop/FL Issues and Problems	31
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY	
3.1 Method of the Study	33
3.2. Data Sources.....	33

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LIBRARIES

3.3. Determining Sample Size of the Student Population	33
3.4. Sampling Techniques and Procedures.....	34
3.5. Instruments for Data Collection.....	36
3.6. Pilot Test	40
3.7. Methods of Data Analysis	41

CHAPTER FOUR: ANALYSIS AND INTERPRETATION OF DATA

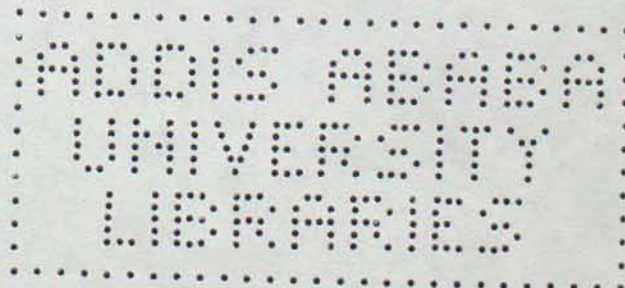
4.1. Content Analysis of Curriculum Materials	42
4.1.1. Findings from Content Analysis of Grades 9 and 10 Biology Curricular Materials	42
4.1.2. Findings from Content Analysis Results of Grade 9 and 10 Geography Curricular Materials	57
4.2. Analysis of Teachers' Responses	70
4.2.1 Teachers' Background Information.....	70
4.2.2 Teachers' Responses Concerning their Training.....	72
4.2.3 Teachers' Responses on the availability of objectives and contents of Pop/FLE	74
4.2.4 Teaching methods used by teachers to present the contents of Pop/FLE to their students in the classroom	76
4.2.5 Teachers' responses on factors that hinder them in using the suggested teaching methods on Pop/FLE.....	78
4.2.6 Factors that Affect the Implementation of Pop/FLE	80
4.3. Analysis of Students' Pop/FL Knowledge and Attitude Test Results	83
4.3.1. Discussion of Students Pop/FL knowledge Test Results.....	84
4.3.2 Discussion of Students Pop/FLE Attitude Test Results.....	87

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary	92
5.2. Conclusions	97
5.3. Recommendations	98

References

Appendices



List of Tables

Tables		Pages
1.	Table One: Total number of woredas and Schools as well as total number of students who Participated in the study-----	35
3.	Table Two: Illustration of the Nine Categories-----	37
3.	Table Three: Analysis results of grades 9 & 10 Biology curricular Materials-----	44
4.	Table Four: Categorization of Pop/FLE contents available in Grade nine Biology student's textbook-----	45
5.	Table Five: Categorization of Pop/FLE contents available in Grade ten Biology student's textbook-----	52
7.	Table Six: Analysis results of grades 9 & 10 Geography Curricular Materials -----	58
7.	Table Seven: Categorization of Pop/FLE contents available in Grade nine Geography student's textbook-----	60
8.	Table Eight: Categorization of Pop/FLE contents available in Grade ten Geography student's textbook-----	65
9.	Table Nine: Characteristics of Teacher Respondents by Sex, qualification, and years of teaching experience-----	71
10.	Table Ten: Responses of teachers about their Training on Pop/FLE-----	73
11.	Table Eleven: Teachers' Responses concerning the availability of objectives and contents on Pop/FLE in the subjects they teach-----	74
13.	Table Twelve: Teachers' Response on ranking the order of the Teaching methods they employed in teaching Pop/FLE contents-----	77

13.	Table Thirteen: Teachers' Responses on factors affecting the Implementation of Pop/FLE program-----	80
15.	Table Fourteen: Students' Knowledge Test Results on Pop/FL Issues-----	84
15.	Table Fifteen: Summary of Students' Knowledge Level-----	85
18.	Table Sixteen: T-test Result on Pop/FL Knowledge-----	85
19.	Table Seventeen: Students' Responses on their major sources of Pop/FL information-----	86
18.	Table Eighteen: Means and Standard Deviations of students' Attitudes toward Pop/FLE-----	88
22.	Table Nineteen: T-test on attitude toward Pop/FLE-----	88
23.	Table Twenty: Means and Standard Deviations of Pop/FL attitude-----	89
24.	Table Twenty-One: T-test on attitudes toward Pop/FL issues and problems in general-----	90

ACRONYMS

- FGAE-** Family Guidance Association of Ethiopia.
- ICDR-** Institute for curriculum Development and Research
- MOE-** Ministry of Education
- NOP-** National Office for Population
- POP/FL-** Population and Family Life
- POP/FLE-** Population and Family Life Education
- S.D-** Standard Deviation
- SPSS-** Statistical Package for Social Sciences
- UN-** United Nations
- UNDP-** United Nations Development Program
- UNESCO-** United Nations Educational, Scientific, and Cultural
Organization
- UNFPA-** United Nations fund for Population Activities

Abstract

The purpose of this study was to assess the status of Pop/FLE in the secondary school curriculum of South Wollo zone. In order to achieve this purpose of the study, basic questions were raised concerning the current condition of objectives and contents of Pop/FLE, the ways through which Objectives and contents of Pop/FLE were integrated in the teaching materials, the teaching methods used by teachers, hindering factors in the implementation of the program and concerning the awareness and attitude of students on Pop/FL issues and problems.

The study was carried out in six secondary schools. Hote, Kombolcha, Haiq, Borena, Gerado and Kutaber secondary schools. The sources of the information were Geography and Biology Curricular materials, forty-two teachers, two curriculum experts from the ICDR, two officials from the zone education office and an official from FGAE. In addition, 393 students did also participate in the study.

The instruments employed to collect the information were coding sheets, a questionnaire consisting of 11 questions (most of which close-ended with some open-ended), interview, focus group discussion, observation, and tests (both awareness and attitude tests containing 15 and 10 questions respectively). The data were analyzed using percentage, mean, and T-test. In addition, based on the analysis, the following major findings were obtained.

Objectives and contents of Pop/FLE integrated in the teaching materials were limited in scope. The contents were presented shallowly using texts with no examples and vivid pictures. It was also found that the time allotted to Pop/FLE contents was the minimum and the suggested evaluation mechanisms were (emphasizing mainly on memorization).

The study also discloses that lack of training for teachers, lack of up-to-date reference materials on Pop/FLE, large class size, and absence of school co-curricular activities together with time constraint were the obstacles for the successful implementation of the program. The students were found to have unsatisfactory knowledge on Pop/FL issues and problems. Nevertheless, most of them show a favorable attitude towards Pop/FLE.

Based on these and other findings the following recommendations were made.

It is necessary to improve the existing situation of the program through the selection and integration of more and comprehensive objectives and contents on Pop/FLE. Moreover, contents are needed to be presented/integrated using vivid pictures, examples, and related stories.

It is advisable that sufficient time is to be allotted to Pop/FLE contents. And, appropriate evaluation mechanisms that help to assess developments in terms of the 3 domains (cognitive, affective and psychomotor) should be suggested.

Efforts should also be made to equip teachers with basic knowledge, skills, and values on Pop/FL issues through effective teachers education and in-service training. In addition, other appropriate recommendations have been forwarded.



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

It has been gradually uncovered by different studies that rapid population growth has become one of the major challenges facing the world today. The developing world is currently going through a period of very rapid demographic change, i.e. unprecedented increase in the size and rate of growth as well as composition of human population having its own impact on environment and development prospects (Kassahun, 2006: 32; IPPF, 1967:1).

Because unbalanced population growth has created additional burden and brought about heavy pressure upon socio-economic development in most developing countries (Nigussie, 1994:5). Rapid population growth has its own impact on public education, health and welfare, employment, total food supply, resources and the quality of the environment and poses a serious threat to development efforts (FGAE 1991: 52-53).

Rapid population growth would inevitably lead to forest destruction, resource depletion, soil erosion and environmental degradation. And this would further obstacle the improvement of the quality of life of the people.

The demographic trend in Ethiopia, as in most developing countries, is mainly characterized by high population growth rate with changes in its structure and composition due to high fertility and declining mortality, which is resulted from improvements in health condition (Derebssa, 1999: 33).

Although uncontrolled population growth is believed to be a major threat to environment and development, the case among Ethiopian society is considered on the other way round (Bisrat, 1997: 1). As per the tradition of

rural Ethiopia, having more children in a given family is taken as a wealth for that family. This is because; children in rural Ethiopia can discharge a number of responsibilities both in and out of home. They provide benefits during childhood by assisting in household chores or on the farm in rural areas. In the household, they produce services such as gathering & carrying fuel, fetching water, assisting in cooking meals & looking after younger siblings (Cain, 1977; Caldwell, 1976, in Yacob, 1991:20). According to Arnold et al. (1975), and World Bank (1984), children provide long-term benefits by supporting their parents during old age. In addition, parents look to their families especially sons, as means of security mainly during their old age.

Consequently, as Shumete, et al., (2006:33) indicate, the annual population growth rate of the country rates at 2.92% with total population exceeding 70 million and doubling itself in 24 years. In this case World Bank (1984) cited in Allen C. Kelly (2001: 37) indicates that "rapid population growth – at rates above 2 percent ... acts as a brake on development." Ethiopia, the second populated country in sub-Saharan Africa is facing a serious challenge today relating to the imbalances between population and resources. Currently, as a result of heavy population pressure and the absence of technological progress, the carrying capacity of the country has declined so much that the population could not be sustained with resources generated internally (Nigussie, 1994:56).

This is because of the fact that the alarmingly growing population in the country needs a big cultivable land, which in turn resulted in deforestation. As Bisrat (1997) mentions, at the beginning of the 20th century, 40 percent of Ethiopia's land was covered with forest, but now it is diminished to 4 percent due to the increment in the size of human population.

In this connection, Shumete, et al.(2006), also show that currently the annual rate of deforestation in Ethiopia is between 150,000 and 200,000 hectares. Thus, this increasing rate of deforestation causes for soil erosion and land

degradation, which in turn leads to deterioration of soil fertility and hence lowland productivity as well as reduced agricultural per capita production and poverty. Moreover, mentioning the UNDP's Human Development Report (2004) the authors indicate that in Ethiopia, the number of people with a daily income of less than 2 dollars is about 80.7 percent and people living below the national poverty line reaching 44.2 percent.

The other issues of the day, which are becoming topics of discussion among the world community, include sexuality matters in general and adolescents' sexual practice in particular. Like most developing countries, in Ethiopia because of strong cultural taboos, parents rarely discuss sexuality issues openly with their children. In addition, incase when adolescents raise questions about sex, the adult is not able to answer because; he does not himself know, or is unable to talk about sex. Thus, adolescents may get information regarding issues related to sex from their teenagers who themselves may be misinformed or hardly informed (Negussie, et al., 1999: 205; IPPF, 1963: 177).

In this case, the Family Guidance Association of Ethiopia /FGAE/ (1994:1-2) states that for an unmarried Ethiopian woman of any age, it is hardly possible to attend any program regarding maternal health or Family planning. Furthermore, FGAE mentions that many Ethiopian adolescents are sexually active and their lack of access to reproductive health information and services has resulted in high rates of adolescent pregnancy and sexually transmitted Diseases (STDs) as well as HIV/AIDS and hence increasing illness and death from unwanted pregnancies and abortion related complications. Many health surveys and social studies conducted in developing countries including Ethiopia have mentioned the situation as follows:

Most of the adolescents are sexually active. Sexual activity at an early age is also identified as being associated with several serious risks and health complications. The majorities of the adolescents who are exposed to such risks

are, at the same time, reported to lack of access to health and social services, or are reluctant to use the services even when they are available. This is mainly due to two major reasons lack of awareness of these risks, and misinformation about the potential consequences of their behavior (ICDR, 1998: 51).

Thus, realizing the seriousness of the situation, the government of Ethiopia tried to take various population related measures. One of such measures was the introduction of Pop/FLE into the formal school system in order to inform adolescents about the Pop/FL related problems and to prepare them for future parenthood. Accordingly, the major concern of this paper is to examine the status of Pop/FLE in the secondary school curriculum in South Wollo Zone.

1.2 Statement of the problem

The demographic trends together with the resulting socio-economic conditions characterizing most of the developing countries of the world today have contributed to the growing social problems of children and youth which have the highest proportion of the population of these countries.

In these countries the problems of rapid population growth coupled with the slow and/or stagnant socio-economic development has caused the general poverty of the people (Assefa Hailemariam and Dilnesaw Asrat, 1996:1).

The situation is worsened in most sub-Saharan African countries where the illiteracy rate is high, and access to education, health and employment opportunities are very low. Among others, severe poverty, malnutrition, high rates of mortality and morbidity, and the presence of limited access to educational opportunities are the major problems characterizing the situation of children and youth in the region. Ethiopia is one of the countries in this region where children and youth have experienced similar living condition (Ibid).

The population growth rate of Ethiopia is recorded as one of the fastest in Africa. This high rate of growth together with the youthful nature of the population is not in a harmony with the slow socio-economic development in the country. The proportion of the young age population is so large that this group quickly consumes any gains in the economy. This leads to little or no growth in the national economy.

Such demographic problems in the country initiated the government for the adoption of effective policy measures. One of such policy measures was the National Population Policy of Ethiopia, which was adopted with the major goal of harmonizing the rate of population growth with socio-economic progress of the country. In order to attain the goal of the National Population policy, the government implemented various projects. One of those projects was project ETH/88/p06_Population Education Program in Ethiopian Schools. (Arowlo, 1989; ICDR, 1998).

Ethiopia introduced Pop/FLE in its formal education system in 1989 as a pilot project under project ETH/88/P06_Population Education Programme in Ethiopian schools funded by UNFPA, supervised by UNESCO and the government of Ethiopia. The implementing agent was the Institute for Curriculum Development and Research (ICDR) of the Ministry of Education (Ibid).

The project was started as an outcome of the Needs Assessment made by UNFPA in Ethiopia in December 1986, which recommended the introduction of Pop/FLE into the formal Education system as one of the strategies for changing attitudes and behavior of Ethiopian youth in favor of small family size relative to the resources available to the family and the nation (Ibid).

The major goal of this study was therefore, to assess the status of Pop/FLE in the secondary school curriculum of South Wollo Zone.

1.3 Objectives of the study

This study was intended:

1. To assess the existing condition of Pop/FLE in the secondary school curriculum through evaluating:
 - 1.1 the scope and strength of Pop/FLE objectives and contents in the curriculum;
 - 1.2 the ways through which Pop/FLE was incorporated in the curriculum
 - 1.3 the Time allotted to Pop/FLE contents;
 - 1.4 the Methods of teaching proposed in the curricula and used by teachers in teaching Pop/FLE contents.
 - 1.5 The Evaluation mechanisms used by teachers to assess the students' progress in relation to Pop/FL issues and problems.
2. To examine the Pop/FL knowledge and attitude of students.
3. To identify the Major factors those affect the successful implementation of the programme and to forward possible solutions.

Thus, towards attaining these objectives of the study the following basic questions were formulated.

1. What is the prevailing condition of Pop/FLE in the Secondary School curriculum of South Wollo Zone?
 - 1.1 Are objectives and Contents of Pop/FLE sufficiently available in the curricular materials of secondary Schools?
 - 1.2 In what way do themes of Pop/FLE integrated into the secondary school curricular materials.
2. How do subject teachers present the contents of Pop/FLE to their students in the classroom?
3. Which factors hinder the implementation of Pop/FL aspect of the secondary school curriculum?

4. What is the awareness level of students concerning Pop/FL issues?
 - 4.1 Is there any significant knowledge difference between sexes; grade levels, and settings?
 - 4.2 Is there any significant difference between sexes; grade levels, and settings on their attitude towards Pop/FLE?

1.4 Significance of the study

Findings from this research are expected to be valuable for the following reasons

1. To curriculum designers and experts, it will show the reality on the ground about Pop/ FL issues and problems and hence to make the necessary reform in the area.
1. It will help both national and international non-government organizations (NGOs) that are engaged in various activities related to Pop/FL issues and problems through the provision of useful and up-to-date information on the subject.
2. It will help teachers to reflect on their methods of teaching themes related to Population and Family Life.
3. In addition, the findings may initiate others to conduct further research in the field.

1.5 Delimitation of the study

Population and Family Life issues and problems are countrywide; hence it is needless to say that studying these issues through out Ethiopia is necessary. However, with regard to the research site, it was delimited to South Wollo Zone, (in Amhara Regional state), with the assumption that the secondary school curriculum of Ethiopia is similar throughout the country. And, to make the study manageable, it was also delimited to this zone where early marriage and adolescent early sexual practice is common.

In addition, it should also be noted that only the first cycle, (grades 9&10) of the secondary school level was included in this study. Because, this level is regarded, in the New Education and Training Policy of Ethiopia, as the general secondary education level where students can get basic knowledge on some common issues such as Pop/FL.

Finally, although the literature indicated for the introduction of Pop/FLE in various subjects like Biology, Geography, Civics, History, Mathematics and Languages, this study has been delimited to Biology and Geography curricular materials to obtain information through Content Analysis. Because, as has been indicated by the ICDR, initially, Pop/FLE was introduced into the Ethiopian secondary school curricula through integration of the issues in the two aforementioned subjects and Home Economics. But, now home economics is no more considered as a subject.

1.6 Limitation of the Study

It would have been to conduct this study at a regional level and with more samples. However, due to time and financial constraints, as well as to make the study manageable, it has been conducted at a Zonal level.

In addition, the subjects that have been included in this study for Content Analysis were only Biology and Geography due to similar reasons. As a result, the findings which would have been the basis of generalization may not be free from limitations.

The other limitation of the study was the problem of getting all the necessary curricular materials of the two subjects. During the course of this study, the researcher has done all the best to get all the materials. Nevertheless, the attempt was not successful in getting the syllabi of grade 9 Biology and Geography. Only cover pages were available with soft copy in the ICDR.

Finally, shortage of source materials, which are results of in-depth research both in other countries and Ethiopian context, on this topic, was another



problem. Hence, some source materials have been repeatedly used in this study.

1.7. Definition of Key Terms

Following terms are defined in accordance with the meanings they have in this study.

- Adolescence – refers to the period from puberty to the attainment of adult growth and maturity (adolescents whose age ranged from 14_19 years).
- Attitude- refers to the students' feelings (their support or opposition) of the matters associated with Pop/FLE and Pop/FL issues.
- Contraceptive- is a device used to prevent conception such as diaphragm or condom.
- Knowledge- refers to the awareness of students on Pop/FL issues and problems as indicated by their scores on the test adapted and constructed by the researcher.
- Population and Family Life Education- is an educational programme, which provides for the study of the population situation in the family, community, nation and the world, with the purpose of developing in the students rational and responsible attitudes and behavior toward the situation.
- Status- concerned with the prevailing condition of the programme in the curricula according to the assessment through the present study.

1.8. Organization of the study

The study is organized into five chapters. The first chapter deals with background of the study, statement of the problem, objective of the study, significance of the study, delimitation of the study, limitation of the study, operational definitions and organization of the study. The second chapter presents review of related literature and chapter three contains the research method. The fourth chapter focuses on presentation and analysis of data.

Finally, chapter five presents summary, conclusions and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter deals with review of related literature on Pop/FLE to give a concrete foundation for the study.

2.1. Population Issues and Problems in Developing Countries

For the first millennium in the history of humankind, the growth of human population was insignificant and the annual rate of growth was estimated to be 0.002 percent with which the given population could take many thousands of years to double (UNESCO, 1978). It is because of the fact that in the pre-historical past, the limited technological capacity of the man had made the survival a difficult proposition. Life at that time was insecure and mortality rates were very high (Alok Ranjan, 1999:1).

The struggle for survival and a secure life however made the man innovative and enterprising. As a result, the man was able to win over a number of diseases and natural calamities that had endangered human life. With agricultural revolution coming into being 10,000 years back, the pace for the increase of human population began to be accelerated. By the beginning of the Christian era, the world population was estimated to be 250 million and amounted to reach half a billion by the year 1650 (Desmond, 1962; Coale, 1974 cited in Cliquest Robert, 1991; and Alok Ranjan, 1991:1).

Latter, with the advent of the industrial revolution the rate of population growth increased its rapidity and resulted in the world population totaling 1 billion, i.e. it doubled in 200 years.

It was, however, since the 1950s that human population began to increase in an exceptional way and in a manner, which is historically unexpected and even, unlikely to be repeated in the future (Cliquest 1991:1; UN, 1991).

In 1974 (after 24 years), the total world population was estimated to be 4 billion, and it reached the mark of 5 billion after 13 years in 1987 and 6 billion by the end of the 1990s.

This is mainly due to the advancement in science and technology, especially in medical field, which resulted in a declining mortality rate with no or little change in fertility (Cliquest and Christian Thienpont, 1995 in Derebssa, 1999; UN 1986). Even today the world is experiencing an overall average increase of 90 million people each year, and it is now estimated to be 6.21 billion and it is expected that in the year 2050 the world population will grow to 9,322.3 million (UNFPA, 2002:72).

Concerning this alarmingly growing population situation of the world Bishop G. (1986:108) indicates that each day more than 170,000 babies are born and the world population is to grow by one million in each five days.

With regard to this, Bisrat (1997:18) states that if the world population remains to grow with such a faster pace, the population density of the world after seven or eight centuries would be ten people per each square meter including both landmass and water bodies. Out of which 75 percent live in developing countries and the rest 25 percent in developed countries. Most of this increase has been observed in the developing countries.

According to Cliquest R. (1991:18) in 1950-1990, it was estimated that out of a total annual increase to the world's population, 86 percent was contributed by the developing countries and 14 percent by the developed countries. In addition, it is expected that 94 percent of world population growth to take place in the less developed countries in the coming few decades.

According to the United Nations (1991) report, however, between 1950-55 it was estimated that, out of a total average annual increase of 47 million of the world's population, 77 percent was contributed by the less developed counties (i.e., 7 percent in the least developed countries and 70 percent in the other



developing regions) with only 23 percent of the population growth accounted for by the developed countries.

The contribution of the less developed countries has further grown to 93 percent out of the 88 million average annual increase of the world population in the period 1985-1990. And it is projected that, the share of the less developed countries will reach 97 percent out of the total expected annual average of 83 million, in the period 2020-2025 leaving only 3 percent to the developed countries (Ibid).

High and still raising fertility and moderately declining mortality rates have been assumed responsible for the faster growth of the population in the less developed countries. The application of the advances in medical science and technology together with increased administrative efficiency for handling large-scale health campaigns has been noted to contribute to a drastic decline in mortality. It is also indicated that the decline in the mortality in developing countries occurred with modest socio-economic development, hence leaving fertility level still high especially in the sub-Saharan African countries (Ibid).

Fertility in the region is assumed to be the highest (3 percent) compared to the other developing regions of Asia and Latin America, which accounted for two percent and 1.9 percent respectively (Cliquest, 1991:18). Therefore, it is evident that the developing countries mainly in sub-Saharan Africa have been under a problem of rapid population growth.

The report on world social situation states 3 major ways in which rapid population growth in the under developed countries adversely affects their social and economic development.

First, it can increase the pressure of population on land that is already densely settled and so retards increases in the productivity of agricultural labor.

Secondly, rapid population growth can worsen the problem of capital shortage, which is one of the major hindrances to economic development of almost all under developed countries. Countries with high rate of population

growth have to allocate a large proportion of their national income on consumption and services like education, health and housing (UNESCO, 1978: 10, and IPPF 1967:54).

Finally, the high birth rates of the developing countries create a heavy burden of dependent children for the working population (Jafeet, 1960: 378).

2.1.1 Population Problems in Ethiopia

Currently, Ethiopia has been facing various complex problems ranging from the climatic changes and topographic constraints, (that are out of control), to the faster growth rate in population and rapid ecological degradation. Current trends in population growth, land resource utilization and environmental degradation suggest for the prevalence of very serious problems in the future (Markos Ezra, 1997:6).

Up to the 1950s, the population of Ethiopia passed through a period of slow growth rate. At the beginning of the 20th c the total population, which was estimated to be 11.8 million, increased to 23.6 in 1960 and reached 42.6 million in 1984 (CSA, 1991). This historical profile indicates that the population of Ethiopia doubled within 60 years (1900-1960) and it has increased from around 11 million to 42 million (almost a four fold) in less than a century. After 1960, the population began to grow in a relatively faster pace, which leads to the decline of the time needed for the population to double.

Ethiopia is today experiencing one of the most rapid increases in population in Africa with its rate of population growth increasing from less than 2 percent in the 1950s to 3 percent in the late 1980s, and to about 3.2 percent in the 1990s (CSA, 1988, 1991). This high rate of population growth is exhibited mainly due to moderately declining mortality and constant and high fertility, which appear to be major demographic features of the country.

For instance, the estimated crude birth rate in 1970 was 42.8 per 1000 population and rose to 46.6 per 1000 population in 1990. The crude death

rate on the other hand has been declined from 20 per 1000 population in 1970 to 16.4 per 1000 population in 1990 (CSA, 1998; OPHCC, 1991; Assefa and Allen, 1997). As this available data indicates fertility has been increasing from 5.8 children per woman in 1970 to 7.7 children in 1990

According to the central statistics authority (1994 census), the population of Ethiopia was reported to be 52.3 million. By the year 2005 it was estimated to be 73.044 million with a population growth rate of 2.62 percent (CSA, 2005). In the period 2006-2020, it is projected that, an average of 2 million people will be added annually (CSA, 1998).

In Ethiopia, universal and early marriage, low level of contraceptive prevalence rate and the persistence of traditional beliefs and values that promote large family size appear to be motivating factors to the high birth rate. The present demographic trends indicate that Ethiopia assuming other things equal will have to bear the burden of unprecedented rapid population growth in the near future. The high population growth may slow down growth of per capita income and fixed capital formation through its depressing influence on rates of savings and investment of the country (Assefa, 1994; Hirut, 1994).

High population growth poses a serious challenge to the nation, particularly in the provision of health and educational services and employment opportunities. Extra facilities in schools, hospitals, transport facilities (more roads) and housing would be required to cope with the additional population.

In such circumstances, the country's limited resources would have to be directed towards the provision of such services at the expense of needed domestic savings to finance fixed capital formation and investment, which could increase production in the future.

In addition, high fertility produces a younger population. The Ethiopian population is young and is getting younger. Children less than 15 years of age constituted about 44 percent of the total population in 1950, about 46

percent in 1985 and again 44 percent in 2005 (UN, 1989; World Bank, 1984 and CSA, 2005).

This age structure, which has resulted from a high rate of population growth, has two main implications. First, a large share of resources must go to meet the special needs of the young. The increasing school age population means a greater demand for more schools and more teachers. The raising demand for housing has to be satisfied. Employment opportunities have to be created for new entrants into the labor force. More health services have to be established for mothers and children. This implies a substantial proportion of government income should be challenged to satisfy the needs of the young.

If their needs remained unfulfilled, then the country may face a volatile political condition. Therefore, a rapid population growth not only strains the financial resources of a government but also imposes a heavy burden on administrative services.

Secondly, an increase in the young age population means an increase in the number of potential parents. In high fertility populations, young people greatly outnumber their parents, and when their generation reaches adulthood the number of potential parents will inevitably be much larger than the present one. Even if this generation somehow limits its family size to half that of the previous one, the population will still increase substantially before leveling off (Todaro, 1987).

Recognizing these and other adverse effects of rapid population growth on the socio-economic development and the environment, the government of Ethiopia has recently begun giving due consideration to integrating population variables in the development planning processes.

2.1.2 The National Population Policy of Ethiopia

Ethiopia drafted its population policy in April 1993 (TGE, 1993:14). The National Population Policy of Ethiopia has a major goal of balancing the rate of population growth and capacity of the country for the development and fair

utilization of natural resources to the end that the level of welfare of the population is improved over time (Ibid). It is an integral part of the socio-economic development policies of the country having some general and specific objectives, which are intended to be attained in the long range.

The multi-disciplinary nature of the population programmes causes the multi-sectored activities needed for the implementation of the population policy. (i.e. the implementation of the national population policy needs broad community participation.) As the major component of the national population strategy, the National Office of Population (NOP) has emphasized on the Population Information, Education and Communication (Pop/IEC). Starting from the time of its establishment in July 1993, the NOP has worked in co-operation with other implementing agencies and its regional offices (which it has established) in drawing up and launching a comprehensive IEC strategy with the goal of informing the target population about the essence of the National Population Policy (NOP, 1996:12-13; 1998:7-8).

Along side the implementing agencies, the NOP has organized workshops and seminars both at the regional and central levels to create awareness for the implementing staff (NOP, 1996:12).

The agencies to be accredited for the implementation of the population policy include: Health Education Center of the Ministry of Health, the Culture Department of the Ministry of Culture and Information, the Educational Media Agency (EMA), the Institute for Curriculum Development and Research in the Ministry of Education, the Women's Affairs Departments of the Ministries of Agriculture, and Labor and Social Affairs, as well as government media agencies and non-governmental organizations (NOP, 1998:7).

As one of the major implementing agencies of the population policy, the following responsibilities are deserved to the Ministry of Education (TGE 1993:31).

These are:

- introducing Population and Family Life Education in the curricula of junior and senior secondary schools and in the higher institutions of learning;
- expanding Population and Family Life Education and assisting basic training of IEC through the educational media agency;
- studying the factors militating against female participation in the educational system, and designing appropriate corrective measures.

Towards realizing these objectives, the Ministry of Education (MOE) organized different workshops on Pop/FLE. The first of those workshops was organized by the higher education Academic and Research Affairs Department (MOE) in Bahir Dar Teachers' College in December 1995. The major objective of the workshop was to inform the academic and administrative staff of the college about Pop/FLE as responsible citizens, parents, and educators. And to assist the academic staff to recognize core carrier subjects for the integration of Pop/FLE in the curriculum of the college and also to encourage the staff to forward possible recommendations on over all possibilities of introducing Pop/FLE in to the curriculum.

Another Pop/FLE workshop was conducted on March 14, 1996 in the Ministry of Education Hall in which the main participants were senior personnel of the Ministry. The aim of the workshop was to sensitize the staff of the Ministry on population education programmes and activities (NOP, 1996:13-16).

In April 1996, there was another workshop in Bahir Dar Teachers' College with the aim of discussing and adapting modalities of offering Pop/FLE curriculum. With similar purpose and objective, another workshop was conducted at the Kotebe Teachers' College in February 1996 (Ibid).

The Institute of Curriculum Development and Research (ICDR) of the MOE organized another workshop between 5 & 7 June 1996 to inform the directors

and instructors of TTIs and Regional Education Bureau Officials about Pop/FLE (Ibid).

2.2 The Concepts of Population and Family Life Education

There is an increasing awareness of the importance of population issues in many developing countries. This is evident from the increasing number of countries with national population policies and the number of countries incorporating population variables in their national development plans. Large number of countries some without a national population policy have adopted Pop/FLE programmes in their school curricula to help students develop responsible attitudes and behavior on population related issues at family, community and national level.

The World Conference on Population and Development held at Bucharest in 1974 was the landmark for population issues in general and Pop/FLE in particular. It was during this time that the participant countries developed the World Plan of Action and a comprehensive definition of Population Education (Arowolo O. O., 1989).

There were a number of seminars and workshops convened at different times, which have dealt with the definition of population education. For example, the Latin American and Caribbean Regional seminar on population education programming convened by UNSECO's regional office in Santiago 1974 as cited in UNESCO (1978) document conceptualized population education as:

A multi disciplinary educational effort which reveals the factors that influence the qualitative and quantitative characteristics of the human population and which contributes to the preparation of the individual in the areas of sexual education, family life education, civics, population dynamics and environmental education, to the end that the individual be aware and responsible in defining

his duty and participation in the improvement of the quality of life in his culture during his epoch.

Pop/FLE is intended to raise the knowledge and understanding of population issues and their inter-relationship with social and economic development. However, the emphasis and approaches to achieve this end vary among countries that have integrated Pop/FLE into existing educational systems (Yacob Zewoldi, 1991:201).

The focus of population programmes is usually dictated by political, cultural and religious considerations, the national goals & objectives and the nature of the population problems and preferred solutions in the given region or country (Yacob, 1991:227). This variation in the focus of Pop/FLE resulted in differences in the conceptualization of the subject in different regions or countries.

There are also variations in the assignment of titles to Population Education programmes indifferent countries. For example, in Africa depending up on national perception of the programme and other factors different countries assigned different names to the program. In countries like Ethiopia, Kenya, Mauritius, Tanzania Seychelles, it was named as "Population and Family Life Education". Other countries such as Burkina Faso, Gabon, Guinea, Madagascar, Mauritania, Mozambique, Niger, Nigeria, Somali, Sierra Leon and Zambia have given the name "Population Education" for their program. Togo's program on the other hand, is referred to as "sex Education" (ICDR, 1994:28).

However, there is a common ground in defining Pop/FLE. Because, in most of the cases Pop/FLE is mainly concerned with family planning and sexuality education with the objective of creating awareness in the learners about all the elements of population through training and dissemination of information.

Moreover, Pop/FLE is mainly intended to regulate fertility behaviors and rates in order to harmonize the demographic situation to the carrying capacity of the environment.

2.2.1 Historical Development of Pop/FLE

For the first time the concept of Pop/FLE started in the developed countries in response to declining rates of fertility. In 1935, the Population Commission of Sweden proposed for the introduction of Population Education in the school activities. It was aimed at responding to the problem of declining birth rate in the country by encouraging marriage, and through bearing of children mainly in the younger population (UNESCO, 1978:23-24).

Latter in 1937 and 1938, the need for the incorporation of population issues to the school curricula with similar objective to that of Sweden was recommended in the United State (Ibid).

After twenty years, however, the introduction of Population Education to the school curriculum of the United State was suggested with a different goal of responding to rapid population growth (Ibid).

Through time, a number of other developed and developing countries of Asia, Africa and Latin America approved the need for the introduction of Population Education in their school systems in response to different population related problems (UNESCO, 1982; Kedir, 1993, cited in Derebssa 1999). The first National School Program for Pop/FLE was developed in Asia: India (1969), in the Philippines and the Republic of Korea (1970). In the Republic of Korea Population Education was introduced through integration into existing school subjects (UNESCO, 1978:25; Derebssa, 1999:41).

In Thailand an aspect of Population Education known as Family Life is integrated into an inter disciplinary course called Life Experience which is taught in the elementary school (Ibid).

In the late 1960s, different pilot activities started in some Latin American countries: at Del Vale University in Cali, Colombia and at the national training center in Chile (Ibid).

In Africa the concept of Pop/FLE was evolved after the UNESCO Regional Office for Education in Africa organized a seminar in Dakar on Population Education and Development in 1970 (UNESCO, 1978:25).

Between 1987 and 1992, the Ministry of Education and Culture in Tanzania with the financial and technical assistance of UNFPA started an experimental project for the introduction of family life education (FLE) in to the schools and teachers' colleges. In 1994, the Ministry realized the in-school Pop/FLE in Tanzania (Derebssa, 1999).

Another African country, Kenya, began to implement Pop/FLE since 1987 after the UNFPA approval (UNFPA, 1993, cited in Derebssa, 1999). According to the report of the World Conference on education (UN, 1990), by the middle of the 1980s, more than 80 countries introduced Pop/FLE in their school system as an integral part of their national development plan. Today their number is increasing to reach more than hundred (ICDR, 1994:25).

2.2.2 Goals and Purposes of Pop/FLE

Similar to the other types of education, the major goal of Population Education is to enable the learner to understand, recognize and define the problems that challenge him/her, and to set the necessary solutions. Pop/FLE does not present the learner with ready-made decisions and courses of action, which he/she has to accept. Rather, it helps the learner to develop desirable knowledge, understanding, skills and values, which will enable him/her to:



- examine the current situation of human population in relation to the problems it creates to the individuals, the family, community, society, the nation and the world at large.
- rely on his/her personal decision while taking appropriate measures necessary to solve problems which the population situation poses to him/her.
- arrive at rational decisions about the quality of life that suits him or her best.
- recognize and differentiate the means that can help to influence population dynamics and factors of population change if necessary (Aggarwal, 1982: 374-375; Derebsa, 1999:36; FAO, 1977:2; UNESCO, 1981:4 and Jayasaria, 1978:26).

FAO (1981:4) on the other hand, states the ultimate goal of population and family life education as to attain a relatively better quality of life for individuals with no consideration to their religious, ethnic, linguistic and/or social background, and in turn to the betterment of national and global living conditions.

Population and Family Life Education can raise students' knowledge, and understanding of population issues and their inter-relationship with development. It would help to mitigate the population problem for the young.

2.3. Modes of Inclusion for Pop/FLE

UNESCO (1983) forwarded the following approaches for the inclusion of Pop/FLE in to the formal school curriculum.

These are:

- A. **Separate course Approach:** it is a way that is followed by population educators to introduce Pop/FLE in the already prevailed curriculum as a subject area along with other subjects, which are taught at one or more grade levels. Although this approach affords the greatest

possibility of systematic and sustained learning for students, it is remained unpopular for long because of different factors.

School time tables are already crowded and the difficulty with teachers to accommodate a new course.

B. As a unit of a new course: it is another mode of incorporating Pop/FLE in a new course, which is developed in response to a specific problem, or new social needs. This can be done when population issues are taken as part of a set of contemporary social problems and given an allotted time in a new course.

C. As segments of existing or revised courses: an approach in which new instructional units are designed to fit logically and meaningfully into existing courses in selected subjects of different grade levels after an analysis is made to find out points of entry for Pop/FLE materials.

This mode of incorporation is the one, which is most widely used in many countries today by including units of Pop/FLE in subjects like Social Studies, General Science, Biology, Mathematics, Home Economics, and Health Education. While using this method, care must be taken not to interrupt the sequential development of contents of the existing course.

D. Integrating Pop/FLE contents into existing courses: In this approach, Pop/FLE contents can be introduced into the normal process of instruction throughout the curriculum. For Population Education is naturally interdisciplinary, there is a possibility of covering the contents by infusing it at appropriate points in different subject areas rather than developing separate course or new units for it.

This method of inclusion, however, needs a deep understanding of the relationship between Pop/FLE contents and other subjects' content areas, and of the appropriate points where the required content of Pop/FLE to be included.

Inspire of the fact that various modes of introducing Pop/FLE into the education system are available, most African countries with the exception of Kenya that has introduced it as a separate course, have integrated Pop/FLE into selected subjects like Biology Geography, Civics, Home Economics etc.

2.3.1 Scope and Content of Pop/FLE

For long Pop/FLE has remained as a subject of controversy among population educators and they didn't arrive at a consensus about a particular content in population education which is to be taught to attain the objectives of population education programme. Rather experts of the field in different parts of the world suggested different contents, which they thought as important to realize the goals of population education (UNESCO, 1981:4).

It is because of the fact that the focus of Pop/FLE is not limited only to population growth. That means, Population Education is not propaganda to indoctrinate people that "population explosion" is their major impediment to development. It is a much broader learning process that focuses on population related problems such as population change (changes in size, composition, and distribution) the probable causes and consequences of population change (i.e. which may be biological, social, economic, political or cultural in nature).

It also involves the relationships between population factors and the different socio-economic processes such as the relation between population and food production, health or nutrition, employment, income, education, socio-cultural processes and the environment (FAO, 1977:1).

Approaches and contents of population and family life education are slightly different all over the world. Different countries give greater attention differently to different issues in their population programs depending on the specific national situation, political and educational goals, programme

strategies (approaches of incorporation of Pop/FLE into the school system), the target population (in school or out of school population, or both), and other related factors.

In most parts of Asia for example, the content of Population Education is mainly concerned with population trend (rapid population growth) and its impact on development. In Latin America and Caribbean countries, however, the focus of the program ranged from a concern with family issues to human sexuality. In this region the title of the program is known as Family Life Education (UNFPA, 1984:122-123; Population Report, 1982 cited in ICDR, 1994:18).

In Africa on the other hand, it mainly emphasizes on cultural diversity, education for development, environmental issues, family life, health, urbanization and migration (Ibid).

In Ethiopia the content of Pop/FLE is intended to entertain the needs of both the in school and out of school population. The following themes are considered to be the major components of the program (ICDR, 1994: 18).

1. Economic development and population (size, growth rate, composition rural/urban, occupation, education etc).
2. Social development and population change,
3. Health, nutrition and population dynamics,
4. Demographic variables/processes (viz. fertility, mortality, migration, urbanization) in relation to resources,
5. Family size as a conceptual dimension in relation to family welfare,
6. Sex, marriage, family planning and responsible parenthood,
7. Values and beliefs in population matters
8. Family Laws and Civic Responsibilities,
9. Youth Women and Development.

2.3.2 Teaching Methods for Pop/FLE

In a UNESCO document (1983), it is indicated that population education is intended to equip students with the critical capacity and analytical skills necessary to evaluate and identify alternative solutions to population related problems. The goal of Population Education, which transcends the transmission of knowledge to the development of investigative and problem solving skills, is one of the major factors that determine the choice of methodology.

In addition, the interdisciplinary nature of the content of Pop/FLE calls for teaching methods which "stress analysis by starting from collective inquiry and lead to appraisal of issues or problems that affect the learners' social environment."

The population educators suggest methods, which emphasize learner participation and the practice of different to attain the goals of Pop/FLE (UNESCO, 1978:16).

Learner-centered or activity methods- those that encourage participation and group work and emphasize problem solving are claimed to be appropriate. It is because these methods involve teaching based on the learners' experiences and their active participation in the study of population (UNESCO, 1983:19).

Since Pop/FLE is concerned with a wide range of problem situations, different methods are required to be applied in order to cultivate the necessary skills. Methods like lecture, small group discussion, role-playing; open-ended case studies, simulation exercises, debates, panels, games, investigations and use of audio-visual techniques are preferable (UNESCO, 1980:92, 1983:21).

In a UNESCO (1983:92) document, the variety and appropriateness of the teaching-learning methods of Pop/FLE are generalized in the following expression: "a well come variety of new teaching methodologies are relevant to new needs".

2.3.3 Problems of Imparting Pop/FLE

Since its introduction to the school curriculum in the late 1960s and early 1970s, Pop/FLE has been implemented in a number of countries though the road has not been smooth. Various problems have been influencing the implementation of Pop/FLE. Some of the major ones are:

- confusion in concept. At the very beginning of its emergence Pop/FLE was suffered from an identity crisis. People didn't understand its meaning. Most of the time it was associated with sex education and other similar disciplines (Aggarwal, 1982:374; ICDR, 1994:24). It was mainly because; in the initial stages there were no population educationists. Pop/FLE was initiated by demographers, medical professionals and social activists and not by educationists.

Secondly, there were not articulated university level population education courses. Only educators with ample experience and sensitive to social problems were available. Finally, there was shortage of literature on population education. As a result, there was a wide range of ideas and interpretation of the scope, philosophy, objectives, concepts and methodology of population education, which left students with no option (ICDR, 1994: 23).

With regard to this, ICDR (1991) states as follows: for if goals and objectives of Pop/FLE are not clearly defined, the course contents are likely to be ambiguous if not misleading and this of course hampers the effectiveness of the programme.

- Teachers' competence, according to Arellano R. and Villaneura C. (1976:34), the ability of teachers to present the subject matter using the appropriate methodology is one of the factors that affect the implementation of Pop/FLE. As stated by various studies "some teachers are still ill-equipped to handle controversial population contents; teachers who do not know how to go about teaching human

sexuality may either embark on indoctrination or avoid the topic altogether”.

- The social and educational backgrounds of both teachers and students. The social and cultural Milieu from which the teachers and students come can affect their attitudes and behavior towards Pop/FLE. The educational background of teachers such as their level of awareness and knowledge of population factors, their concern and attitudes towards population issues, and their familiarity with population education concepts and methodology can affect the implementation process (UNESCO, 1983:29).

There are also some other important factors that affect the implementation of Pop/FLE. These are:

- time available for teaching Pop/FLE
- the nature of contents of Pop/FLE and their organization
- modes of inclusion of the contents
- shortage of teachers who can impart Pop/FLE effectively
- prejudice of parents
- lack of suitable planning
- lack of co-ordination among various agencies working in the field of family planning, welfare and education (Aggarwal, 1982: 374; UNESCO, 1983).

2.4 The Situation of Pop/FLE in Ethiopia

A concern over the population issues has grown over the years when the government of Ethiopia has taken a number of measures to formulate different policies and principles as solutions for the population-related problems of the country. Various forms of Population Education activities as: seminars, workshops, family planning meetings and conferences on population issues were started at different times (Derebssa, 1999:48).

For long, it was the Family Guidance Association of Ethiopia (FGAE) that has exercised family planning activities in the country mainly in the form of family life and Planned Parenthood. However, it was not satisfactory.

As a result, "the need to make Pop/FLE an integral part of the school curriculum, particularly at the secondary level has become a critical element in the effort to raise popular awareness in the public in general and the youth in particular" (ibid). To this end, Pop/FLE was emphasized with its major goal of producing citizens who feel responsible for their demographic behavior through their participation in national development activities (ICDR, 1991).

During the military regime, there was a curriculum revision to modify the education sector in way that it can contribute for development activities in the country. The mission was informed to include some aspects of Pop/FLE under the heading Home Economics, in both the secondary and elementary levels of schooling.

At the elementary level, more emphasis was given to issues like human relations and Family Planning, Hygiene, Sanitation, Clothing and Nutrition. Where as in the secondary level, topics about Family Planning including elements of sex education, marriage counseling and parental responsibility were emphasized (UNFPA, 1980:70).

With UNFPA, funding the implementation of the Pop/FLE program was started in 1989 as a pilot project in some selected schools in order to see its receptivity and feasibility in the socio-cultural context of the country. More than 25, various curricular and co-curricular materials in Pop/FLE were prepared and tested in the pilot school. At the same time, over 500 inspectors and head masters were trained in Pop/FLE in seminars and workshops (UNFPA, 1994:26-27). However, before implementation at the national level, the program suspended following the fall of the military regime for the whole education system was changed. ICDR (1996a) cited in Bisrat (1997:34) states Pop/FLE was reintroduced through the New Education and Training Policy of

Ethiopia since 1994 through integration in the existing courses like Biology, Geography and Civics in the secondary school level.

The program was introduced with the major goal of enabling adolescents to develop desirable knowledge, attitude, and skills on Pop/FL issues and problems.

2.5. Knowledge and Attitude of Adolescents on Pop/FL Issues and Problems

Studies disclosed that adolescents through out the world have insufficient knowledge on Pop/FL issues and problems such as reproduction and reproductive health, sexuality issues, contraception, menstruation etc (Daniel, 2000 and ICDR, 1998).

In most developing countries, adolescents are expected to delay sex until marriage. Situations which encourage sexual behavior are undermined, supervised or are met by negative sanctions. Adolescents have not any opportunity to obtain information from parents concerning their physical and emotional changes and information about sex and menstruation (Ibid).

However, these days adolescents are believed to be sexually active. Sexual activity which is accompanied by inadequate information makes the youth to be victims of and vulnerable to various sex related problems such as sexually transmitted diseases, unwanted pregnancy, abortion and its complications, and even death (ICDR, 1998 and UNFPA, 1997).

According to UNFPA (1999), millions of adolescents are in short of information and services, which can help them, prevent the prevalence of unwanted pregnancy, abortion and sexually transmitted diseases.

Studies conducted in different countries of Africa approved that the adolescent population has a deficient knowledge on the above-mentioned issues. For instance, Gage (1998), in his study on Kenyan adolescents mentioned that decisions about sex appear to be derived from insufficient

knowledge and misconception rather than from a rational consideration of the alternatives and consequences of sexual behavior.

In Ethiopia, the few studies concerning awareness of the youth on similar issues disclosed the presence of insufficient knowledge of adolescents (FGAE, 1998, UNFPA, 1997).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Method of the study

The major goal of this study was to assess the status of Pop/FLE in the secondary school curriculum of South Wollo Zone. To realize this goal a descriptive survey method was employed. Descriptive survey method was used because; it helps to describe educational situations and phenomena in detail (Kaul, 1996, Balley, 1994, Fraenkel and Wallen, 2000 and Kumar, 1996). In addition, a qualitative method was employed at the instrument level in order to gather supplementary information on the topic.

3.2. Data Sources

The data sources were grade 9 and 10 students, teachers (teachers those who have taught Biology and Geography), curriculum experts from ICDR, an official from FGAE, curriculum materials (syllabi, textbooks and teacher's guides) and Education Office officials in the selected Zone.

3.3 Sample Size and Sampling Techniques

According to the statistical data Procured from south Wollo Zone education office, there were about 25 secondary schools in 1999 academic year. Nevertheless, out of these secondary schools, five schools were recently opened (three schools with grade 9 only, and two schools have started grade 10 in the stated academic year).

These schools have been excluded from this study taking into account their limited experience. The study was intended to include all the rest (20) secondary schools.

Nevertheless, the schools are faraway one from the other. In addition, they have large number of population, which is difficult to be managed in a limited time. Therefore, only 6(30 percent) of the total (Borena, Kombolcha, Haiq, Gerado, Kutaber and Hote) Secondary Schools were selected. The schools were selected purposively to include schools both from urban and rural weredas of the Zone and also based on access for transportation.

According to the statistical data obtained from South Wollo Zone education office and from the selected sample schools, there were 20173 grade 9 & 10 students (Males=11952 and Females=8221). The sample size was determined based on Krejcie and Morgains' (1970) "table of determining sample size for research activities". Accordingly, the sample size becomes 377. It was felt that; it is also valuable to add 10 percent of the sample size to balance the case of incomplete test if any. Hence, the sample size becomes 415 students.

However, some of the selected participants (9 in number) were absent during the time of test administration and some (13 in number) did not give full answers to the questions. These were totaling 22 and were excluded from the study. Hence the total number of students participated in the study were 393.

The sample size allotted for each school was determined based on proportion to size. Stratified random sampling was used based on grade and sex to select sample students in each sample school. Then, in each grade and sex strata the number of students to be sampled was decided based on proportion.

In the selection of participant teachers purposive sampling was used to include those teachers who have taught the selected subjects in the sample schools. In some schools where the number of teachers who teach the selected subjects was less, availability sampling was employed but in others

where the number of subject teachers was high, simple random sampling was used. Total number of teachers Selected for this study was 42.

Eighteen teachers who participated in the Focus group discussion were selected purposefully based on their willingness among those who did fill the questionnaire.

Two curriculum experts of Biology and Geography were selected purposefully. In addition, two officials from the zone education office and an official from the North East branch Family Guidance Association of Ethiopia were selected purposefully taking into account their responsibility.

Accordingly, the total population participated in this study was totaling 440.

With regard to the selection of curriculum materials for content analysis, Biology and Geography were purposefully selected. It is mainly because ICDR (1994) has already indicated Biology, Geography and Home Economics as carrier subjects in which Pop/FLE has been included for the Ethiopian secondary schools. But, following the advent of the New Education and Training Policy of Ethiopia the subject Home Economics has been rejected. In addition, literature indicates for the possibility of integrating Pop/FLE contents in subjects like history, civics, Languages and mathematics in addition to the aforementioned ones. However, due to the stated factors under the delimitation part of this study, the researcher selected the two subjects, Biology and Geography, for the analysis purpose.

Table1. Total population and number of participants, by school, grade and sex

Woreda	School	Total Population	Grade level	Sex	Sample taken	Total Sample
Dessie	Hote	4585	9	M=1272	25	90
				F = 1125	22	
				T = 2397	47	
			10	M = 1260	24	
				F = 988	19	
				T = 2188	43	
Kombolcha	Kombolcha	3337	9	M= 1218	23	65
				F =995	20	
				T = 2213	43	
			10	M = 650	12	
				F = 474	10	
				T = 1124	22	
Tehulederie	Haiq	3738	9	M = 1455	28	73
				F = 1103	22	
				T =2558	50	
			10	M= 769	15	
				F = 411	8	
				T = 1180	23	
Debresina	Borena	4473	9	M= 1603	30	87
				F = 1058	20	
				T = 2661	50	
			10	M= 1129	23	
				F= 683	14	
				T = 1812	37	
Kutaber	Kutaber	2757	9	M= 1033	21	55
				F = 602	12	
				T = 1635	33	
			10	M = 747	15	
				F= 375	7	
				T = 1122	22	
Dessie Zuria	Gerado	1283	9	M= 451	8	23
				F= 216	4	
				T= 667	12	
			10	M= 425	7	
				F= 191	4	
				T = 616	11	
Total		20173		20173	393	393

3.4. Instruments for Data Collection

For this study, data, which have a dominantly quantitative value, with a few qualitative data have been, collected through different instruments such as document analysis (using coding-sheets), questionnaire, interview, test, Focus Group Discussion (FGD) and observation.

A. Coding Sheet

It was mainly employed to investigate information about objectives, contents; on Population and Family Life Education and the way they were incorporated in the curricular materials of the selected subjects. In addition, the allotted periods, methods of teaching, the suggested evaluation mechanisms on Population and Family Life Education were examined. The integration of Pop/FL issues and problems may take place at different levels in the selected subjects (as a chapter, a sub-topic, sentence or as examples). Therefore, every chapter of the selected textbooks was critically assessed.

To this end, nine different themes/categories which were proposed by ICDR (1991:18) based on the UN recommendation as important aspects of Pop/FLE content to be included in the secondary school curriculum were used as Units of Analysis.

Table 2. Themes recommended by ICDR(1991) and applied in this study as Units of analysis for the selected materials

No	Themes/ Categories	Description
	Category one	Economic development and population (size, growth rate, composition rural/urban, occupation, education, etc)
	Category two	Social development and population change
	Category three	Health, nutrition and population change
	Category four	Demographic variables/ processes (viz, fertility, mortality, migration, urbanization) in relation to resources.
	Category five	Family size as a conceptual dimension in relation to family welfare
	Category six	Sex, marriage, family planning and responsible parenthood
	Category seven	Values and beliefs in population matters
	Category eight	Family laws and civic responsibilities
	Category nine	Youth, women, and development

Therefore, the contents of Pop/FL issues in the textbooks were tallied in accordance with these categories.

B. Questionnaire: -A questionnaire is a data collection instrument that is widely used in educational research to obtain information about certain

conditions and practices, and to inquire into opinions and attitudes of individuals or groups (Kaul, 1996:142).

The questionnaire consisting of two parts was developed and administered to the teachers. The first part was intended to collect background information about the respondents where as the second part of the questionnaire consisted of 15 items (most of which close-ended & few open-ended) was used to collect information concerning the training of teachers, the problems encountered in the implementation of school Pop/FLE program, the teaching methods employed by teachers, about the presence of community participation towards the implementation process and the personal suggestions of the respondents towards the successful implementation of the program.

The items were constructed by the researcher after consulting different materials and commented on by the advisor and an expert in the faculty of education.

Since the respondents were high school teachers, they may not be in difficulty of understanding the English language. Therefore, the items in the questionnaire were prepared in English. And then the questionnaire was administered to eight teachers, who have taught Biology and Geography in Kombolcha secondary school, for a pilot test a week before the main data collection was began. As a result, four items, which were found ambiguous, were automatically dropped. Hence, the number of items was reduced to 11(eleven).

C. Interview

Interview guides were developed to collect supplementary data for this study. The interview guides comprise a series of open-ended structured questions, which were conducted for the curriculum experts and those officials of South Wollo Zone education office. It was also used to get some sort of information from an official in the North Eastern branch Family Guidance Association of



Ethiopia in Dessie, concerning their role in disseminating Pop/FL information among adolescents in the area.

D. Tests

Awareness Test

In order to obtain information about the awareness level of students on pop/FL issues and problems, 15 awareness test items were prepared. The test items consisted of questions about rapid population growth and its consequences to natural resources and family welfare. It also comprises questions about reproductive health and questions that emphasize on sexually transmitted diseases including HIV/AIDS.

They were prepared in "yes" or "No" having three alternatives: "Yes", "Not sure" and "No". Values 0, 1, and 2 were assigned to them (i.e. 'zero' for the 'wrong' responses, 1 for 'not sure' and 2 for 'correct' responses) regardless of the direction of the item (negative or positive).

Attitude Test

To measure the attitude of students towards Pop/FLE and Pop/FL issues and problems, 10 close-ended items were prepared. And all the items were followed by five alternatives: Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. The items were constructed in such a way that they can elicit either positive, negative, or combined reactions from the participants. The alternatives were labeled as:

Strongly Agree= SA, Agree = A, Undecided= UD, Disagree= D and Strongly Disagree= SD.

If a given statement was favorable towards Pop/FLE, and Pop/FL issues and problems, the following weights were given to the alternatives (5= SA, 4= A, 3= UD, 2= D, 1=SD) and vice versa if the statement was unfavorable.

Both the awareness and attitude test items were those, which were constructed by the researcher after consulting Pop/FLE handbooks prepared by ICDR for Secondary Schools. In addition, Biology and Geography textbooks of grades 9 and 10, and previous thesis papers were also consulted. Finally, the advisor and two senior graduate students in the department of psychology commented the items on.

The tests were first prepared in English. However, it was believed that the students have difficulties in understanding the English version of the tests. Therefore, the test items were translated in to Amharic language by the researcher and one senior graduate student in the department of TEFL.

E. Observation: It was made to check the availability of reference (source) materials for Pop/FLE in the libraries of the selected schools. And it was used to check class size as well as the teaching methods employed by teachers in teaching Population and Family Life related topics. For this purpose six classroom two library observation were made.

F. Focus Group Discussion (FGD): It was designed to collect information from teachers regarding their methods of teaching, the factors that hinder them in using the various active teaching methods, the periods allotted to Pop/FLE contents and regarding the evaluation mechanisms they used to check the progress of students in relation to Pop/FLE.

3.5. Pilot test

After the tests were prepared, translated in to Amharic and checked by experts, they were pilot tested one week before the main data collection process began.

The pilot test was conducted in Kombolcha secondary school. For this purpose, 4 sections of grade 9 and 10 (2 sections from each grade level) were selected using simple random sampling technique, and 40 students with equal number of males and females were selected and completed the tests.

Sections from which these students selected were excluded from the main study.

The Interco relation of the test items was checked using Cronbach Alpha reliability test. The reliability of the awareness test was indicated to be 0.70 during the pilot study where as the reliability of the attitude test was found to be 0.72.

3.6. Methods of Data Analysis

The Data collected through questionnaire and, content analysis, were quantitatively analyzed using percentage. And data, which were obtained through the qualitative data collection instruments, were qualitatively analyzed as a supplement to the quantitative data. The test results were quantitatively analyzed taking the demographic information (i.e. Sex, grade levels and settings) of subjects as independent variables; and knowledge and attitude as dependent variables to find out whether there were differences between sexes; between grade levels, and settings.

To this end, mean, T-test and Standard Deviation were employed.

CHAPTER FOUR

ANALYSIS AND INTERPRETATION OF DATA

In this chapter, data that were collected through content analysis, questionnaire, interview, focus Group discussion observation and tests were presented and analyzed using both qualitative and quantitative analytical methods.

4.1. Content Analysis of curriculum materials regarding objectives, modes of presentation of the contents, methods of teaching, time allotment and evaluation Mechanisms of POP/FLE.

According to ICDR (1991) the program of Pop/FLE was launched in the secondary schools of Ethiopia in 1989. It was introduced through the integration of Pop/FL issues and problems in some of the existing subjects like Biology, Geography and Home economics which were referred to as carrier subjects. Currently, however, Home Economics as a separate subject is no more existing in the list of school subjects in general.

Based on the above information, the availability of contents and objectives on Pop/FLE in the secondary school (grades 9 and 10) curricula mainly in Biology and Geography were assessed.

Following is the presentation of the analysis results for the selected subjects of the respected grade levels.

4.1.1. Findings from content Analysis of Grades 9 and 10 Biology curricular materials

In the introduction part of the syllabus it is indicted that the syllabi of grade 9 and 10 biology have integrated current social issues that are related to environment, population, health and disasters” (Syllabus, 2004). Therefore, Biology curricular materials are assessed and analyzed for the availability of



objectives and contents to address the issues stated above. The result of the analysis is presented here under.

Table 3. Analysis results of grade 9 and 10 Biology curricular materials about contents and objectives of Pop/FLE

Grades	Units	Levels of availability	Themes/Categories								
			Available								
			1	2	3	4	5	6	7	8	9
9	1	None									
	2	Until level			✓						
	3	Sub-topic			✓						
	4	Sub-topic			✓			✓			
	5	Topics	✓		✓	✓		✓			
	6	Topic			✓						
	7	None									
10	1	None									
	2	None									
	3	None									
	4	None									
	5	Sub-topic						✓			
	6	None									
	7	Sub-topic				✓	✓				

As can be seen from the table, objectives and contents on Pop/FLE were available in biology curricular materials of the two grade levels. The results for each grade level are discussed below.

For instance, in the Teacher's Guide of grade 9 Biology, some objectives concerning Pop/FL issues and problems were stated as follows

Students will gain an understanding of:

- the energy content of foods, the role of vitamins and minerals in human nutrition and the idea of balanced diet.
- the works done on smoking as a health hazard
- human population growth in relation to food problems
- the basic diseases caused by micro-organisms and some of the control methods

- body defense mechanisms against diseases and the principles behind vaccination, use of antibiotics and other drugs.

These objectives have not addressed the entire theme, of Pop/FLE proposed by ICDR. They focus mainly on some of the categories such as nutrition, health (disease), and population growth in relation to food. They are limited both in number and scope. This way of stating objectives can invite teachers to see the subject matter in a narrow sense.

Population and family life education is a broader concept that can touch every aspect of human life in relation to population dynamics. Therefore, it can have objectives which could be wider in coverage and larger in number than those stated above.

Hence, the objectives stated in the Teacher's Guide were not sufficient to show the desired outcomes concerning Pop/FLE. This is an indication for the low status of the program in the curriculum.

In the corresponding student's textbook, there were contents of Pop/FLE in a limited number of pages.

Table 4 Categorization of Pop/FLE contents available in grade 9 Biology student's textbook

Categories	Chapter two		Chapter Three		Chapter Four		Chapter Five		Chapter Six	
	No. of pages devoted to the categories	Ways of presentation	No. of pages	Ways of presentation	No. of pages	Ways of presentation	No. of pages	Ways of presentation	No. of pages	Ways of presentation
1	None		None		None		1(145)	Text	None	
2	None		None		None		None		None	
3	13(pp.29-41)	Tables Picture & Texts	11(pp-63-74)	Picture & Text	5(pp.110-114)	Text	1(146)	Text	6(pp-161-165)	Tables and text
4	None	-	None	-	None	-	2(143-144)	Text	None	-
5	None	-	None	-	None	-	None	-	None	-
6	None	-	None	-	2(pp115-116)	Text	2(pp-147-148)	Text	7(pp.16&178-183)	Text
7	None	-	None	-	None	-	None	-	None	-
8	None	-	None	-	None	-	None	-	None	-
9	Non	-	None	-	None	-	None	-	None	-

- Note, please refer table two under chapter three for the categories.

Grade 9 Biology textbook comprises of seven chapters with a total of 220 pages. Out of the seven, five chapters (2, 3, 4, 5 and 6) have given little space for some aspects of Pop/FLE contents. These chapters covered 160 (72.7%) of the total pages. Out of these, only 50 (22.7%) were devoted to contents on Pop/FLE. From the total 50 pages 13 (26%) were covered with contents on nutrition and 24 (48%) of the pages were devoted to health issues.

Both contents on nutrition and health issues, however, were not discussed in relation to population change contrary to the recommendation of ICDR. This implies that the available contents were mismatched with the proposed or recommended them of Pop/FLE. Only 3 (6%) of the total pages were covered by contents on population change and its effects on economic development as well as natural resources. The rest eleven pages, which account to 22% of the total, were devoted to explanation about family planning, various contraception methods and about the development of responsible sexual behavior to prevent unwanted pregnancy and to reduce transmission of sexually transmitted diseases including AIDS. In addition, there was a discussion about the concept and objective of population education as one of the mechanisms to check rapid population growth. Furthermore, issues with regard to environment in relation to population change were discussed.

Nevertheless, there were no contents addressing most of the recommended categories such as: social development and population change, the concepts and effects of family size on family welfare, family laws; and the roles of the youth as well as women in development activities.

Even, the available contents themselves were not well presented. They were limited in scope and depth i.e. they were presented shallowly and with a limited number of pages.

The other major issue examined was the mode of presentation/integration of the contents in the textbook. The way of presentation of a given content can have its own effect on the amount of information presented in a limited number of pages and on the students' learning. Pictorial and graphic

representations can help to present a great deal of information and are easily understandable than texts.

With respect to this, the analysis result indicates that the available contents on Pop/FL issues were presented or integrated using texts. So it can limit the amount of contents presented in the limited number of pages devoted to it.

It is also important to present contents using appropriate examples, which can elicit students' day-to-day experience. For instance, in discussing the impact of population growth on the socio-economic development, the over crowded classrooms in Ethiopian schools were to be used as examples. However, the contents were presented with no examples.

Other important issues considered were the suggested teaching methods for Pop/FLE contents. In the teacher's guide the following methods were proposed. These were explanation, inviting guest speakers, discussion, description, demonstration, the use of various behavior change methods and teacher's presentation augmented by charts, diagrams etc.

In the literature, it was indicated that role-playing, open-ended case studies, simulation exercises, debate, panels, game, and investigations were some of the suggested methods in addition to the aforementioned ones in teaching Pop/FLE contents. However, they were not included in the teacher's guide. This shows for the presence of discrepancies between the suggested teaching methods of Pop/FLE in the literature and teacher's guides.

There was also activity methods in the text book through which students were asked to do a project on how such factors like food, migration and over crowding can affect human life in the student's surrounding and to present their report to the class. It is really an important way of making students active participants in the teaching learning process.

In the teaching-learning process students' progress should be checked and assessed using appropriate formative evaluation mechanisms in order to identify periodically how much they know from what they have learnt. In this

respect, the following evaluation mechanisms such as oral questions, class work exercises, group works and presentation of reports were suggested in the teacher's guide. They emphasized mainly on the cognitive and affective aspects not to the psychomotor ones. However, students' development/progress was to be assessed in terms of all the 3 domains.

Concerning the period allotment, in the introduction part of grade 10 syllabus it is indicated, "the number of periods allotted for grade 9 and 10 each per week is 4. Assuming that there are 31 lesson weeks for this grade level, the total number of Biology periods for the academic year will be 124." However, the schools' time tables as well as teachers' responses in the Focus Group Discussion indicated the number of periods per week was three. This shows that there is a difference between the planned and utilized periods. So that it can affect the implementation process of the curriculum in general and Pop/FLE program in particular.

In the teacher's guide, periods were allocated to each chapter with no further allocation of periods for the lessons. Therefore, it makes difficult to judge the number of periods allotted to the topics and lessons on Pop/FLE issues.

To conclude, in grade 9 Biology curricular materials, the program of Pop/FLE was not in a satisfactory condition. (i.e. it was not in a position to attain the expected outcomes.) It is mainly because; the stated objectives on Pop/FLE were not comprehensive even to address some of the major aspects of the program. In Addition, contents on the majority of the recommended Pop/FLE themes were not available. Even, some of the available contents themselves mismatched with the themes proposed by the ICDR.

Moreover, most of the contents availed in the limited pages of the textbook were presented through texts only, without the use of other ways of presentation in a way that can affect the amount of information presented and the level of the students' learning.

Grade ten Biology syllabus (2004) has indicated for the presence of objectives and contents addressing Pop/FL issues and problems. The objectives were categorized under the three domains of cognitive, affective and psychomotor. These are presented as follows:

1. To develop understanding and acquire knowledge of

- Individual and social effects of misuse and abuse of drugs
- Types, processes and organs of reproduction in plants and animals
- Methods of transmission and prevention of the most common sexually transmitted diseases (STDs)
- Effect of rapid population growth on the environment
- Modes of transmission, prevention, epidemiology, and impact of HIV and AIDS

2. To develop skills and abilities of:

- Caring for and protecting organs and systems of the body and keeping them in proper hygienic conditions
- Avoiding risk behaviors that could make them vulnerable to HIV and AIDS

3. To develop the attitude of:-

- Participation in educational programs voluntarily against drug abuse, depletion of natural resources, and harmful traditional practices and healthful sexual behavior.
- Giving care and protection to people living with HIV/AIDS

As can be shown in the above category the available objectives on Pop/FLE were stated under the 3 domains. Under the cognitive domain twelve general objectives were availed. Out of them, 5(41.7%) were dealing with Pop/FLE knowledge. From the five, two objectives, (40%) discussed the ways of spreading and the means of prevention of sexually transmitted diseases including AIDS. There was one objective about reproductive organs in plants and animals.

The other two objectives each of which addressed the effect of drug abuse to the individual and to social life as well as the issue of rapid population growth

and its effects on the environment were stated. Based on this information, it is possible to infer that the stated objectives were not enough to develop the necessary knowledge on Pop/FLE. Because they emphasized on some of the recommended themes. Most of the Pop/FL issues were not addressed. To cite, there was no single objective dealing with issues like socio-economic development in relation to population change; the effect of family size on family welfare, the values and beliefs in population matters; family laws and civic responsibilities. More over, there was no objective about women and the youth as well as their significant role in development activities even though they have been vulnerable groups and having the highest proportion of the total population.

Under the psychomotor domain as it was indicated in the syllabus, there were seven general objectives. From these, two (28.6%) were focusing on some of the desired skills from population and family life education. These were concerned with the development of skills on personal hygiene, and responsible sexual behavior in order to protect HIV/AIDS.

However, there were no other objectives stated on the skills and abilities to be developed by the students with regard to birth control methods in order to protect unintended pregnancy and rapid population growth.

Objectives stated under the cognitive domain were to be reflected under the affective and psychomotor domains. In contrary to this fact, some of the stated objectives under the cognitive domain were not reflected under the psychomotor domain. Hence, it could make the desired outcomes of the program more of theoretical.

With regard to the objectives stated under the affective domain, it is indicated that five general objectives, were stated. Out of these, two (40%) were focusing on the intended attitudinal changes of students towards Pop/FL issues and problems. The first one of these objectives was found to be compounded, too long and hence it is vague. The indicated issues were to be stated separately in a shorter and precise manner.



Moreover, the stated attitudinal objectives were not enough to attain the desired changes of attitude towards the issue under study. For attitude is one of the factors which affect the implementation of programs such as Pop/FLE both in and out- of school, even more objectives emphasizing attitudinal changes were to be including in the list.

In order to realize the aforementioned objectives, contents were found to be available in the corresponding student's textbook. The textbook was divided into eight chapters covering a total of 240 pages. From these, only two chapters (five and seven) have shown the presence of contents on Pop/FLE.

Table 5. Categorization of Pop/FLE contents available in grade 10 Biology student's textbook.

	Chapter five		Chapter seven	
	No. of pages/paragraphs devoted to the categories	Ways of presentation	No. of pages/paragraphs devoted to the categories	Ways of presentation
1	None	-	None	-
2	None	-	None	-
3	None	-	None	-
4	None	-	4 pages (pp. 199-200 & 215-216), 2 paragraphs (pp. 205 & 212)	Text
5	None	-	None	-
6	19 pages (pp. 131-149)	Using tables, graphs, diagrams, pictures and text	None	-
7	None	-	None	-
8	None	-	a paragraph(p. 216)	Text
9	None	-	None	-

* Note, the categories are already stated on table two under chapter three

Table 5 shows the categorization of contents available, their coverage and ways of presentation. In the fifth chapter, under the sub-topic "Sexual reproduction in humans" (pp. 131-149), i.e.7 % of the total pages, a number of issues were discussed. Mainly, the human reproduction system, the

reproductive organs of both sexes, reproductive health issues including STDs menstruation and its cycle, ovulation, fertilization, pregnancy and health were treated.

In addition to this, such issues like harmful traditional practices (i.e. early marriage, female genital mutilation etc); the various family planning and contraception methods as well as the concept and importance of child spacing were explained.

To sum up, the Pop/FL contents available in this chapter were focusing mainly on family planning & reproductive issues.

The other chapter in which some Pop/FL issues included was chapter seven. This chapter covered 32 (13.3%) of the total pages. However, the space devoted to Pop/FLE contents was very much limited. They were included and discussed in some paragraphs. To exemplify, there were explanations about the effects of man on natural vegetation (3 paragraphs, pp. 199-200) and on water pollution and wild life each in a paragraph (pp. 205 and 212) respectively.

There were also explanations about the consequence of rapid population growth on the environment, and about the current status and growth rate of the population of Ethiopia. The policy measures that are being taken by the government of Ethiopia including the National Population policy have been discussed (p. 215).

The aim of the National population policy of Ethiopia was stated in the student's textbook as follows:

The policy aims at closing the gap between high population growth and low economic productivity through planned reduction of population growth and increasing the social and economic status of the society.

This is one of the mechanisms through which the experts who participated in the preparation of the textbook tried to show the status at the national level of population issues to the students. It may help the students to understand the significance of the problem of population growth in the country.

Those experts also proposed/recommended some measures which they thought as requirements for the accomplishment of the aims of the national population policy. These were: -

1. Mounting effective countrywide population information and education programme addressing issues pertaining to small family size and its relationship with human welfare and environmental security. In increasing popular awareness, community participation in the implementation of the programs developed should be taken in to account.
2. Expanding and strengthening capacity at the federal regional and local levels in demography and population studies through training.
3. Improving the quality and scope of service delivery in health services.
4. Attention should be given in program development and implementation processes by making domestic and external funds available to institutions engaged in demographic and population related research and training.

According to these points, it is possible to infer that having a population policy can not be a solution by itself for the population related problems. Therefore, the concerned government bodies are expected to do their level best for the attainment of the policy.

In general, in the curricular materials most of the population and family life issues though with in a limited number of pages, were discussed shallowly.

Nevertheless, there was no even a single sentence talking about the youth, women and development. Women constitute almost half of the total population of Ethiopia and hence half of the working forces in the development activities. The same is true for the youth that has a large proportion of the total population in the country.

In spite of their large proportion and vulnerability to various socio-economic problems including reproductive health problems, the youth and women were neglected. In the curricular materials, there was no topic and even a sentence explaining about the youth, women and development issues. Since women and youth are more susceptible to Pop/FL problems, it is difficult to minimize the problems without the participation of the two.

The other important issue examined was the way through which the available Pop/FLE contents were presented or integrated in the textbook. In this regard, the analysis result indicates most of the contents addressing human reproductive issues were presented using various ways of presentation like; graphs (through which the content on menstrual cycle was presented, pictures (to show the different reproductive organs), tables, diagram and text.

However, the contents on population issues in chapter seven were presented through text only. Hence it made the discussion shallow. Because it is difficult to present a given content deep and wide using a text only. Therefore, the contents were to be presented using the appropriate ways of presentation.

With respect to the methods of teaching for Pop/FLE contents, the teachers guide suggest the following: description, demonstration, brainstorming, whole class discussion, using various behavior change methods, role play, case studies, values clarification and lecture on the meaning and benefits of child spacing.

As it can be seen, most of these methods are more of student-centered which needs active participation of the students in the teaching-learning process.

More over, there were some activities and projects in the textbook to be done by the students. For instance, there was a project work that asked the students to collect information/data in groups on how rapid population growth affects our country's development and causes food problem. For this purpose, students were asked to use different methods such as interviewing

experts, visits and library research and to find possible solutions for the problem and then to present their report to the class.

This is an important method, which enables the students to actively engage in the teaching-learning process.

The period allotment was the other important issue, which needed to be examined. In this regard, the teacher's guide didn't show the number of periods allotted to each topic and sub-topic. Periods were allocated to each chapter. Accordingly, the chapters addressing Pop/FLE contents have been given the minimum number of periods. This could be an indication for the low status of the program in the curriculum of the grade level under study.

In the teaching-learning process, the student's progress should be checked and evaluated. With regard to this, the teacher's guide listed the following evaluation mechanisms to see the students' progress in Pop/FLE. These were: oral questions, group reports and classroom presentations, writing articles, labeling diagrams of male and female reproductive organs etc. These mechanisms can help to check the students' progress in the three domains of knowledge, skill and attitudes.

In general, compared to grade 9 Biology curriculum materials, grade 10 Biology curriculum materials were found to be relatively better with regarding to the status of Pop/FLE program. In the latter, objectives were stated taking in to account the three domains of knowledge, skills and attitude, which was not, the case in the previous grade level. In addition, even though, the objectives in grade 10 curriculum materials were deficient in relation to the whole Pop/FLE program, they were found to be inclusive compared to those available in grade 9.

Concerning the selected contents on Pop/FLE, grade 10 Biology textbook was found to be better. Because contents on most of the recommended themes of Pop/FLE were available. However, they were not enough to realize the goal of Pop/FLE as a whole. In addition, as the case in the previous grade level,

grade 10 Biology textbook was observed for absence of contents discussing about women, and the youth though they are highly vulnerable to and remained victims of most of the Pop/FL problems in the society.

This is one of the major deficiencies observed in the curricular materials under study. Hence, an indication for the low status of the program. In both cases, most of the contents were integrated without using vivid ways of presentation in a limited number of pages. This can affect the coverage of the contents both horizontally and vertically. Therefore, this situation together with the limited period allotted to the program, and absence of in-service training for teachers can affect the successful implementation of the program.

Nevertheless, the deficiencies observed in Biology curriculum materials have the chance to be compensated (included) in geography curricular materials of the grade levels understudy. Having this in mind, the aforementioned materials were analyzed and the results are presented in the following section.

4.1.2. Findings from content Analysis Results of grade 9 and 10 Geography curricular materials for objectives and contents on Pop/FLE.

It is obvious that different school subjects are not equally sensitive to the integration of the same issue. Each subject can be susceptible to the presentation of different issues, which are related to the nature of the subject. For example, it may be difficult to integrate objectives and contents on Pop/FLE in subjects like geography and Chemistry in the same way. For these subjects can't be equally sensitive to the stated issues

The same is true for biology and geography. In fact, both of them are related to Pop/FL issues. However, as to the view of the researcher of this study is concerned, geography is directly related and sensitive to the population issues where as biology for the Family Life aspect.

Based on this, the curricular materials of geography for the two grade levels were assessed and the results are presented and discussed below.

Table 6 Analysis results of Grade 9 and 10 Geography Curricular materials for contents and objectives of Pop/FLE

Grades	Units	Levels of availability	Themes Available /Categories									
			1	2	3	4	5	6	7	8	9	
9	1	None										
	2	None										
	3	None										
	4	None										
	5	Unit level	✓		✓	✓	✓				✓	
10	1	None										
	2	None										
	3	Lesson level	✓									
	4	Unit level	✓	✓	✓	✓			✓	✓		✓
	5	Lesson level	✓									✓
	6	Paragraph level	✓									
	7	None										

As it could be understood from the table, objectives and contents on Pop/FLE were identified in grade 9 and 10 geography teaching materials. When each grade level is separately examined, it is indicated that in grade 9 Geography materials there were few contents emphasizing on the impact of population growth to the environment. As it was mentioned under the limitation part of this study the attempt made by the research to get the syllabus of grade nine geography was not successful. It was thus the teacher's guide only assessed for objectives.

There were some specific objectives stated in the teacher's guide. These objectives were presented as follows:

After completing this lesson, students will be able to:

- explain human resource as the source of labor

- discuss human resource as the creator of spiritual and material wealth.
- explain the individual and group responsibility to fight against the spread and impact of HIV/AIDS,
- analyze statistical data on the spread of HIV/AIDS in Ethiopia and the world at large,
- describe measures to be taken to overcome the spread of HIV/AIDS.

These objectives are focusing mainly on two things. One is the importance of human resource as source of labor as well as creator of spiritual and material wealth. The other is on the activity of people in the anti HIV/AIDS campaign in general to which three out of the five objectives are directed.

Therefore, these objectives are not comprehensive and significant to address most of the Pop/FL issues and problems, which were expected to be treated. Population and family Life issues are broader and inclusive than those to which the aforementioned objectives are directed.

Let alone Pop/FL issues and problems in general, even the population aspect of the program that was to be addressed through geography was not in a position to be treated.

With regard to the contents available on Pop/FLE, the student's textbook was examined. It was found that grade 9 geography textbook comprised five chapters with a total of 221 pages. Out of these, only chapter five (20%) of the total chapters covering 66 pages (29.9%) of the total has dealt with population and environmental issues under the topic "Humans and their Environment." From these, only few pages were devoted to population issues. The contents were categorized in to the nine themes (Categories) and presented in the table below.

Table 7 Categorization of Pop/FLE contents available in chapter five of grade 9 Geography student's textbook

Categories	Number of pages/paragraphs devoted to the categories	Ways of presentation
1	One paragraph on page (217)	Text
2	Not available	
3	3 pages (213-215)	Text and diagram
4	2 pages (206-207) One paragraph (171) 2 paragraphs (180-181)	Text
5	2 paragraphs (217) i.e. sentence	Text
6	2 lines (217) i.e. sentences	Text
7	A paragraph (212)	Text
8	3 pages (172-173, 213)	Texts
9	3 Pages (216-218)	Text

The contents available in the textbook to attain the stated objectives were not enough. Because, most of the selected contents were beyond the objectives stated in the teacher's guide. For instance, to materialize the 1st two objectives (indicated above) on human resource, content was presented in a single paragraph, which was too shallow and insufficient to discuss about the importance of human resource.

The selected contents were mismatched with the objectives. Most of the contents were discussing about those population issues to which no single objective was stated in the teacher's guide. It is possible to say that the presence of contents with out objectives is similar to a journey with out an identified direction. Therefore, this situation may confuse teachers during implementation of the program. This may be due to the reluctance of those experts who prepared both the teacher's guide and the textbook. With the exception of category two (on which no content was available), the other categories recommended by ICDR were discussed at a paragraph and even sentence level. However, they were not sufficiently discussed.

For instance, category nine which is concerned with the youth, women and development was not completely addressed. Because no sentence discussing about women, and their role in development was identified.

In general, most of the contents presented in the chapter under study were discussing about environmental issues where as the contents on Pop/FL issues were few and shallow. It was also the population aspect that was emphasized more compared to that of the family Life issues of the program.

The other major issue that was taken into account was the organization or sequential arrangement of the materials (contents).

It is true that textbooks are expected to be written taking into consideration the developmental level of students (novice-to-expert approach), and there should also be organic linkage (both horizontal and vertical) with in the contents of the textbook (Ayalew and Demeke, 2007:3). Contrary to this, however, the presentation of contents on Pop/FLE didn't follow the sequential flow of the subject matter. For example, there was a discussion about the impact of rapid population growth on the environment without any indication about what rapid population growth mean. It was to be started from the meaning and causes of rapid population growth and then to its consequences. Therefore, it can create a sort of confusion for the students.

With regard to the mode of integration (presentation) of the contents, it is indicated that most of them were presented using a text. However it could have been better to use varied ways of presentation (such as diagrams, pictures, photographs, figure, etc) which could help the students to learn more from the given contents available in smaller number of pages. Because learning can be effective only when the subject matter is concretized using the aforementioned ways of presentation/integration.

The suggested teaching methods on Pop/FLE were other aspects, which were examined. It was found that the following teaching methods were suggested in the teacher's guide. These were; explanation, demonstration, discussion, debating, field visit and brain storming. Most of them are found to be activity methods that can help the students actively participate in the teaching-learning process. Nevertheless, compared to those methods suggested by the

UN on Pop/FLE, the above methods are few in number. Most of the suggested methods of teaching in the literature are not included here.

Period allotment was the other important issue emphasized in the content analysis. In any innovation, the minimum required time to implement a program is specified at the designing level. The time allotted to chapter five in which some population issues included was 28 periods as indicated in the teacher's guide. Out of these, only two periods (7.1%) of the total were allotted to the topic addressing population issues. It is believed to be the minimum.

Students are expected to develop the necessary skills concerning the broader population issues and problems through their active engagement in learning. For that purpose, it is necessary to have sufficient amount of time. The amount of time allotted for the broader population issues is insufficient. It is therefore an indication for the low status of Pop/FLE in the curriculum under study.

The evaluation mechanisms proposed in the teacher's guide to check the student progress on Pop/FLE were written exercise, Oral questions and discussion. These were emphasizing mainly on the cognitive aspect of the students. The all rounded personality development of the students in relation to Pop/FL issues was to be checked using appropriate evaluation mechanisms.

To wind up, from the above discussion it could be possible to conclude that the weight given to Pop/FLE was not that much satisfactory compared to the significance of Pop//FL problems prevailing in the country. Objectives were not stated in a way that they can address most of the population and family life issues. There was an imbalance between objectives and the selected contents. The presence of a discrepancy was also identified between the methods of teaching on Pop/FLE suggested by the UN and those presented in the teacher's guide. In that most of the teaching methods on Pop/FLE indicated in the literature were not included in the teacher's guide. Even little

attention was given concerning the period allotment and selection of evaluation mechanisms on the program.

Grade 10 Geography syllabus has shown for the presence of 17 general objectives for the course. Out of which, only 3(17.6%) of the total were addressing population issues. From these, one objective was focusing on population policies and women. The objectives were presented in the syllabus as follows:

After completing grade 10 the students will be able to:

- Comprehend the meaning, importance and some basic concepts and measures of population;
- Develop an understanding of peoples and population of Ethiopia, world population distribution and the controlling factors, trends and patterns of population growth in developed and developing countries of the world;
- Recognize the importance of population policies and programs as well as the role of women to control the rapid population growth;

As can be seen above, the first two objectives on population issues are too general, compounded and vague. For instance; the first objective is a combination of meaning importance, concepts and measures. This way of stating objectives can be a source of ambiguity for the given objectives. It was to be stated separating the different elements in it. i.e. meaning, importance and concepts of population on the one hand and measures of population on the other.

Similarly, the second objective was stated as a combination of various issues at different levels and in different conditions. It causes lack of clarity for the objective. It was thus better to state this objective in the following manner:

- Develop an understanding of peoples and population of Ethiopia, and world population distribution, (as one).
- Develop an understanding of the controlling factors, trends, and patterns of population growth in developed and developing countries of the world (as another).

Objectives are said to be the directives in the teaching-learning process. It is towards their realization that every educational activity is performed. The way that objectives are stated is one of the major factors that can affect the effectiveness of the teaching-learning process.

Therefore, educational objectives are expected to be stated in a way that they could be easily understood by the practitioners and can give the same meaning to the writers and the implementers.

In addition, the objectives were focusing on the knowledge aspect without any consideration to skills and attitudes.

With regard to the corresponding contents on population education, the textbook was assessed and the results were presented below. Grade 10 Geography textbook had a total of six chapters. Out of these, four chapters (3, 4, 5, & 6) accounting (66.7%) of the total pages were indicated to have contents of population education at different levels (from a paragraph to a chapter level).

Table 8. Categorization of the contents of Pop/FLE available in grade 10 Geography student's textbook.

Categories	Chapter Two		Chapter Four		Chapter Five		Chapter Six	
	No. of pages/paragraphs devoted to the categories	Ways of presentation	No. of paragraphs	Ways of presentation	No. of pages/paragraphs	Ways of presentation	No. of pages/paragraphs	Ways of presentation
1	None	-	27pages (151-161, 165-171, 189-197)	Using table and text	None	-	2 paragraphs (284)	Text
2	None	-	6pages (160-165)	Text	None	-	None	-
3	None	-	5Pages (197-201)	Text	None	-	None	-
4	A paragraph (136)	Texts and table	10pages (171-180)	Text	None	-	None	-
5	None	-	None	-	None	-	None	-
6	None	-	None	-	None	-	None	-
7	None	-	A paragraph (p.204)	tex	None	-	None	-
8	None	-	2.5 pages (pp. 202-204)	tex	None	-	None	-
9	None	-	2paragraphs (p.164) 3 pages (177-179)	Tables & Texts	12 pages (218-229)	Tables & texts	None	-

Out of the four chapters, chapter four has addressed the majority of the categories (themes) proposed by ICDR with the exception of two categories (5th and 8th) dealing with family life issues. The other chapters, however, were found to treat population education contents either at a sub-topic or a paragraph level. For instance, in chapter three only 3 pages (pp. 136& 145-146) were devoted to contents on population issues (Specifically discussing on human activities as causes of climate change). But, this concept is a repetition of the one presented in grade 9 Geography.

The fifth chapter covered 24(8%) of the total 300 pages. 12(50%) of the 24 pages addressed population and development issues. In chapter six,

however, only two paragraphs (p. 284) were devoted to issues of population change and economic development. The contents were found to be relevant to attain the stated objectives in the syllabus. Nevertheless, the problem is that, they emphasized on the population aspect with little or no space for the family life issues.

Concerning the ways of presentation of the contents, it is revealed that most of them were presented using tables and texts. And the information was more of facts.

The sequential flow (the horizontal and vertical linkages) of the contents in the textbook of this grade level was more or less better. With regard to this, the syllabus revealed "the subject matter is sequenced in such a way that there is a good flow of the material from one grade level to the other with increasing complexity". However, in practice the organization of the materials in relation to Pop/FLE contents is contradicting to the principle of vertical sequencing. Because; in grade 9 Geography textbook, contents addressing the impact of rapid population growth to the environment and socio-economic development were presented. Where as the concept and causes of rapid population growth which are the basic issues were presented in grade 10 without following the sequential flow. This could be due to the little attention given to the program during preparation of the curricular materials.

The selection of contents is not a sufficient condition to realize the stated objectives on Pop/FL issues. The way the contents are being taught is an important issue that is to be taken into account.

Population and Family life issues and problems are immediate to the students in their future activities as parents and policy makers. Therefore, students are expected to develop the necessary skills and understanding of the issues and problems understudy through active participation in the teaching-learning process. For this purpose, active teaching methods, which can initiate students for participation, are expected to be employed. In this respect, the syllabus suggested the following methods like discussion,

brainstorming, explanation, lecture, debate, demonstration, motivating students to compare and contrast population structure and population pyramids of developed and developing countries of the world.

Most of the suggested methods (listed above) are emphasizing on student activities. However, in the real classroom teaching-learning process these were not practical as attested by teachers' response in the questionnaire. And most of the respondent teachers indicated for the use of teacher-centered methods like lecture, question and answer and to some extent discussion.

One of the major reasons for this discrepancy as the teachers mentioned was time constraint coupled with the vast nature of the contents. Consequently, they were rushing to cover the textbook.

This is one major indication for the low status of Pop/FLE program in the curriculum material of the level.

In order to see the number of periods allocated to population issues, the time allotment was assessed. And it was found that the total periods allotted to grade 10 Geography were 56. Out of which, 9 periods (16.1%) of the total were for the chapter in which population topics were included. This too is deficient in relation to the sensitivity of the issues.

Assessment of student's learning is part of the teaching-learning process that should be done with great care. The formative assessment techniques that teachers are supposed to use frequently in the course of instruction are helpful to check periodically how much students have learned from what has been taught in the classroom.

Thus, the syllabus and teacher's guide were examined for the type of evaluation mechanisms suggested. It is indicated that written exercises and oral questions were the major suggested evaluation mechanisms.

These are appropriate to check only the cognitive changes. They are not helpful to assess the all rounded personality development of students in relation to population and Family life issues.

Based on the above discussion, it could possibly be concluded that the program of population and family life education has been given little attention in the curriculum of the grade level. Theoretically, the subject matter of Geography is believed to be directly related to population issues and problems and is expected to address them in a relatively better way.

In practice, however, it is revealed that population issues were being given little space. In that, objectives were not clearly stated. The selected contents, though relevant to realize the stated objectives in the syllabus, they were not sufficient to address the population issues and problems in general.

The students are expected to develop the necessary skills in relation to population issues and problems through direct engagement in the teaching-learning process, and through repetition of various activities. For this purpose, logical time allotment was to be made.

However, the least number of periods were given to the chapter in which population issues were found.

According to the New Education and Training policy of Ethiopia, grade 9 and 10 are considered to be general secondary education levels. At this crucial time, students need to have basic knowledge, skills and attitudes on the major Pop/FL issues like fertility, mortality, sex, family, family size and its effect on the family welfare, family planning, contraception, reproductive health issues etc through the delivery of Pop/FLE in the respective subjects of Biology and Geography. For the reason that, the Ethiopian education system lets the students to join different streams (social science, natural science and vocational) immediately after the completion of grades 9 and 10. Consequently, subjects like geography and Biology are not being given to all students.

This in turn, may create deficiency of knowledge and skills for the students in their future life on some of the basic Pop/FL issues.

Therefore, the issues under discussion should have been thoroughly addressed at grades 9 and 10.

However, the results of the analysis of the curriculum materials of the two grade levels clearly indicated that, the issues were not given due consideration so as to bring the desired outcomes.

In most of the cases, the objectives were not clearly and properly stated. They were either too specific or too general and vague. Sometimes there was no relevance between objectives and contents. i.e. a mismatch was discovered between contents and objectives.

Most of the contents were not organized cognizant to sequential order for the better pedagogical advantage of the pupil (for example the case in grade 9 geography). Moreover, the contents were seen not accompanied by vivid pictures, and illustrations. This may create obstacle to the better understanding of the students. In addition, it can affect the scope of the information presented.

When the nature of Pop/FLE contents included in each subject is taken into account, in Geography more of population contents were available where as in Biology both population and Family Life issues were found.

As far as the suggested themes (Categories) of Pop/FLE are concerned, most of them were shallowly discussed. Especially, the 9th category (about the youth, women and development) was not that much treated despite the significance of the issues.

The concern to Pop/FLE in the curriculum documents appeared to be negligible though Pop/FL problems have now days threatened the socio-economic development of the country.

However, curriculum experts during the interview indicated that:

though difficult to include every aspect of Pop/FL issues and problems in the curriculum, the curriculum designing committee made the maximum effort to integrate the major themes in the curricula.

Here it could be deduced that adopting policy issues about the topic under study by itself could not bring any significant change in the area, unless and otherwise it is translated into educational programs in a way that can improve the existing bottlenecks.

4.2. Analysis of Teachers' Responses

4.2.1 Teachers' Background Information

Teachers have an undeniable role in the process of curriculum implementation. Without the presence of teachers and students, implementation of an educational program would not be attained. To realize the goals of educational program such as Pop/FLE, at the secondary school level, various issues such as educational qualification, type of training, styles of teaching etc of teachers have to be taken into account. In this section, teachers' responses on the aforementioned and other similar issues were presented and discussed.

Table 9. Characteristics of teacher respondents by sex, qualification and service years

No	Characteristics	Sex					
		Male		Female		Total	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
1	Qualification - Diploma	14	33.3	6	14.	20	47.6
	- BA/BSc	19	45.2	3	7.1	22	52.4
	- Total	33	78.5	9	21.4	42	100.0
2	Service years 1-5 years	22	52.4	7	16.7	29	69.1
	6-10 years	7	16.7	2	4.7	9	21.4
	Above 10 years	4	9.5	-	-	4	9.5
	Total	33	78.6	9	21.4	42	100.0

The percentage distributions of teacher respondents by sex, qualification and year of experience indicate that, a significant number of them (78.6 percent) were males, while 9(21.4 percent) were females. This shows the presence of less participation of female teachers especially in offering Biology and Geography. The discrepancy also indicates for the presence of low participation of women in education and this could have its own impact in the implementation of Pop/FLE program in the school because women in most cases have nearness and are sensitive to most of the population and family life issues.

Concerning their educational background, more than half of the respondents 22(52.4 percent) had a qualification of B.A/B.Sc. and the remaining 20 (47.6 percent) were diploma holders. Thus, it is possible to infer that a significant number of teachers have not fulfilled the required qualification to teach in the secondary school level. This doesn't satisfy the new Education and Training policy (1994) of Ethiopia, which says teachers who teach at this level are expected to have a qualification of BA/B.Sc. as a minimum requirement. So, it can have its own impact in the teaching-learning process.

With regard to their years of experience, 29(69.1 percent) of the teacher respondents did have teaching experience ranging from 1 to 5 years. The remaining 9 (21.4 percent) and 4(9.5 percent) of the respondent teachers had teaching experience from 6 to 10 years and above 10 years respectively.

Thus, it shows that most of the respondent teachers were recent graduates and were not that much experienced. Experience is one of the factors that can affect the implementation of a given program. Teachers those who are well experienced can develop the skill about the presentation of controversial sexuality issues (issues that are considered to be "taboo") in the classroom compared to those newly graduates.

4.2.2 Teachers' Responses Concerning their Training

The kind of training teachers get is also an important factor that can affect the implementation/realization of a given educational program such as Pop/FLE. With regard to this, Derebssa (2004:237) indicates, "the best educational practice is unlikely to fulfill its promise in the hands of inadequately trained or unmotivated teacher. Therefore, curriculum specialists have to take into account the needs, level of commitment and skill of teachers while deciding their involvement in program delivery.

Fullan and Pampret cited in Derebssa (2004:237) in their part mentioned the importance of training saying that, for effective implementation of a new program needs time, personnel interaction and training, teachers (the implementing agents) should get the necessary training before implementation and support and monitoring while the implementation is going on.

ICDR (1994:19-20) in its part indicates that educating the teachers through pre-and in-service training in Pop/FLE is an important way of enabling them to integrate the basic concepts of Pop/FLE into the topics, which they are going to teach. If such training programmes are sufficiently provided, and relevant instructional curricular materials are prepared, it could be an important approach of integration. To this end, in service trainings and programmes must reach the practitioners.

Open discussions concerning the new programs should be scheduled through out the implementation process. Because, well planned and executed pre-service and on the job training help the teacher to go about his duties with confidence (Shester and Ploghoft, 1963).

Based on this, respondent teachers were asked whether or not they did participate in any kind of training concerning the implementation of Pop/FLE. And their responses are presented in the table below.

Table 10. Responses of teachers on their training about Pop/FLE.

No	Item	Respondents	
		Number	Percentage
	Did you participate in any kind of training, (Seminar, or workshop) on the implementation of Pop/FLE?		
	Yes	1	2.4
	No	41	97.6
	Total	42	100

Almost all of the respondent teachers responded for the absence of training on the implementation of Pop/FLE. Only one person gave positive response.(See Table 10)

Thus based on this information, one can infer that there seems a communication gap between curriculum designers (experts) and the practitioners (teachers). Absence of communication between the two mainly through training, workshops, seminars etc concerning the new developments in the curriculum, may lead teachers to consider the program as alien and can develop a protective attitude towards the implementation process.

In a way that seems to support the teachers' response, an official from ICDR who was interviewed by the researcher indicated that, there was training for some selected teachers through seminars and workshops by the time when the program was designed as a project. However, after the project was interrupted, there has been no training prepared for teachers.

From these findings it could possibly be deduced that teachers have not been given the necessary training that can build their confidence. Therefore, it may be one of the important factors that can affect the proper implementation of Pop/FLE program in the selected secondary schools in particular and in the whole school system in general.

4.2.3 Teachers response on the availability Objectives and Contents of Pop/FLE

In designing any educational program, the necessary issues that have to be taken into account are objectives (the desired outcomes), the selection of contents (the materials to be taught in order to realize the stated objectives), learning experiences (methods of teaching), and evaluation mechanisms (Derebssa, 2004: 169).

Having this in mind, teachers were asked whether or not objectives and contents on Pop/FLE were available in the curricular materials of the respective subjects they were teaching. The responses have been presented in the following table.

Table 11. Teachers' responses on the availability of objectives and contents concerning Pop/FLE

	Items	Respondents			
		Biology teachers		Geography teachers	
		No	%	No	%
1	Do you find objectives and contents on Pop/FL issues and problems in your respective subjects?				
	a. Yes	21	84	15	88
	b. No	1	4	-	-
	c. No response	3	12	2	11.8
	Total	25	100	17	100
2	If your answer for question number "2" is 'Yes', are the objectives clearly stated?				
	a. yes	12	48	9	52.9
	b. No	9	36	5	29.4
	c. No response	4	16	3	17.7
	Total	25	100	17	100

Eighty four percent of Biology and 88% of Geography teacher respondents confirmed objectives and contents on Pop/FLE were available in their respective subjects (Table 11). Three (12%) of Biology and two (8%) of Geography teacher respondents on the other hand, gave no response. The remaining one Biology teacher respondent indicated for the absence of objectives on Pop/FLE.

From this, one can conclude that most of the subject teachers in the sample schools were able to identify the available objectives and contents of Pop/FLE in their respective subjects.

However, the presence of objectives and contents on a given program is not a sufficient condition to attain its goals. The way objectives are stated (clarity and vagueness) matters a lot in the implementation process.

With regard to this, Derebsa (2004:180) explains as follows: "objectives were useful only if they are sufficiently precise that different people obtain from them the same understanding of intended learning outcomes". By this, he meant that objectives should be written in a way that the writer and the implementer could derive the same meaning.

Having this in mind, teachers were asked to forward their personal judgment on the nature of those objects available in the curriculum materials of their respective subjects. Accordingly, 48% and 52.9% respectively of Biology and Geography teacher respondents believed that the objectives were clearly stated. On the other hand, nine (36%) of Biology and five (29.4%) of Geography teacher respondents indicated for lack of clarify on the objectives. Where as the rest, 4(16%) of respondent teachers from Biology and 3(17.7%) from Geography did give no response.

From the above discussion, it could possibly be deduced that, even though many of the respondent teachers approved for clarity of the stated objectives on Pop/FLE, a significant number of them are still remained in confusion concerning the meaning of those objectives. There is more or less similar result obtained through content analysis.

This situation can affect the implementation of the program. Because; without understanding the meaning of a given objective, it is hardly possible for teachers to put the program in to effect.

4.2.4 Teaching methods [Employed by teachers to present the content of Pop/FLE to their students in the classroom]

To bring about the desired learning outcomes, it is necessary to employ various teaching methods. The use of participatory teaching methods, which give much more emphasis to the needs of the students, is important for the effective implementation of educational programs such as Pop/FLE, which needs active participation of students in the teaching-learning process.

With regard to this, UNESCO (1978:74) stated that teaching methods for population education should encourage learner participation. Teaching methods, which encourage pupil participation through investigations to be carried out by pupils and discussion on the basic information, or views, collected from parents, resource person in the community, or members of the public.

In this respect, to identify the frequently used methods in the teaching of Pop/FLE contents, teachers were asked to put 13 teaching methods in a rank order of 1-13 in accordance with their use. They were asked to use a rank order of 1 for the first most frequently used method 2 for the second most frequently used method etc. The result is presented in the table below.

Table 12. Teachers' response on ranking the order of the Teaching Method employed in the teaching of Pop/FLE Contents.

No	Teaching methods	Biology Teachers			Geography Teachers		
		N	%	Rank order	N	%	Rank order
1	Lecture	25	100	1	17	100	1
2	Small group discussion	13	52	5	3	17.65	6
3	Role playing	5	20	7	5	29.4	5
4	Open-ended case studies	2	8	8	-	-	-
5	Demonstration	20	80	4	9	53.4	3
6	Question and answer	25	100	2	17	100	2
7	Debate	-	-	-	3	17.65	7
8	Simulation exercises	6	24	6	2	11.8	8
9	Drama	-	-	-	-	-	-
10	Use of audio-visual techniques	23	92	3	6	35.3	4
11	Panels	-	-	-	-	-	-
12	Investigation	-	-	-	-	-	-
13	Games	-	-	-	-	-	-

As can be seen from the table, 100 % of the respondents indicate that, the most frequently used teaching methods were those teacher-dominant traditional ones like lecture, as well as question and answer. However, there were differences between Biology and Geography classes in the utilization of teaching methods. As the response of Biology teachers indicates, teaching methods such as use of audio-visual techniques, demonstration, and group discussion (which encourage student participation) were used in schools mainly where the teaching-learning process was conducted through plasma Television. But in those schools where there was no plasma television, the dominant methods were those teacher centered (traditional ones).

In a Focus Group discussion with the researcher, (44 %) of Biology teachers, mentioned the following:

the plasma teacher has applied demonstration. In addition, the classroom teacher has also tried to apply methods like discussion by the order of the plasma teacher whenever necessary. However, the major problem is shortage of time. In most of the cases, the time given by the plasma teacher for discussion is not more than five minutes. It is difficult for the students to discuss and present their views to the class with in five minutes.

Nevertheless, in those schools where there was no plasma television, mainly for grade nine as indicated by (56 %) of teachers, the dominant teaching methods were the traditional teacher-centered ones.

The same results were disclosed during classroom observation.

The same was true for Geography classes where the classroom teacher conducts the teaching activity. This may be an indication for the presence of a big difference between the suggested and utilized teaching methods for Pop/FLE contents. The teachers in the actual teaching-learning process did

not employ most of the methods suggested in the teacher's guide. It could one of the setbacks in the realization of the desired outcomes of the program.

4.2.5 Teachers' Responses on Factors that hinder them in using the suggested Teaching Methods on Pop/FLE

The reasons why teachers failed to use the various active teaching methods like discussion; demonstration, debate, drama etc were discussed by those teachers who participated in the Focus Group discussion with the researcher.

Accordingly, one of the major factors mentioned was time constraint. In this regard the teachers reported the following.

The contents in the textbooks are too vast where as the time allotted to cover them is insufficient. Therefore, teachers are rushing to cover the course in the given time by using the lecture method.

Concerning the period allotment of the subjects under discussion, the respective syllabi of grade 10 Biology and Geography indicated 4 periods per week for Biology and 3 periods per week for Geography. However, according to all (100 %) of the teacher participants in the discussion and the school timetables, the periods utilized in the actual teaching-learning process for Biology and Geography were 3 and 2 periods per week respectively. One period per week was deduced from each subject without any change in the contents of the textbooks.

The main reason indicated by all (100 %) teachers in the discussion and a curriculum expert in ICDR was the introduction of Civic Education as a school subject. Since the school timetable is already crowded to include the new subject, periods were deduced from the already existing subjects.

Moreover, 88.8 % of the teachers in the Focus Group Discussion mentioned the following reasons.

Most of the contents on Pop/FLE in the textbooks are presented in a fragmented manner and the time given to cover them is too short. Those curriculum experts do not give them special attention during the curriculum design. Therefore, it is hardly possible for the teachers to give special attention for Pop/FL issues.

It was also supported by the content analysis results.

In addition, the teachers mentioned for absence of training concerning the implementation of Pop/FLE program using those practical methods recommended by UNESCO. Because most of the recommended teaching methods for Pop/FLE contents were not familiar to the teachers. This indicates for the presence of a big discrepancy between the planned and utilized periods of the two subjects.

This could be one of the major factors, which may hinder the proper implementation of the curricula in general, and school Pop/FLE program in particular.

4.2.6 Factors that Affect the Implementation of Pop/FLE

Table13. Teachers' Responses on Factors affecting the implementation of Pop/LE programs in the schools

No	Factors	Responses		
		More Serious	To some extent	Not at all
1	Shortage of reference materials	20	8	5
2	Students' perception towards Pop/FL issues	-	14	28
3	Lack of training for teachers	40	2	-
4	Time factor (shortage of time)	38	4	-
5	Large class size	15	19	8

- Note: the total is not equal to the number of respondents because they responded more than ones.

The implementation of Pop/FLE program has been influenced by various factors. According to teachers' responses, lack of in-service training for

teachers on the implementation of the program was one of the major problems followed by shortage of time to treat Pop/FL issues in depth. In addition, shortage of reference materials on Pop/FLE and the presence of large class size were the other reported factors, which have influenced the successful implementation of the program in the selected schools.

Large class size was reported as a problem for it affected teachers' use of the different active teaching methods. Concerning this issue, the researcher did a classroom observation. Accordingly, it was observed that in two of the sample schools (Haiq and Borena) secondary schools, a crowd of 105 pupils were learning together in a single classroom mainly grade 9. This shows over population of the students in the selected schools.

This situation may affect the use of teaching methods like small group discussion, role-play, drama etc. However, it may also be used as an important method of teaching population issues and problems. Teachers might have used the large class size as an important example for their students to be aware of the problem of rapid population growth in the country in general and the schools in particular.

With regard to shortage of reference materials, the researcher interviewed an official from ICDR. It was reported that up to 1994, different resource materials (including monographs and hand books) on Pop/FLE were prepared and distributed to the secondary schools through out the country. After 1994, however, the project on Pop/FLE stopped. Following that no resource material was prepared on Pop/FLE.

During school visit, the researcher observed school libraries for the availability of resource materials on Pop/FLE. Hence, the materials observed were those prepared by ICDR in and before 1994.

This indicates for the absence of recent reference materials on Pop/FLE for teachers and students to update their knowledge of Pop/FL issues and problems. Therefore, absence of up- to- date reference materials coupled with

lack of training may cause double hand-capped ness on teachers towards the implementation process of the school Pop/FLE program.

Moreover, the successful implementation of school Pop/FLE program could not be accomplished only through classroom activities for the reason that Pop/FLE is geared towards the development of the psychosocial, physical, vocational, and spiritual aspects of human life through reflection, self-awareness, and self-expression exercises [Jokkoo (1998)]. Therefore, to realize these goals, coordinated co-curricular activities are necessary in the schools.

With respect to this, the respondent teachers were asked if there were clubs related to Pop/FL problems in their respective schools. All of them (100%) reported for the presence of different clubs such as anti-HIV/AIDS club, environment club, girls' club and health club even though they remained by name.

Most of the teachers (95 %) further explained the absence of significant activities made by the aforementioned clubs for the reason that there was no financial and material support from the concerned bodies.

To back up the activities of school clubs, the roles of both governmental and non-governmental organizations are necessary. To obtain information concerning the activities of both governmental and non-governmental organizations in relation to Pop/FLE in the sample schools, a question was posed to the respondent teachers. In this case, most of them (85.7%) indicated for the absence of any coordinated activity in the schools.

One of the concerned organizations in this area was the Northeastern branch of the Family Guidance Association of Ethiopia. An official from this organization was interviewed concerning the activities of the office in relation to Pop/FLE. Thus, one of their major activities reported was the provision of training in the youth center for those volunteering adolescents on family life issues. It has been given, however, only to those adolescents in the town of Dessie. They didn't have any role even in those schools that are found in the town. i.e. they emphasized on the out-of-school population.

The other concerned body in the area was the zone education office. Experts were interviewed on the situation of school Pop/FLE program in the Zone. However, they themselves were not aware of Pop/FLE program.

From all these, it could possibly be deduced that even though schools have tried all their best with all the difficulties, there was no any support and contribution from the concerned governmental and non-governmental organizations for the successful implementation of the program.

Finally, teachers were requested to forward their suggestions toward the proper implementation of the school Pop/FLE program. Accordingly, more than three-fourth of them (83.3%) suggested the importance of training for teachers and strengthening school co-curricular activities in order to expand peer teaching through cassette recorder and other similar ways for the formal classroom teaching-learning situation is not enough to bring the desired outcomes.

In addition, some of the respondent teachers, 4(9.52%) suggested for the expansion of the program to the out-of school community. Moreover, they recommended for the importance of integrated activities of the community and schools towards the realization of Pop/FLE goals for independent school activities can't be successful.

4.3. Analysis of Students' Pop/FL knowledge and Attitude test results

In order to see the students' knowledge and attitude levels with regard to Pop/FL issues, the researcher prepared both attitude and awareness tests on the issues under study. The test items were prepared within the framework of the nine themes of Pop/FLE recommended by ICDR. In addition, the students' awareness and attitude differences were discussed in terms of sex, grade levels, and settings using their mean scores. The results are presented and discussed here under.

4.3.1 Discussion of Pop/FL Knowledge Test Results

Table 14. Group statistics of students' knowledge test results on Pop/FL issues & problems

Values	Total Population	Sex		Grade		Setting	
		M	F	9	10	Urban	Rural
Mean	23.9	21.7	27.16	24.1	23.8	23.9	24.0
S.D	3.5	2.1	2.6	3.7	3.3	3.7	3.2
N	393	232	161	236	157	244	149

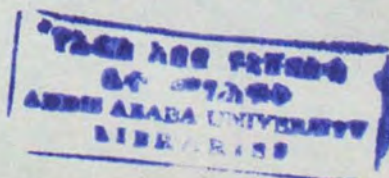
The above table indicates for the presence of sexual differences in the mean scores on Pop/FL knowledge between females & males with (mean=27.16) and (mean=21.7) respectively, showing females did have better Pop/FL knowledge than males. With regard to the standard deviation, a little more variability was observed among female participants than males.

Grade level of the participants showed no difference in the mean scores. Concerning the standard deviation, there was a little more variability among grade 9 students. With regard to setting, no more difference was observed in the mean scores. Where as somewhat more variability was observed among urban dwellers of the participants concerning their standard deviation.

The above table also indicates that the grand mean was 23.9. The researcher used this value as a reference to divide the Pop/FL knowledge of the participants as high, moderate, and low. In this case, scores above the grand mean indicate high knowledge level. Moderate knowledge refers to scores equal to the grand mean where as scores below the grand mean represent low knowledge level. Accordingly, the results are presented in the following table

Table 15 Summary of students' knowledge level in accordance with the grand mean

High		Knowledge level				Total	
N	%	Average		Low		N	%
		N	%	N	%		
191	48.6	6	1.5	196	49.9	393	100.0



The above table displays that 191(48.6%) of the students have scored higher than the grand mean where as a significant number of them, 196(49.9%) were found to have low knowledge level. The remaining 1.5%, however, were indicated to have average knowledge level.

This shows that about half of the total numbers of students in this study, (50.1%) i.e. those scored above and equal to the mean together, were believed to have better knowledge. However, it does not mean that the student's Pop/FL knowledge level displayed is enough. Rather, it shows that something have been left to be done. Because almost 50% of the sample students have scored below average.

In order to see whether or not a variation exists in the students' Pop/FL knowledge in relation to other independent variables of sex, grade level, and setting, T-test was computed. The results are presented in table 16.

Table 16. Comparison of students' group means scores on Pop/FL knowledge

Group		Mean	S.D	T-value	df	Significance
Sex	M	21.7	2.1	-24.1	391	.000*
	F	27.2	2.7			
Grade level	9	24.1	3.7	.373	391	.709
	10	23.8	3.3			
Setting	Urban	23.9	3.7	.118	391	.906
	Rural	24.0	3.2			

The above table indicates for the presence of statistically significant difference between sexes (at .05). This shows that females did have better Pop/FL knowledge (mean= 27. 2) than their male counter parts (mean=21.7).

In line with this, Pai panadiker, Bishnoi and Sharma (1978), in Bisrat (1997:66) mentioned the presence of discrepancy between males and females concerning their knowledge level of family planning. Even though, they emphasized on one of the Pop/FL issues (i.e. Family planning), the authors approved women of having better knowledge than males. Likewise, ICDR (1998:67) based on different studies approved that females were better than males concerning their knowledge on contraception.

The reason might be the case that women in general have nearness and are more susceptible to most of Pop/FL issues and problems like pregnancy, childbearing and rearing, the use of contraceptives abortion and its complications etc. In most of Ethiopian families, female adolescents could have much more time to stay with their mothers at home (who are in most cases victims of the aforementioned Pop/FL problems) so that they learn more about the issues through observation of their mothers' experiences.

On the other hand, the table shows for the absence of statistically significant difference between both grade levels, and settings. This indicates that students could have a more or less equal exposure to Pop/FL information. In this regard, students were asked to mention their major sources of knowledge on Pop/FL issues. The results are presented in the table below.

Table 17. Students' Responses on their major sources of Pop/FL information

No	Source of information	Respondents					
		Male		Female		Total	
		N	%	N	%	N	%
1	School (Teacher)	69	29.7	54	33.5	123	31.3
2	Mass-media	75	32.3	47	29.2	122	31
3	Friends	49	21	31	19.3	80	20.3
4	Parents or other family members	16	7	11	6.8	27	7
5	Health institutions	23	10	18	11.2	41	10.4
	Total	232	100	161	100	393	100

Table 17 displays; the major sources of Pop/FL information were schools (teachers) for 123 (31.3%), mass media for 122 (31%), and friends for 80(20.3%) of the students. The roles of families and health institutions as sources of Pop/FL information for the sampled students were considered to be 7% and 10.4% respectively. Which were insignificant compared to their immediacy to the issues under study.

Regarding this issue a few studies conducted in Ethiopia have shown more or less similar results. For instance, as a study conducted in Gondar on adolescents' major sources of information concerning modern contraceptives shows, thirty-seven percent of the subjects mentioned that they got information about contraceptives from school, 27.5% from books, 19.2% from friends, 12.7 % from mass media and 2.8 % from their sexual partners (Mesganaw et al., 1995).

4.3.2. Discussion of Students Pop/FL Attitude test results

Students' attitude towards Pop/FL issues in general and Pop/FLE program in particular were assessed separately. As stated earlier in the methodology part of this study, each attitude test item was followed by five alternatives from strongly agree to strongly disagree. If a given statement was favorable towards Pop/FL issues and Pop/FLE, the following weights were given to the alternatives (5=SA, 4=A, 3=UD, 2=D and 1=SD) and vice versa if the statement was unfavorable.

Thus, regardless of the direction of the statements, values 5 and 4 show favorable attitude, values 2 and 1 on the other hand show unfavorable attitude. Where as value 3 shows mixed reaction of the subjects. Based on this, frequencies and percentages of the responses were computed for each item. The results are presented below

Table 18. Means and standard Deviations of Pop/FLE Attitude

Value	Target population	Sex		Grade level		Setting	
		M	F	9	10	Urban	Rural
Mean	3.5	3.5	3.5	3.2	3.9	3.4	3.7
S.D	1.3	1.3	1.3	1.3	1.2	1.3	1.3
N	393	232	161	236	157	244	149

From the table, one can observe that male and female participants showed no difference in their means on Pop/FLE attitude. When we observe their standard deviations they had closer variability. The same was true for setting where means are almost equal, and standard deviations showing similar

variability. The grade levels on the other hand, showed mean differences in which grade 10 students scored better mean (mean=3.9) than their friends in grade 9 (mean 3.2). Concerning their standard deviations they had almost equal variability.

Thus, to identify whether or not the difference is significant, T-test was applied.

Table 19. Comparison of Students' means on Attitude towards Pop/FLE

Group		Mean	S.D	T-value	df	Significance level
Sex	M	3.5	1.3	-.300	391	.764
	F	3.5	1.3			
Grade level	9	3.2	1.3	-5.2	391	.000*
	10	3.9	1.2			
Setting	Urban	3.4	1.2	-2.0	391	0.42
	Rural	3.7	1.2			

The above table indicates there were no statistically significant differences observed between males and females concerning their attitude towards the program of Pop/FLE. However, statistically significant differences were observed between grade levels (at .05). Grade 10 students have shown more favorable attitude (mean= 3.9) than grade 9 students (mean=3.2).

This attitude difference between the two grade levels may be due to various factors.

One of the factors might have been the difference of their stay in high school. i.e., grade ten students have stayed a year longer than those in grade nine. In that, they might have a chance of exposure to more Pop/FL information through the contents available in Biology and Geography, which in turn affect their attitude. As indicated in the content analysis part of this study, more Pop/FLE contents were included in grade 10 than in grade 9. As a result, students might have better opportunity to understand the impact of Pop/FL problems on the socio-economic development of their country, and hence they may think for the solution i.e., Pop/FLE.

In addition, as a result of their long stay in school, grade ten students might have been in a position to develop a relatively critical mentality by which they can identify the positive and negative sides of things including that of Pop/FLE. In general, from the above discussion one can conclude that with an increase in grade level, students develop a desirable attitude towards Pop/FLE.

Table 20: Means and Standard deviations of Pop/FL Attitude

Value	Target population	Sex		Grade level		Setting	
		M	F	9	10	Urban	Rural
Mean	1.4	31.1	30.5	27.7	35.5	29.1	33.8
SD	.49	6.2	6.8	6.2	3.4	7.0	4.1
N	393	232	161	236	157	244	149

Table 20, shows that no sexual differences were observed in the mean score on Pop/FL attitude. However, differences were observed in the mean score between grade levels. In this case, grade 10 students had a better mean (35.5) than grade 9 students (mean=27.7). Concerning their standard deviations, more variability was observed among grade 9 students. Differences in mean scores were also observed between settings. Participants from the rural setting showed a better mean score (33.8) than those from the urban setting (mean =29.1). With regard to the standard deviations, high variability was observed among the participants from the urban setting. In order to see the significance level of differences T-test was computed.

Table 21. Comparison of students' means on Attitude towards Pop/FL issues in general

Group		Mean	S.D	T-value	df	Significance level
Sex	M	31.1	6.2	.790	391	.430
	F	30.5	6.8			
Grade level	9	27.7	6.2	-16.0	391	.000*
	10	35.5	3.4			
Setting	Urban	29.1	7.0	-8.4	391	.000*
	Rural	33.8	4.1			

The above table displays that no statistically significant difference was observed between males and females on their attitude towards Pop/FL issues.

However, a statistically significant difference was observed between grade levels (at .05). In that grade 10 students have shown more favorable attitude towards Pop/FL issues (Mean= 35.5) than grade 9 students (mean= 27.7).

Similarly, students who have lived in rural areas were found to have more favorable attitudes towards Pop/FL issues than their urban friends (at .05). Though Krisha (1968) and Debesai (1989) cited in Bisrat (1997:83) revealed that students who lived long in urban areas show favorable attitude on Pop/FL issues and problems than those who stayed long in rural setting, the reverse is indicated in this study. This attitude difference might happen due to several factors.

For instance, the rural people are under the direct influence of the Pop/FL problems. Because, the rural area is where the rapid population growth is observed together with the resulting problems like shortage of agricultural land, deforestation, over cultivation soil erosion and the consequent reduction of soil productivity. It leads to low agricultural per capita income and hence impoverished living condition.

It is also in the rural setting that women remained victims of maternal death and various health problems related to pregnancy and birth complications, as a result of frequent child bearing worsened by lack of adequate health facilities.

Moreover, children in rural areas grow among large family members in average (above 7 or 8 children per family) where they can hardly get sufficient food, clothing, and little opportunity for schooling. This in turn, might affect their attitude towards the problems. In contrary to this, most of the population problems that prevailed in the urban centers are the indirect results of the population problems in the rural areas. To mention, urban population growth in most of the cases, is occurred due to the rural-urban migration of people in search of job for their livelihood.

In addition, children in the urban setting have grown up with in a limited family size. As a result, they can't even understand the impact of large family

size on family welfare. Generally, most of the problems that prevail with in the rural families might not be observed in urban families. Hence, little or no influence will be there on the attitude of urban children.

To wind up, the results of students' knowledge test indicate that even though half of the participants achieved above or equal to the grand mean, the remaining half scored below and nearer to the mean. In addition, a significant gender difference was observed in the participants' Pop/FL knowledge in which females showed better knowledge than males.

With regard to their attitudes, most of the participants were observed to have favorable attitude towards both Pop/FLE and Pop/FL issues and problems (please refer appendix 'J'). Significant differences were observed on Pop/FL attitudes with grade level and setting, in that participants from grade 10 and those from the rural setting were found to have a relatively more favorable Pop/FL attitude. i.e. an increase in attitude with increasing grade level was observed.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

The concept of Pop/FLE was for the first time conceived in Sweden by the middle of the 1930s. It happened mainly through the recommendation of the Sweden population commission for the incorporation of population issues into the school curricula in response to the declining fertility rate in the country. The same concept happened in the United States in late 1930s (UNESCO, 1978).

It was, however, in the 1960s and 1970s that the concept of Pop/FLE attracted the attention of both developed and developing countries as a solution for problems related to the demographic changes (dynamics). Following that, different countries of Asia, Africa, and Latin America incorporated population issues into their school systems (Derebssa, 1999).

In Ethiopia, the program was introduced into the curricula of some selected schools as a pilot project by the year 1989. However, the implementation of the program at the national level was interrupted due to the prevailing political Chaos at the beginning of the 1990s (UNFPA, 1994). According to the interview held with a curriculum expert in ICDR of MOE, the program was re-introduced by 1994 with the endorsement of the NETP through integration of population related issues in the existing subjects like Biology and Geography in the secondary school level.

The aim of this study was therefore, to assess the status of Pop/FLE in South Wollo Zone secondary school curriculum and to forward some possible solutions for the successful implementation of the program.

Having this in mind, the following research questions were formulated.

1. What is the prevailing condition of Pop/FLE in the secondary school

curricula of South Wollo Zone?

- 1.1. Are objectives and contents of Pop/FLE sufficiently available in the curricular materials of secondary school?
- 1.2. How do themes of Pop/FLE are integrated into the secondary school curricular materials?
2. How do subject teachers present the contents of Pop/FLE to their students in the classroom?
3. Which factors hinder the implementation of Pop/FL aspect of secondary school curriculum?
4. What is the awareness level of students concerning Pop/FL issues?
 - 4.1. is there any significant knowledge difference between: sexes, grade levels; and settings?
 - 4.2. is there any significant difference between: sexes; grade levels; and settings on their attitude towards Pop/FLE?

In order to answer these questions, the researcher employed a descriptive survey method. In addition to this, the qualitative approach was used as a supplement or to get an in depth information on the topic.

The main sources of data for this study were teaching materials, teachers, and curriculum experts, officials of the Zone Education office and an official from FGAE. In addition, grade 9 and 10 students were included.

Accordingly, a Coding Sheet was prepared and used in the content analysis of Biology and Geography curricular materials of grades 9 and 10. In addition, a questionnaire comprising 11 questions (most of which close-ended with some open-ended) was developed and administered to 42 sample teachers who were teaching the aforementioned subjects in six sample secondary schools of the selected zone. To substantiate the information gathered through the questionnaire, a Focus Group Discussion was conducted with a group of teachers. In addition, interviews were held with 2 zone education office officials, and two curriculum experts. And an official from the Northeastern branch of the FGAE was also interviewed.

Classroom and school libraries observations were also made to obtain first hand information about the class size and the instructional methods used by teachers on Pop/FL related topics on the one hand, and the availability of Pop/FL related reference materials on the other.

Furthermore, knowledge and attitude tests containing 15, and 10 close-ended questions respectively were prepared and administered to a total of 393 grades 9 and 10 students in the sample schools. Pilot study was conducted to test the reliability of these instruments.

Then, the data collected through the different instruments were quantitatively analyzed using the following statistical tools such as percentages, means and standard deviation. T-test was also computed to see the significance level of differences of Pop/FL knowledge and attitude in relation to some variables. Based on the results of the analysis made, some major findings were obtained and summarized as follows:

According to the content analysis, objectives and contents of Pop/FLE were available in the school curricula. It was also supported by teachers' responses in the questionnaire. However, objectives and contents were found to be insufficient. i.e., compared to the current situation of Pop/FL related problems among the community objectives and contents integrated in the curricular materials were not satisfactory.

They seem limited both in number and scope. And the time allotted to teach the contents was the minimum in the curricular materials. And most of the suggested evaluation mechanisms were focusing mainly on memorization. In short, objectives and contents were inadequate to address the recommended Pop/FLE themes. Some of the Pop/FLE themes suggested by the ICDR were either partially addressed or not treated at all. For instance, no objectives and contents were found concerning women and the youth even though they remained to be victims of and vulnerable to most of the Pop/FL related problems in the society.

Similarly, the roles of women in development were not discussed. In addition, the objectives found in the materials seem lack clarity.

With regard to the ways through which Pop/FLE themes integrated into the curricula, it was revealed that most of the contents were presented using texts with a few or no vivid pictures, diagrams, charts, graphs, tables etc in accordance with the nature of the contents. In addition, no examples were used in the integration of contents. As a result, most of the Pop/FLE contents integrated in the materials seem to be shallow in their depth and limited in coverage.

Moreover, in some of the cases the integrated contents of Pop/FLE were indicated for lack of sequential flow (i.e. the case between grades 9 and 10 Geography curricular materials where a problem of vertical sequencing was observed on Pop/FLE contents).

As regards to the type of teaching methods which teachers employed in the teaching of Pop/FLE contents, the study disclosed the following results. Out of 14 methods of teaching suggested both in the literature and the Teacher's Guides of the subjects under study, only two (15.38%) of them, (i.e. lecture, and question and answer) were frequently used by teachers.

The data obtained concerning the major obstacles on the successful implementation of Pop/FLE indicated, out of the five randomly suggested factors lack of training for teachers, shortage of time, shortage of reference materials, and large class size were reported to be the major ones.

Concerning the 1st factor teachers' response indicates that almost all of them (97.6%) did not receive any in-service training on the implementation of Pop/FLE.

With regard to the second major factor, the respondent teachers who participated in the focus group discussion mentioned that the allotted periods in the syllabi of the subjects under study, and the utilized periods were not equal. Because; one period per week is reduced from each subject with out

changing the number of periods in the syllabi and the contents in the textbooks. The same was uncovered through content analysis.

The major reason as indicated in the interview held with an expert in ICDR of MOE was the introduction of Civic education into the already crowded school timetables.

According to the standard set by MOE, the secondary school is requiring teachers with B.A/B.Sc degree (MOE, 1994:12). But this study indicated that almost half of the secondary school teachers in the sample schools (47.6%) have not fulfilled the required qualification. So it could be taken as another hindrance to the successful implementation of the program.

Almost 100% of the respondent teachers mentioned that different clubs such as environment club, anti-HIV/AIDS club, girls' club and health club were established in the sample schools. However, the actual condition of school co-curricular activities was not conducive for effective implementation of Pop/FLE through active participation of students. It was mainly due to lack of financial, material and technical support from the concerned government and non-government bodies in the area.

When we consider the students' awareness, the study demonstrated that while 50.1% of them had an encouraging Pop/FL knowledge, the remaining 49.9 % on the other hand were found to have a relatively poor knowledge.

A significant knowledge difference was observed between males and females i.e. females (mean=27.2) had better Pop/FL knowledge than males (mean=21.2).

The majority of the students attributed their Pop/FL knowledge to the school (31.3%) and mass media (31%) respectively.

Hence, it seems convincing that with all the difficulties faced, the sample schools were trying to bring the desired outcomes of Pop/FLE only through classroom teaching, which might not be enough.

Concerning their attitudes toward the program of Pop/FLE, most of the sample students have shown a supportive attitude with a statistically significant difference between grade levels (Grade 9=3.3; Grade 10=3.9).

5.2. Conclusions

Taking into account the above discussion, it is possible to conclude that objectives and contents of Pop/FLE integrated in Biology and Geography curricular materials of the grade levels understudy seem to be limited in scope, and the time allotted to teach the contents was found to be the minimum. In addition, the contents were presented shallowly using texts (verbal ways of presentation) with no or little pictorial representations. Moreover, the evaluation mechanisms suggested were focusing mainly on memorization.

In general, compared to the prevailing conditions of Pop/FL problems and their impacts on the socio-economic development, it seems that little attention has been given to the program of Pop/FLE in the curricula understudy.

The frequently used teaching methods, which teachers employed to teach Pop/FLE contents, were those traditional (teacher-dominant) ones. The teaching methods suggested in the teacher's guide were not adequately utilized.

Some of the major factors that hinder the effective implementation of the program were lack of in-service training for teachers, shortage of time, and lack of up-to-date reference materials on Pop/FLE, large class size and absence of school co-curricular activities.

Shortage of time was one of the serious problems because a total of 31 periods were deduced from the already allotted periods to each subject without any modification to the contents in the textbook. This fact coupled with the aforementioned factors remains to be the stumbling block for the

successful implementation of the curricula in general and Pop/FLE in particular unless it is urgently addressed.

As a result of all these factors, the students' Pop/FL knowledge was found to be unsatisfactory. Almost half of the sample students were observed to have a discouraging knowledge. This implies that due attention is to be given to the program.

However, most of the students have shown a favorable attitude toward Pop/FLE and their attitude become more favorable with an increase in grade level showing that the contribution of the schools is undeniable though not sufficient.

5.3. Recommendations

Based on the findings of the study the following recommendations were forwarded.

1. The findings of the study revealed that Objectives and contents of Pop/FLE in the curricular materials were limited in scope. The contents were presented shallowly using texts with no examples and vivid pictures. It was also found that a few periods were allotted to Pop/FLE contents and the suggested evaluation mechanisms seem to be inappropriate (emphasizing mainly on memorization).

It seems necessary to improve the existing situation of the program through the selection and integration of more and comprehensive objectives and contents. And contents are to be presented/integrated:

- Using various ways of presentation such as vivid pictures, graphs, charts, diagrams, and tables in accordance with the nature of the given contents.
- Through the use of examples which are related to the students' day-to-day experiences/activities.
- Through the use of stories which are appropriate to present the given contents.

Sufficient time is to be allotted to Pop/FLE contents. And, appropriate evaluation mechanisms, which help to assess developments in terms of the 3 domains, (cognitive, affective & psychomotor) are to be suggested.

2. Educating the teachers through pre and in-service training in Pop/FLE is an important way of enabling them to integrate the basic concepts of Pop/FLE in to the topics, which they are going to teach. In addition, the training of teachers can help them to skillfully present some of the controversial and culture sensitive Pop/FL issues in the classroom using the appropriate teaching methods. However, the sample teachers were found to have no training. Thus, efforts need to be made to equip teachers with basic knowledge values and skills on Pop/FLE with the appropriate teaching methods through:

- an effective teacher education program for those would be teachers
- in - service training for the already assigned teachers.

3. Pop/FL issues and problems are dynamic. They have been changed based on different factors including time.

Therefore, it seems recommendable that up to date Pop/FLE reference materials, which can help both teachers and students to update their Pop/FL knowledge and skills, are to be available in the school libraries.

4. One of the major goals of Pop/FLE is the development of investigative and problem-solving skills, which can be attained through direct involvement of students in learning mainly through school practical activities.

Thus, it is better to take measures toward maximizing the students' learning through co-curricular activities. To this end, due attention need to be given to school clubs.

5. In addition, Pop/FL issues and problems are broader and multi-dimensional. They can affect every aspects of life, and no one is exempted. Hence, the school Pop/FLE program may not be sufficient to address them. Thus, it could be advisable to give attention to the out-of-school

population through the out-of school Pop/FLE program with coordinated activities of both governmental and non-governmental organizations.

6. Finally, the present study was conducted in a single zone with a relatively homogenous population having a more or less similar culture, and language as well as with a relatively restricted sample size. As a result, the findings may not be enough to arrive at a fair generalization at a national level.

Therefore, the researcher suggests those interested individuals to conduct further research in the field.

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Appendix A
ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATES STUDIES
FACULTY OF EDUCATION

**Department of Curriculum and Teacher professional
Development Studies**

Data Collection instrument

A questionnaire to be filled by Students

The purpose of this questionnaire is to generate some general information about the awareness level of high school (grades 9 and 10) students on population and family life issues. It is also intended to gather information concerning the students' attitudes toward population and family life education and population and family life issue and problems. In addition, it is used to collect information concerning the major sources of population and family life information of the students.

For this purpose the questionnaire is divided in to four parts: part one comprises questions about the students' personal information, part two (knowledge questions), part three (attitude questions), and finally a question concerning sources of population and family life information of the students.

The information obtained through this questionnaire will be used only for research purpose. There fore, your being frank and honest in responding the questions will help the outcome of this study. You are not expected to write your name.

Thank you for your cooperation.

	to regulate the population growth of the country			
10	Cleanliness is one way of protecting people from many communicable diseases			
11	The flow of menstrual blood lasts between 3 to 5 days			
12	An ovum (egg) can be capable of fertilized within seventy two hours.			
13	Population growth is always a threat to the socio-economic development of a given country			
14	Fertility, mortality and migration have nothing to do with population growth			
15	Adolescence is the stage between the end of childhood and the onset of being an adult			

Part Three

Attitude Questions

Instruction: Please read each statement carefully.

Then put (✓) mark under either of the five scales given based on your feeling and understanding.

Attitude towards population and family life education

No	Item	Strongly agree	Agree	Undecided	Disagree	Strongly Disagree
1	Population and Family Life Education Program is necessary to minimize problems related to population growth and reproductive health.					

Attitude towards population and family life issues and problems

		Strongly agree	Agree	Undecid ed	Disagree	Strongly Disagree
2	Rapid population growth is one of the serious problems in developing countries					
3	Education of women has its own impact on their fertility level					
4	Abortion may be advisable if pregnancy is unwanted					
5	Some people believe that making abortion legal means encouraging pre marital sex					
6	I believe that advising couples for the use of contraceptive is inhuman					
7	Condom is believed to have a dual purpose of protecting sexually transmitted disease and the prevalence of unwanted pregnancy					
8	I believe that open discussion with parents and teachers about sexuality issues including reproductive health issues, sexually transmitted disease and contraceptives can help children /youth get the desirable knowledge on the issues.					
9	I believe that early marriage has its own contribution to population growth and maternal health problems					
10	It is true that large family size can affect the family welfare					

Part Four: Question on the students' source of population and family life information

Please read the question carefully and circle the letter of your choice

1. Which one of following alternatives is your major source of population and family life information?
 - a) School Teachers
 - b) Mass media
 - c) Friends
 - d) Parents or other family members
 - e) Health institutions

የአዲስ አበባ ዩኒቨርሲቲ
የድህረ ምረቃ ትምህርት ቤት
የትምህርት ፋኩልቲ የሥርዓተ ትምህርትና የመምህርነት ሙያ
ማሻሻያ ጥናት ትምህርት ክፍል

በተማሪዎች የሚሞላ መጠይቅ

የዚህ መጠይቅ ዋና ዓላማ የአጠቃላይ ሁለተኛ ደረጃ ትምህርት ቤት ተማሪዎች የሥነ-ሕዝብና የቤተሰብ ኑሮ ጉዳዮች ዙሪያ ስለሚኖራቸው አጠቃላይ የግንዛቤ ደረጃና አመለካከት በተመለከተ መረጃ ለመሰብሰብ ነው። በተጨማሪም የሥነ-ሕዝብና የቤተሰብ ኑሮ ጉዳዮችን በተመለከተ የተማሪዎችን የመረጃ ምንጮች ምን ምን እንደሆኑ ለመለየት ነው።

ስለዚህ ይህ መጠይቅ አራት ክፍሎችን አካቷል። ክፍል አንድ የተማሪዎችን አጠቃላይ መረጃ ያካተተ ሲሆን ክፍል ሁለት ግንዛቤን የሚመለከቱ ጥያቄዎችን የያዘ ነው። ክፍል ሦስት የአመለካከት ጥያቄዎችን ያካተተ ሲሆን የመጨረሻው ክፍል የተማሪዎችን የመረጃ ምንጮች የሚመለከት ጥያቄን አካቷል።

በዚህ መጠይቅ የሚሰበሰበው መረጃ ለትምህርታዊ ጥናት ብቻ የሚውል ነው። በመሆኑም የእናንተ ግልፅነትና ተአማኒነት የተሞላበት ምላሽ ለዚህ ጥናት ዓላማ መሳካት በጣም አስፈላጊ ነው። በመጠይቁ ውስጥ ስም መፃፍ አይጠበቅም።

ለምታደርጉልኝ ትብብር ሁሉ በቅድሚያ አመሠርግሰሁ።

ክፍል አንድ: አጠቃላይ መረጃ

መመሪያ: ለሚከተሉት ጥያቄዎች ትክክለኛ መልስ የያዘውን ፊደል በማክበብ መልስ/ሽ::

- 1. ያታ ሀ/ ወንድ ለ/ ሴት
- 2. የክፍል ደረጃ ሀ/ 9ኛ ለ/ 10ኛ
- 3. የመኖሪያ ቦታ ሀ/ ከተማ ለ/ ገጠር

ክፍል ሁለት: የግንዛቤ ጥያቄዎች

መመሪያ ሁለት: የሚከተሉትን ጥያቄዎች በጥንቃቄ ከአነብህ/ሽ በኋላ ይህንን «√» ምልክት በመጠቀም በጥያቄዎቹ ፊት ለፊት በቀረቡት አማራጮች ሥር በአንዱ አመልክት/ቺ/::

ተ.ቁ	ዐረፍተ ነገር	አዎ	አይደለም	እርግጠኛ አይደለሁም
1	የኢትዮጵያ የሕዝብ ቁጥር ዕድገት በአፍሪካ ክፍተኛ ከሚባሉት አንዱ ነው::			
2	የሕዝብቁጥር እድገት በግብርና ምርታማነት ላይ ምንም ዓይነት ተፅዕኖ የለውም::			
3	ልጆች በየሦስት ወይም አራት ዓመታት ተራርቀው ቢወለዱ በጣም ጤነኛ ሊሆኑ ይችላሉ::			
4	የቤተሰብ ዕቅድ አገልግሎት የሕዝብ ዕድገት ፍጥነትን በመቀነስ የኢኮኖሚ እድገትን ለማምጣት አንድ መፍትሔ ሊሆን ይችላል::			
5	ልጆችን በዕድል ሳይሆን በምርጫ መውለድ አንዱ የቤተሰብ ምጣኔ ዕንሰ ሃሳብ ነው::			
6	ሴቶች ከወንዶች ይልቅ የኤች አይ ቪ/ኤድስ ተጠቂዎች ናቸው::			
7	የአባላዘር በሽታዎች በግብረ ሥጋ ግንኙነት አማካይነት ሊመጡ የሚችሉ የበሽታ ዓይነቶች ናቸው::			
8	ሴቶች ለዕድገት ጉልህ ሚና ሊያበረክቱ ይችላሉ::			
9	የኢትዮጵያን ሕዝብ ቁጥር እድገት የመቆጣጠር ኃላፊነት ያለበት መንግሥት ብቻ ነው::			
10	ንፅህና ሰዎችን ከተላለፊ በሽታዎች ለመከላከል የሚረዳ አንዱ መንገድ ነው::			
11	የወር አበባ ፍሰት ጊዜ ከ3-5 ተናት ይቆያል::			
12	የሴት የዘር ፍሬ/እንቁላል/ በ72 ሰዓታት ውስጥ ከወንድ የዘር ፍሬ ጋር ከተዋሃደ እርግና ሊፈጠር ይችላል::			
13	የሕዝብ ቁጥር ዕድገት ሁልጊዜ ለአንድ ሃገር ማህበራዊና ኢኮኖሚያዊ እድገት እንቅፋት ነው::			
14	ውልደት ሞትና ስደት ከሕዝብ ቁጥር እድገት ጋር ምንም ዓይነት ግንኙነት የላቸውም::			
15	ጉርምስና የሚባለው ክህላግነት አድማ መጨረሻ እስከ አዋቂነት አድማ መግቢያ መካከል ያለው የእድገት ደረጃ ነው::			

ክፍል ሦስት: የአመለካከት ጥያቄዎች

መመሪያ: የሚከተሉትን አረፍተ ነገሮች በጥንቃቄ ከአነብ-በክ/ሽ/ በኋላ ይህንን «√» ምልክት በመጠቀም በጥያቄዎቹ ፊት ለፊት ከቀረቡት 5 አማራጮች ውስጥ የእናንተን ስሜት ግንዛቤ በሚገልጸው አማራጭ ስር አስቀምጡ።

የሥነ-ሕዝብና የቤተሰብ ኑሮ ትምህርት አመለካከት

ተ.ቁ	ዓረፍተ ነገር	በጣም እስማማለሁ	እስማማለሁ	አልወስንኩም	አልስማማም	በጣም አልስማማም
1	የሥነ-ሕዝብና የቤተሰብ ኑሮ ትምህርት እቅድ የሕዝብ ቁጥር እድገትንና የተዋልዶ ጤና ጋር የተያያዙ ችግሮችን ለመቀነስ በጣም አስፈላጊ ነው።					
	የሥነ-ሕዝብና የቤተሰብ ኑሮ ጉዳዮችና ችግሮችን የተመለከተ አመለካከት					
2	ፈጣን የሕዝብ ቁጥር እድገት በታዳጊ ሃገራት ውስጥ ከሚታዩ የከፋ ችግሮች መካከል አንዱ ነው።					
3	የሴቶች ትምህርት በወሊድ መጠናቸው ላይ ትልቅ ተፅዕኖ ይኖረዋል።					
4	ያልተፈለገ እርግዝና ከተከሰተ ውርጃ ሊፈቀድ ይችላል።					
5	አንዳንድ ሰዎች ውርጃን ሕጋዊ ማድረግ ቅድመ ጋብቻ የግብረ ሥጋ ግንኙነትን ማጠናከር እንደማለት ነው ብለው ያምናሉ።					
6	ጥንዶችን የወሊድ መቆጣጠሪያ ዘዴዎችን እንዲጠቀሙ መምከር ኢሰብአዊ ጽርዒት ነው ብዬ አምናለሁ።					
7	ኮንዶም በግብረ ሥጋ ግንኙነት የሚተላለፉ በሽታዎችን እና ያልተፈለገ እርግዝናን በመከላከል ሁለት ጥቅም ይሰጣል።					
8	ስለ ሥነ-ተዋልዶ ጤና ጉዳዮች፣ በግብረ ሥጋ ግንኙነት አማካኝነት ስለሚተላለፉ በሽታዎችና መከላከያዎቻቸው ከቤተሰብና መምህራን ጋር የሚደረግ ግልፅ ውይይት ልጆች (ወጣቶች) በተጠቀሱት ጉዳዮች ላይ አስፈላጊውን ዕውቀት እንዲያገኙ ያደርጋል ብዬ አምናለሁ።					
9	ያለ ዕድሜ ጋብቻ በሕዝብ ቁጥር እድገትና ለእናቶች የጤና ችግር የራሱ አስተዋፅኦ እንዳለው አምናለሁ።					
10	ብዙ የቤተሰብ አባላት መኖር የቤተሰቡን ደህንነት ሊያውክ እንደሚችል ይታወቃል።					

ክፍል አራት: በሥነ-ሕዝብና የቤተሰብ ኑሮ ዙሪያ የተማሪዎች የመረጃ ምንጮች የሚመለከት ጥያቄ

የሚከተለውን ጥያቄ በጥንቃቄ ካነቡብክ/ሽ በኋላ ትክክለኛውን መልስ የያዘውን ፊደል በማክበብ መልስ/ሽ::

1. ቀጥሎ ከተሰጡት አማራጮች መካከል የሥነ-ሕዝብና የቤተሰብ ኑሮ ጉዳዮችን በተመለከተ ዋና የመረጃ ምንጭ/ሽ የትኛው ነው?

ሀ/ ትምህርት ቤት/መምህራን

ለ/ የመገናኛ ብዙሃን

ሐ/ ንጋዴዎች

መ/ ቤተሰብ ወይም ሌሎች የቤተሰብ አባላት

ሠ/ የጤና ተቋማት

**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**DEPARTMENT OF TEACHER PROFESSIONAL
DEVELOPMENT STUDIES**

Questionnaire To be filled by Teachers

The purpose of this Questionnaire is to obtain the necessary information concerning Pop/FLE in the Secondary School Curriculum and to forward possible recommendations for further improvement of the program. You are kindly requested to give your authentic responses.

Thank you in advance for your cooperation

I. General Information

1. What is your qualification? _____
2. The subject you teach _____
3. School name _____
4. Grade Level you teach: a) Grade 9 _____ b) Grade 10 _____
c) both _____
5. Years of Teaching Experience _____
6. Your sex: a) male _____ b) female _____

II. Please answer the following questions by putting (*) mark in the space provided and give your comments wherever necessary.

1. Did you participate in any kind of training concerning the implementation of Pop/FLE? a) Yes ___ b) No ___ c) No idea.

2. Do you find objectives related to Pop/FL issues and problems in your respected subjects?

a) Yes ___ b) No ___ c) No response ___

3. If your answer for question number 2 is 'yes', are they clearly stated?

a) Yes ___ b) No ___ c) No response ___

4. Is there any appropriate content on Pop/FL issues to realize the given objectives? a) Yes ___ b) No ___ c) No response ___

5. Are there Pop/FL related school clubs in your school setting?

a) Yes ___ b) No ___

6. If your answer for question number 5 is 'yes', mention them and their role _____

7. Are there any governmental or non-governmental organizations, which have tried to inform students about Population and Family Life issues and problems in the school setting? A) Yes ___ b) No ___ c) No idea

8. If your answer for question number 7 is 'yes', mention them and their role _____

9. The following are suggested teaching methods in teaching Population and Family Life contents. Therefore, you are requested to give them a rank order according to the frequency you use them in teaching Population and Family Life topics in the classroom. Give a rank order of 1 for the first most frequently used method, 2 for the second most frequently used method, --- and 13 for the last ones.

No	Teaching methods	Rank order	
		Biology teachers	Geography teachers
1	Lecture		
2	Small group discussion		
3	Role playing		
4	Open-ended case studies		
5	Demonstration		
6	Question and answer		
7	Debate		
8	Simulation exercises		
9	Drama		
10	Use of audio-visual techniques		
11	Panels		
12	Investigation		
13	Games		

10. Below are five randomly suggested factors which are expected to affect the successful implementation of school Population and Family Life Education program. Therefore, you are required to show the degree of their seriousness in your school condition. Give your response by putting a () mark under any one of the given alternatives.

No	Factors	Major problem	To some extent	Not at all
1	Shortage of reference materials			
2	Students' perception towards population and Family Life issues and problems			
3	Lack of training for teachers			
4	Shortage of time			
5	Large class size			

11. What suggestions do you have towards the successful implementation of school

Population and Family Life Education program?

Appendix C

Interview guides to FGAE Officials

1. Have you ever tried to disseminate Population and Family Life information for school adolescents?

If yes how?

2. What is the major role of your office concerning population and Family Life Education in South Wollo Zone?
3. How do you see the condition of Population and Family Life issues and problems in South Wollo Zone?

Appendix D

Guidelines for Teachers' FGD

1. What are the major factors that hinder you in using the suggested teaching methods in the teacher's guide for Population and Family Life Education topics?
2. What comments do you have about the Population and Family Life Education contents available in the teaching materials of your respective subjects and the period allotted to them?
3. What evaluation mechanisms you use to check the progress of students in relation to Population and Family Life issues and problems?

Appendix E

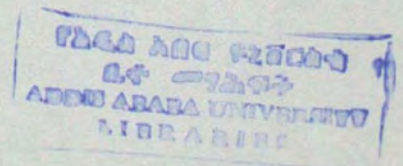
Interview guide to Curriculum Experts

1. What is your qualification?
2. Did you take part in the curriculum designing process?
3. Do you think that objectives and contents on population and family life related issues have been incorporated in the curriculum?
4. Do you believe that the periods allotted to population and family life related topics in the curriculum are sufficient?
5. Have you ever tried to communicate with teachers through:
 - trainings (conference, workshops, seminars etc) concerning the implementation of population and family life education?
 - The preparation and distribution of up to date reference materials on population and family life education?

Appendix F

Interview Guide to Education Officials

1. Did you attend any training (workshop, seminar, conference etc) on Population and Family Life Issues and Problems?
2. How do you follow the implementation of school Population and Family Life Education Program in the Zone?
3. Did you organize any training for secondary school teachers on Population and Family Life Education?
4. How do you see the situation of Population and Family Life issues and problems in the Zone?



Appendix G

Coding sheet for content analysis of school subjects for population and family life education contents

Category	Population and family life issues that are to be integrated into school curriculum	Subject	Grade level		Levels of availability	Ways of integration
Category One						
Category Two	Economic development and population (size, growth rate, composition rural /urban Occupation, education etc)					
Category Three	Social development and population change					
Category Four	Health nutrition and population change					
Category Five	Demographic variables /processes (vit, fertility , mortality, migration urbanization) in relation to resources					
Category Six	Family size as a conceptual dimension in relation to family welfare					
Category Seven	Sex, marriages, family planning and responsible parent hood					
Category Eight	Values and beliefs in population maters					
Category Nine	Family laws and civic responsibilities					
	youth, women and development					

Source: World Health Organization 1992: cited in Abera Megersa, 2001

Appendix H

Library observation checklist

1. Is there any reference material on Population and Family Life Education in the school libraries of the sample schools?
2. Are the available materials up-to-date?

Appendix I

Classroom observation checklist

1. How many students are there in a class?
2. Are the students actively participating in the teaching-learning process?
3. What instructional methods does the teacher use in teaching Population and Family Life related topics?

Appendix J

Results Of Students Attitude Toward Population And Family Life
Education

No	Item	Responses							
		Favorable attitude		unfavorable attitude		No response		Total	
		N	%	N	%	N	%	N	%
1	Population and Family Life Education Program is necessary to minimize problems related to population growth and reproductive health	235	59.8	90	22.9	68	17.3	393	100
Results of students attitude toward population and family life issues and problems									
2	Rapid population growth is one of the serious problems in developing countries	196	49.9	119	30.3	78	19.8	393	100
3	Education of women has its own impact on their fertility level	246	62.6	83	21.1	64	16.3	393	100
4	Abortion may be advisable if pregnancy is unwanted	220	56	102	26	71	18	393	100
5	Some people believe that making abortion legal means encouraging pre marital sex	180	45.8	133	33.8	80	20.4	393	100
6	I believe that advising couples for the use of contraceptive is inhuman	158	40.2	149	37.9	86	21.9	393	100
7	Condom is believed to have a dual purpose of protecting sexually transmitted disease and the prevalence of unwanted pregnancy	231	58.8	95	24.2	67	17	393	100
8	I believe that open discussion with parents and teachers about sexuality issues including reproductive health issues, sexually transmitted disease and contraceptives can help children /youth get the desirable knowledge on the issues.	223	56.7	93	23.7	77	19.6	393	100
9	I believe that early marriage has its own contribution to population growth and maternal health problems	227	57.8	95	24.2	71	18	393	100
10	It is true that large family size can affect the family welfare	239	60.8	88	22.4	66	16.8	393	100

Appendix K

Required Sample Size, Given A Finite Population, Where N = Population Size
and n = Sample Size

N - n	N - n	N - n	N - n	N - n
10 - 10	100 - 80	280 - 162	800 - 260	2800 - 338
15 - 14	110 - 86	290 - 165	850 - 265	3000 - 341
20 - 19	120 - 92	300 - 169	900 - 269	3500 - 346
25 - 24	130 - 97	320 - 175	950 - 274	4000 - 351
30 - 28	140 - 103	340 - 181	1000 - 278	4500 - 354
35 - 32	150 - 108	360 - 186	1100 - 285	5000 - 357
40 - 36	160 - 113	380 - 191	1200 - 291	6000 - 361
45 - 40	170 - 118	400 - 196	1300 - 297	7000 - 364
50 - 44	180 - 123	420 - 201	1400 - 302	8000 - 367
55 - 48	190 - 127	440 - 205	1500 - 306	9000 - 368
60 - 52	200 - 132	460 - 210	1600 - 310	10000 - 370
65 - 56	210 - 136	480 - 241	1700 - 313	15000 - 375
70 - 59	220 - 140	500 - 217	1800 - 317	20000 - 377
75 - 63	230 - 144	550 - 226	1900 - 320	30000 - 379
80 - 66	240 - 148	600 - 234	2000 - 322	40000 - 380
85 - 70	250 - 152	650 - 242	2200 - 327	50000 - 381
90 - 73	260 - 155	700 - 248	2400 - 331	75000 - 382
95 - 76	270 - 159	750 - 254	2600 - 335	100000 - 384

(Adapted from Krejcie & Morgan, 1970, p.608)