

**A STUDY OF STUDENTS' AND SOCIETAL NEEDS REGARDING AN
APPROACH TO THE FIRST CYCLE PRIMARY SCHOOL
CURRICULUM INTEGRATION
IN TIGRAI**

**BY
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**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

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**A Partial Fulfilment of the Requirements
for the Degree of Master of Arts in
Curriculum**

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SCHOOL OF GRADUATE STUDIES**

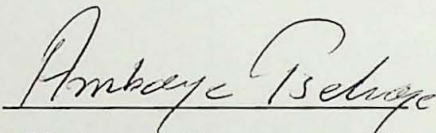
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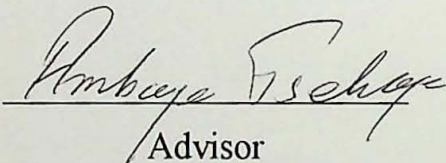
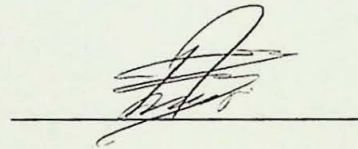
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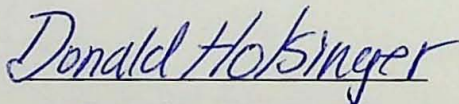
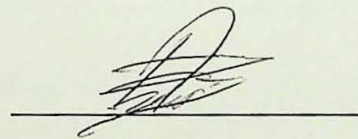
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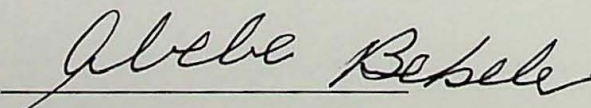
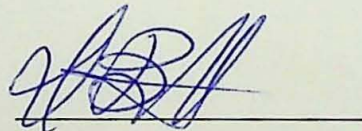
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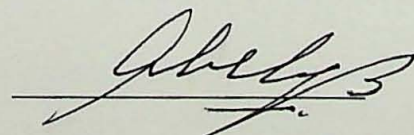
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ABSTRACT

A review of literature in curriculum integration reveals that it is possible to use themes (basic concepts), student activities or social problems as unifying elements, which depends on the leading philosophy of the curriculum development. And education is more responsive to its intent when it reflects local and regional needs. Accordingly, the main purpose of this study was to identify the approach of curriculum integration in the first cycle primary schools of Tigrai according to the needs of the students and the society.

That is, 193 subjects (students, parents, teachers and representatives of the regional bureaus of education, agriculture, health, and teachers' and women's association) were used to investigate the relevant approach of integration for the level and region underdiscussion. The data gathering instruments were opinionnaire and interview. And the data procured was interpreted using percentages and the chi-square.

Results of the study, then, indicated that the social problem curriculum was preferred to the activity and thematic ones. Furthermore, it was found out that the need of such a curriculum was not a function of (a) cognitive development of students, (b) sex, educational level and domicile differences of students and parents and (c) sex difference of educational professionals. But educational level difference of the educational professionals seemed to affect the result: majority of teachers (12+T.T.I. and diploma) and educational officials (B.A./B.Sc. and M.A./M.Sc.) selected the social problem and activity approaches respectively.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Problem

The development of a curriculum, a plan of action of an instructional process, involves decision-making activities. Unfortunately, however, no single universally accepted theory has been developed to guide the action. Formulating objectives, selecting contents and organizing them are still the main sources of controversy in the world of scholars in the area. Of all the central questions of curriculum theory again the relationship of the fields of knowledge to curriculum organization stands at the front line, in which the structure of knowledge and the function of knowledge are the two broad and competing doctrines (Bellack and Kliebard, 1971).

Advocates of the structure of knowledge, academicians, give priority to the logical order of concepts and principles that characterize the knowledge in different subjects such as mathematics, chemistry, history, etc. The philosophy that underlies such contention is that knowledge is divided in to subject areas each of which has its own unique impact upon the human mind. That is, as Pratt(1980:47) has put it:

- a. the mind can be improved like a muscle by specific exercise; and
- b. More commonly is a belief in wide-ranging transfer of learning: that practising memorization of irregular verbs will train the memory, mathematics increases logical thinking, grammar will improve written expression, history will result in good citizenship.

In other words, the academicians believe that the human mind is divided into faculties: faculty of memory, will power, appreciation, logic and imagination. These faculties can be developed by making them function in the appropriate subjects. For instance, the more repeatedly the mind is trained in reason, the more the faculty of reasoning will be developed to cope with problems related to logical thinking. And the appropriate subject for this is mathematics. Therefore, “the curriculum plan appears neatly divided into subjects” (Saylor et al., 1981: 206).

Functional organization, on the other hand, emphasizes on the direct application of knowledge in living. It is organizing knowledge around the needs and problems of the learner and/or the society. Because education is directly conceived as an instrument of human improvement rather than merely knowing (training of the mind). Besides, the proponents of this organization believe that the content of education is life itself (Whitehead, 1959: 10) or social process. Thus, life is one that does not have a natural compartmentalization that calls for a corresponding organic quality in school subjects, i.e. school subjects should be integrated as the life situation is so outside the school.

Anyway, such arguments did not enable one group to convince the other. But, in the practice of curriculum development the functional approach is more favoured than the structural one, especially at the lower grades. This is so because of two reasons:

1. Theoretical Reasons

These can be seen in three different aspects:

a. Epistemological

The Prominant subjects in a separate - subject curriculum are language, mathematics, history and science (Bestor in Orlich and Shermis, 1965: 129-131). Thus, though knowledge in the world is changing, knowledge in the subject curriculum is not. And decision-making on which knowledge should be included in the curriculum is becoming a serious problem for we can not teach students all what exists. The need to organize the curriculum around basic principles and key concepts is, therefore, to cover a broad range of knowledge, to discard the obsolescent facts, and to avoid fragmentation of knowledge (Ingram, 1979: 44-46).

Furthermore, in the traditional curriculum (subject curriculum) different subjects have different objectives: mathematics for reasoning, history for good citizenship, etc. (Bestor in Orlich and Shermis, 1965: 129-131). Such assumption creates difficulty to expect a general aim of the curriculum and is a "potential source of confusion for the growing child" (Ingram, 1979: 47). Because the child is exposed to different realities, not in degree but in kind.

b. Psychological

Psychological reasons can be seen in two different but interrelated aspects: fulfilling the prerequisites of learning and developing personality traits.

In the traditional curriculum students are taught to realize the expectations of adults; they are to be guided and controlled by the teachers to learn. In the case of integration (functional approach), not control but self initiation, not knowledge but its application are emphasized. Knowledge is not an imposition from without but a development from within (Dewey, 1968: 9-10), which considers interests and needs of the learners for the purpose of striking while the iron is hot.

Second, literatures (eg. Richmond, 1971) revealed that in the subject-curriculum emotional, social, moral and practical aspects of learning are not consciously focused. Bestor (in Orlich and Shermis, 1965: 129), the strong supporter of subject-centred curriculum, has said that type writing should not be included in the curriculum for it is training of the fingers rather than the mind. In short, academicians strive for the development of critical thinking at the expense of other traits. Hence, integration is more inclusive of the social, mental, ethical, etc. aspects for it considers all walks of life.

c. Social

As to Ingram (1979: 53-55) these can be divided in to three.

i. Facilitating sharing in learning and teaching.

Subject curriculum initiates competition in learning. Teachers and pupils are likely to make efforts independently. Whereas in an integrated curriculum, learning contents have practical nature and touches broader area of living. Hence, both teachers

and learners are likely to relate their efforts with that of others. Otherwise, many of the integrated works will be difficult.

ii. Coping with multidisciplinary issues

Prevailing social issues and problems can be discussed in the school. For instance, “sex education” is part of Biology, Home economics, psychology and Sociology. As a result it would be appropriate to integrate the issues with the relevant contents in these subjects to (a) avoid duplication (b) minimize loads of teachers (c) show its relation with other human activities, etc.

iii. Relating the school and the society

Pure subjects do not reflect the existing situation of the society. “Food production”, for instance, can create a direct relationship between the school and the society. Because students are likely to use what they have learned in class in their home, which makes the society to be conscious of what the school is doing and thereby increase its participation in school affairs.

2. Practical Results

Research results too support the integral curriculum. Vars (1971) quoted the National Association for core curriculum (1984) to say that since the establishment of the eight-year study of the progressive education, the first of its kind, more than eighty normative or comparative studies have been carried out on the effectiveness of integrative programs. Thus, Vars concluded that:

In nearly every instances, students in various types of integrative/interdisciplinary programs have performed as well or better on achievement tests than students enrolled in the usual separate subjects.

This signifies that (a) the integral curriculum is at least as effective as the linear one, (b) the effectiveness does not depend on the type of integration. Similarly, Aschbacher (1991) wrote that an integrated high school curriculum in Los Angeles, called Humanitas, showed statistically significant effect on students' writing and content knowledge over a year's time. Besides a direct relationship was obtained between duration of learning in an integrative program and performance improvement, particularly on conceptual understanding.

From such an angle, the recommendation of the new Ethiopian Education policy (Ethiopian Education Policy Implementation Strategy, 1994: 21) to develop an integral curriculum for the first cycle of the primary schools (Grades 1-4) has sound bases.

But, what type of integration is yet a question of research for there is no generally accepted approach. Giving priority to the nature of the society, the learner or the subject-matter is still in a centrifugal force. Besides, an integration approach which is said to be effective in one society can not be necessarily effective in an other for the very reason that the societies can not be identical.

Hence, the non-existent of local research in the area, the novelty of the idea to Ethiopian situation and the interest of the researcher to develop skills in curriculum planning initiated him to conduct this study.

1.2 Statements of the Problem

The ultimate objective of this study is to identify an approach of curriculum integration relevant to the local conditions of the first cycle primary schools in Tigray. Hence, the study answers the following questions.

1. What type of curriculum integration (thematic, activity or social problem based) should be used in the first cycle primary schools of Tigray according to the needs of the:
 - a) students?
 - b) society (parents, educational and non-educational professionals, and pressure groups)?
2. Is there a significant difference in the choices of an integration approach as a result of:
 - a) cognitive development stages of students?
 - b) sex variations of students, parents and education professionals?
 - c) differences in educational background of the students, parents and educational professionals?
 - d) urban and rural dwelling differences of students and parents?

1.3 Significance of the Study

As the purpose of this study is to determine the type of curriculum integration vis-a-vis local needs, it is helpful for the following reasons:

1. The study reveals out the needs of the society and the learner which are paramount importance to make the curriculum responsive to local conditions.
2. Since the approach of curriculum integration determines the objectives, learning experiences to be emphasized, and the method of instruction, the study helps to identify the areas of priority in relation to these aspects.
3. For “teachers teach the way they were taught by their teacher”, this study gives a hint as to how the curriculum of the would be respective teachers should be organized.
4. Local researches hardly exist in the area. Thus, this study can be a resource material for such issues, and in paving a conducive ground for policy matters and further researchers.

1.4 Delimitation of the Study

Since the main objective of the study is to uncover the relevant integrative thread of the integral curriculum sought by the new education policy, the focus of the study is only the first cycle primary school curriculum for the region in concern.

In light of the policy guidelines which accords to decentralization, primary school curriculum development (Grades 1-8) is the responsibility of the respective regional education offices (MOE, 1995: 3). This forshadows for the researcher to

delimit the study to one of the regions, thereby explore such intent at implementation stage. Thus, Tigray is selected to be the target of this study for two basic reasons. First, the researcher does not have language problem to develop and administer the data collecting instruments and to interpret the collected data. Second, since the work place of the researcher is there, it will enable him to examine the issue for further study.

Moreover, the study includes an assessment of the needs of the society and the learner in activity, social problems and thematic curricula. This is so:

- (a) to include the three basic sources of contents-society, student and subject matter; and
- (b) for these are the three approaches with relatively easily measurable integrating elements. In social functions (processes), for instance, it is difficult to clearly separate its elements from that of the above mentioned approaches. Because social process refers to all aspects of life - concepts, skills, problems, etc. available in the living conditions of the society.

1.5 Limitations of the Study

Hypothetically, it is generally agreed that the validity of a research result increases as the sample size increases and distribution is widened. In this study, however, 193 subjects were selected from four schools and regional bureaus (three governmental and two non-governmental) to represent the Tigray region. Due to financial and time factors, it was not possible to include some more subjects.

Besides, the scarcity of reading materials in the area and the absence in Ethiopian context forced the researcher to rely on limited and imported resources; and lack of such research works made him lose the possibility of comparing the present results with that of other countries or localities. Despite these, the researcher has made every effort to make the study as complete as possible.

1.6 Operational Definitions of Terms

1. **Curriculum** - is “a plan for providing sets of learning opportunities for persons to be educated” (Saylor and others, 1981: 8).
2. **Integration** - creating interrelationship across the curriculum by determining issues that can be dealt in different perspectives (disciplines).
3. **Approaches (of integration)** - are ways of curriculum integration using either themes, activities or social problems.
4. **Need** - the respondents’ preferences of an approach (social problems, activity or thematic) to curriculum integration.
5. **Urban** - refers to areas of living where the majority of the inhabitants are engaged in non-agricultural economic activities such as trade.
6. **Rural** - refers to areas of living where most of the inhabitants are engaged in agricultural activities such as farming.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 The Concept of Curriculum Integration

It is not unusual that different educators conceive important terms differently. Some of the roots of such disagreement are political and philosophical positions of the scholars, the types of socio-economic situation in time, and the condition and place of application of the term at hand. Which ever the case may be, it is of paramount importance to indicate the possible meanings of key terms to avoid confusion of readers in understanding one's work. Thus, defining what curriculum integration takes the first effort in this part of the paper.

Integration in curriculum is used in two different ways: as a principle and as a type^{of} curriculum organization. Tyler (1949: 85), for instance, defined integration as the horizontal relationship of various curricular contents in different subject areas. The concepts and skills in Mathematics should be developed in consideration of their application in science and other fields at the same grade level. That is, the structure of knowledge and its application area are dissociated. It is a question of what types of concepts and skills can be learned by using these in other subjects. Subject boundaries are not to be eliminated. Thus, according to such people, integration is a principle of correlation across the curriculum.

On the other hand, integration, as opposed to the separate subject approach, is a method of developing a unified whole. According to McNiel (1990: 184):

Integration usually means applying organizational elements to an ever-widening variety of situations. Organizing principles commonly in use call for increasing breadth of application and range of activities for fitting parts into larger and larger wholes.

Here, integration is not a principle but a process of establishing a total, not as a sum of parts but as a unified whole. Take water as an example. It is composed of two molecules of Hydrogen and one molecule of Oxygen. But does it appear as a sum? No, because the result (water) has a different property, appearance, function etc. in its own. Hence, integration is not like the union of two or more sets in which change in any aspect will not be seen in the resulting set, except in the number of elements. That is:

The word integration means a unity of parts in which the parts are in some way transformed. A single grouping or adding of distinct objects or parts together would not necessarily create an integrated whole. There would have to be some formal characteristic of the whole from which the parts gained some new identity, this characteristic belonging only to the whole (Pring in Peters, 1980: 127).

This implies that either the parts or the whole possesses other different property (function) depending on the process of forming an integration: Inductive or deductive.

People like Beane and Wiggins prefer to use 'coherence' instead of 'integration', though there is no difference in meaning. To Beane (1994: 3) a coherent curriculum is:

One that holds together, that makes sense as a whole; and its parts, whatever they are, are unified and connected by that sense as a whole.... It is not simply a collection of disparate parts or pieces of that accumulate in student experiences and on transcripts. A coherent curriculum has a sense of the forest as well as the trees, a sense of unity and connectedness, of relevance and pertinence. Parts or pieces are connected or integrated in ways that are visible and explicit. There is a sense of a larger, compelling purpose and actions are tied to that purpose.

The wish to create a whole is not enough. There must be a connecting element to the parts and that is the integrative thread which can be a theme, way of learning or a social issue depending on the school of thought guiding the curriculum development. Simple collection of parts as they appear in the subjects is, however, a separate-subject approach to curriculum organization.

Wiggins (1994: 101-102), too, strengthened the idea of Beane and said that the word coherence implies a sensible and effective organization; parts are not to contradict each other, nor with the whole. There must be a justifiable integrating element to ensure coherence.

Integration in its essence (as a type of curriculum organization), thus, does not mean the repetition of similar contents in different subjects. Nor is it to mean artificial relationship. It is rather identifying the area of natural linkage across the curriculum.

“Parts of the body”, for example, can be used to teach arithmetic computation (in Maths), vocabularies (in language); functions and locations of parts of the body, and hygiene (in sciences); and the like. So, can what will be learned using this topic be expressed as a sum? No, because (a) the cracks across subjects are at least narrowed, if not totally eliminated; (b) it will be difficult to separate what students can develop about human body into subject areas. But, sure enough, they are also learning the structure of the subjects through the discussion on “parts of the body” which can be easily observed and measured.

Furthermore, Taba (1962: 299) used the term integration to show a product rather than a means. She said that integration also refers to what happens in the learner’s personality (integrated behavior). Since the purpose of curriculum integration is for the development of an all-rounded personality and there is no conceptual difference in understanding the term, objection hardly exists to Taba’s definition. But an educational result should not be expected from a vacuum.

2.2 Human Needs and Curriculum Integration

There seem to be an agreement in what “need” means in education. It is defined as the gap between “what is” and “what should be” (Taba, 1962: 286; Steller, 1980; Kaufman and Stakeners, 1981; Tyler, 1949: 7-8; McNeil, 1990: 110; Good, 1973:383; Dearden, 1972: 52-53; Pratt, 1980: 50). This implies:

- a. the absence of something desirable, eg. The inability of illiterates to read.
- b. a difference in degree, e.g. the difference in the efficiency of typing 60 letters per minute and 10 letters per minute .
- c. eliminating what is available and/or replacing it by another behavior.

Female circumcision, for example, is a harmful practice that should be avoided.

But, are all such gaps needs? No. According to Dearden (1972: 62), ~~†~~ there are three criterias for the proper use of the term need in education. These are:

- i. there must be a norm, a case in point is the requirement for college entrance that can not include all twelve complete but those with the required performances.
- ii. the norm is not achieved, i.e. there is a difference between the present status and the norm as people need food when hungry.
- iii. what is said to be needed must be relevant condition to achieve the norm.

In other words, as identified by Kaufman and Stake~~nas~~ (1981), need refers to both process and result. Process is the means to attain a result, where as result is what is to be realized or what is realized. Curriculum and its components (objectives, contents, method of organizing, strategies of implementation and evaluation) are, for instance, means to train skilled man power which is the result. Thus, Dearden is saying that there must be a direct relationship between means and ends, in the case of the example between curricular aspects and the type of personality expected.

Therefore, for curriculum integration is a means to the development of an integrated personality, “need” in this study is a process need (not an end). But whose needs? The new education policy emphasizes on the needs of the student and the society. To cite an evidence, one of the objectives of the policy is “to make education relevant by providing problem-solving skills and an all rounded education catering to the needs of the individual and the society (Education Sector Strategy, 1994:13).

Furthermore, curriculum integration is organizing knowledge in order of practical application in living. Thus, it is evident that the development of an integrated curriculum calls for a study of the prevailing conditions of the society, and the needs and interests of the learner - assessment of human needs. These are, according to Prescott as quoted by Tyler (1947:7),

- a. Social needs - needs for affection, for status etc.;
- b. Physical needs - needs for water, for food, for activity, etc.; and
- c. Integrative needs - the need for way of living (philosophy of life), etc.

More explicit statements of human needs are given by Oliva (1988: 138-142).

These are:

- a. Students’ needs:
level: human, national, state or regional, community, school and
individual need;

types: physical, socio-psychological, educational and developmental tasks;

b. Social needs:

level: human, international, state or regional, community, and neighbourhood needs; and

types: political, social, economic, educational, health, moral and spiritual needs.

Thus, educators like McNeil (190: 266-281) and Pratt (1980: 81-84) suggest the involvement of governmental and non-governmental agencies to increase the relevance of the curriculum to local conditions. These are members of the:

- Social service sector (Ministry of Health, social affairs, etc.)
- Developmental agencies - eg. Ministry of Agriculture.
- Administrative officers.
- Ministry of Education - implementers (teachers, office workers).
- Pressure groups (teachers' association, women's association, etc.) and so on.

The major reasons for doing so are:

- to avoid resistance or opposition in implementing the curriculum;
- to consider government plans which should be served by educational activities; and

- to obtain additional data which can strengthen the validity and educational value of the information to be obtained from the society. Even those people may have better understanding (as they work with the society for the society) and ability to give educational meaning to the needs and problems of the mass (including the learner).

The basic assumptions to conduct a needs assessment in developing curriculum are, therefore, (1) to avoid a mismatch between school and environmental conditions, and students' and school experiences; (2) to make education more responsive to its intended functions; and (3) to make the educational programme more economic, i.e. there is a high possibility to have a direct link between means and ends which can avoid unnecessary expenses in a trial and error method.

Furthermore, previous experiences show that the adequacy of a programme should not be left to chance. Hawes (1979: 29-30), after an analysis of a primary education reform in Cameroon called Buea project, has said that:

Many megatons of unprofitable material have been produced (and will still be produced) all over Africa just because no preliminary study had been made to ascertain whether children and parents wanted them, could afford them, read them or understand them.

That is, needs assessment helps to determine the prevailing conditions in living and thereby create a correspondence between what is and what should be done.

2.3 Approaches of Curriculum Integration

Educators are in a continuous disarray as to what should be taught in schools. Each of the universally accepted sources of curricular contents receive some votes in its support. A similar condition is reflecting in how should the curriculum be integrated. The efforts made to identify the integrative threads show that either social issues, student experiences (activities) or structures of subject matters are wanted to be focused. Hence, the three basic approaches of integration are the epistemological, psychological and social types (Ingram, 1979) .

2.3.1 Epistemological Approach

If integration is taken merely as creating a unified whole, it can refer to the arrangement of contents in a subject. The knowledge in subject areas can be organized, as is the case in linear curriculum, in terms of pre-requisite learning or increasing of level of difficulty. The sequence of learning in language, first letters and then words and sentence formation, does not involve collection of different letters, but conceptual integration. Hence, the integrating element is the structure of knowledge within the subject area.

Integration can also be at a disciplines level. Sex education, for instance, can be used to interrelate Biology, Psychology and Sociology. That is, The boundaries of these subjects are not to be removed but focus is given to the development of specific concepts, skills and values in all cases.

Still another instance is when subjects lose their identities. Geography and history may be combined to be treated as social studies. This does not mean that the subjects have their own separate chapters in the resulting discipline but setting up relations like between geographical locations and historical events (Skilbeck, 1972).

The aforementioned structural integrations involve combining parts to form a whole. The process of integrating is based on recognizing the different structures and then finding relevant relationships between these. But real integration is a result of the applications of knowledge rather than its structures. Hence, the best way of integrating the curriculum is by using "... themes from the students' close environment which have a direct meaning for the students" (Blum in Husen and Postlethwaite, 1994: 2900). Such integration is for some (eg. Blum opcit; Aschbacher, 1991) a thematic approach; for others (eg. Ingram, 1979: 34) a Holistic approach.

In a thematic approach parts are derived from the whole, not the vice versa. Thus, it avoids the possibility of parts to remain unrelated to the larger whole as it helps to determine what should be included in the curriculum so that there would be a relationship across the learning contents to be taught in (learned by) a particular class. The topic "conservation of soil", for instance, can be made the subject for reading in language, for problems in mathematics, for field surveys in social studies and for practical demonstration in agriculture.

Furthermore, this approach enables the learner to discuss the same issue in different perspectives; facilitates students' understanding of concepts; bridges the gap between the traditional subjects; initiates transfer of learning.

For themes (topics) must have a close relation with the students' environment, different educators use different organizing elements. To cite some, for Warwick (1975) they are three basic ideas - man, environment and interaction; for Phenix (1964) they are six realms of meaning - symbolics (language, mathematics, art), empirics (Physical and social sciences), aesthetics (literature, art, music), synnoetics (literature, philosophy, history, psychology, theology), ethics/morals (philosophy theology) and synoptics (philosophy, religion, history); and for Peterson (1960) they are the logical, the empirical, the moral, and the aesthetic. The latter two try to categorize the whole knowledge, whereas the first one is independent of forms of knowledge but living conditions of human beings.

2.3.2 Psychological Approach

The psychological type is an integration based upon the students' needs and interests. It is designed in the assumption that effective learning takes place when the learning condition is related to the aspects of living.

Some educators (eg. Ingram, 1979: 37-40) tried to identify four types of psychological integration. These are integration through:

- a. the present needs and interests of the child;
- b. enquiry, for such method initiates the learner to use his potential in learning;
- c. experience of students to avoid the displacement of learning experiences from their original place; and
- d. the students' activities which is to mean 'learning by doing'.

Dewey (1968: 3-18), the major proponent of the psychological type of integration, however, does not make such distinctions. The present experiences, needs and interests of the child are the bases for the selection of contents. Ross (1971; 142-43) explained this idea by saying:

For the pragmatist, the principle of integration is the life and experience of the pupil in general, and his present activity in particular The unity of the knowledge and skill arise from purposive activity, from striving to attain a desired end.

That is, every experience may not be always an overt behavior because of one or more of the following: (a) the child is not conscious of the particular experience, (b) the child does not have the necessary pre-requisite to reveal it, (c) the child doesn't have the interest and purpose to express it. Only some of the experiences may be observable in the present life purposes which are the activities that can integrate learning contents. And the purposive activity reflects the needs and interests of the child. Because according to pragmatists, the only subject of education is life (Whitehead, 1959: 10). And life is one which brings all activities in to a coherent whole-self-actualization.

The starting point in learning, to pragmatists, is the overt experience which leads to a fuller and organized form through enquiry (purposive activity). Hence, pragmatist's curriculum is commonly called the Activity or Experience curriculum (Taba, 1962: 400; Smith and others, 1957: 264). Its distinct characteristics, as developed by Dewey, are focus on students' common needs and interests, flexible **planning** and emphasis on the process of learning rather than on the product (students must be active participants in learning).

Piaget, a child developmentalist, shared the idea of Dewey. He believed that "the child's activity is the fundamental source of new knowledge", said Kagan (1980). But an observable behavior, Piaget argued, should be interpreted in terms of its root in the mental activity of the subject. Accordingly, he has posited four stages of development with their approximate age limits:

- a. Sensorimotor period(stage)(0-2 years) the child explore the world by senses such as touch;
- b. Pre-operational stage (2-8 years) refers to the mental activities to get information;
- c. Concrete operations stage (7-11 years), in which the child starts to reveal out his concrete experiences(to deal with concrete facts); and
- d. Formal operations stage (about 11 year), in which the child starts to think abstractly and logically (Stenhous, 1983: 29-30; McNeil, 1990: 179-180; Owen, 1987: 34-44; and Mayer, 1987: 23).

Such theories of development are helpful in curriculum integration to:

- a. pre-plan based on the common needs and interests of students in a given society; and
- b. sequence contents of learning according to development a needs: match learning sequence with developmental sequence.

2.3.3 Social Approach

Social based curricula are aimed at increasing the social significance of education. According to the advocates of such curriculum, education is viewed as an instrument of social progress.

In integrating the curriculum, however, there seems to exist a slight difference among educators. Some (eg. Taba, 1962: 396) dealt with the social processes and life functions curriculum; others, specially reconstructionists (McNaiel, 1990: 3-33), emphasize on social problems. The former is more comprehensive that includes the later one. Because social processes refer to all branches of living - customs, traditions, economic and social activities and what not. **Social** problems are, on the other hand, the real social questions that need solutions at the time, i.e. real problems are presented in the class and students are to propose solutions. These can be such as poverty, disease, pollution, etc.

A school with social functions or social problems curriculum is, therefore, a miniature society. It is a “laboratory study of social living” (Taba, 1962: 396). In so doing, then, the society is likely to do its part to improve quality of education for the school shares social responsibility.

2.4 Experiences of Other Countries in Integrating the Curriculum

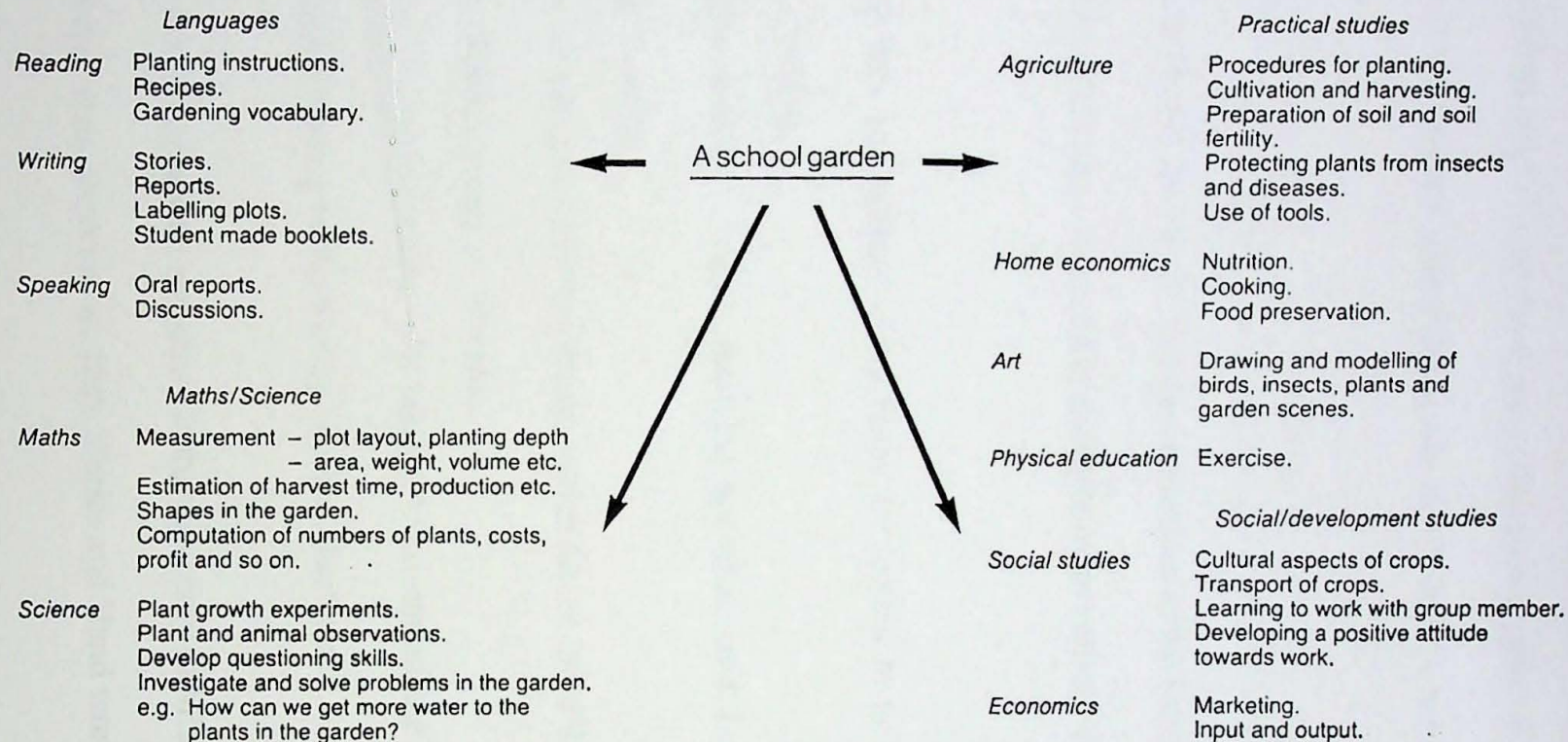
Though needs assessment researches and comparative studies of different types of curriculum integration are hardly available, some integrating efforts in different countries are worth mentioning.

Thematic Approach

According to the observation of Hawes (1979: 87), all African countries have adapted many scientific and mathematical units (such as construction, water, dry sand and exploring the environment) in language, social studies, mathematics and science syllabuses of lower primary schools, though this is a simple relationship between subjects rather than integration.

Hawes further described that in Lesotho and Botswana subject-based curricula are supported by projects on selected themes. The former, for example, has designed a six week lesson on transport. The latter, on the other hand, has scheduled two days of the week for students’ group work to examine some topics across the curriculum as illustrated below.

Fig. 1 Patterns of integration suggested by a school garden project in Lesotho



Source: G.S. Soroka (1967) as taken by Hugh Hawes (1978) Curriculum and Reality in African Primary Schools. London: Longman P.90.

Fig. 1 shows that language skills (reading, writing and speaking), mathematical concepts (such as shape length, width, numbers, etc.), scientific process (observation, investigation, experimentation, etc.), Nutrition, types of soil, valuing work condition, etc. are to be taught with reference to the theme “A School Garden”.

Activity Approach

Smith and others (1957: 264) wrote that the curriculum of the Dewey laboratory school, at the university of Chicago, is a typical example of an activity curriculum. It was based on:

- a. the social activities eg. folktale which helps the learner to be an active member of the society.
- b. the constructive activity - which included activities useful to produce something. eg. Sewing.
- c. the activity to investigate and experiment- which represented the tendency of the child to find out things eg. Puzzles.
- d. the expressive or artistic activity - the interest to communicate with others and to bring one's feeling to the fore eg. writing short story.

Another was Maria Montessori's laboratory school in the university of Missouri, in which the integrating activities were observation, play, stories and Hand work. That is:

- observation was based on physical objects such as animals, people, trees, etc;
- play was based on free games;

- stories were to include reading, telling, dramatizing, singing songs, drawing pictures etc.; and
- hand work was aimed at expressing ideas in tangible forms (*ibid* pp.267-268).

An African country-Nigeria - too has designed activities programme to supplement the subject-based lessons of the elementary school which covers about half the instructional time (Hawes, 1979: 87). The elementary school science syllabus, for example, has suggested the use of activities such as raising questions, prediction, formulating models, formulating hypothesis, interpreting data, etc. in classes. Another instance is that of Botswana, in which science Grades 1-4 contents are recording, measuring, experimenting, comparing etc.; whereas that of the languages are speaking, writing, listening, reading and writing (Botswana, MOE, 1992: 1-73).

Social Functions Approach

The social problems curriculum is a modification and an aspect of the social functions curriculum. Thus, as listed by Taba (1962: 398), the integrating elements of the Virginia state curriculum programme where:

1. Protecting life and health
2. Getting a living.
3. Making a home
4. Expressing religious impulses
5. Satisfying the desire for beauty
6. Securing education

7. Cooperating in social and civic action
8. Engaging in recreation
9. Improving material conditions

Ingram (1979: 41) has, however, suggested the use of the following social problems to integrate the curriculum. These are: health and safety, poverty and wealth, courtship and marriage, home and family life, personal relationships, war and peace, race and immigration, food and hunger, law and order, vandalism, pollution, conservation, and so on.

2.5 An Overview of Primary School Curriculum Planning in Ethiopia

It was at the opening decade of this century that modern schooling was established in Ethiopia, in which the first school was Minilik II in Addis Ababa. Its curriculum included French, English, Italian and Arabic (Tekeste, 1990:1).

For nearly twenty years, however, the Minilik II was the only government operated modern school. Other schools started to flourish after the establishment of Tafari Mekonnen School in Addis Ababa in 1925.

Literatures like that of Richard Pnakhurst (1976) revealed that all schools were functioning either in French or in English language; teachers and teaching materials were imported from abroad; teachers and headmasters were trying to fix upon the

Ethiopians the cultures of their respective countries. That is why the then education in Ethiopia is said to be foreign in nature. An American educational advisor in Ethiopia, Ernest Work (1934), wrote that before an Ethiopian boy can make any sort of study he must first learn some foreign language and in it get all his information through a language not his own and, what he does thus laboriously learn, is almost entirely about some other country than his own.

The Italians, during their invasion of Ethiopia (1936-1941), destroyed the embryonic modern education system in the country. But after liberation (1941) the 6-6 education system (i.e. six years of primary followed by six years of secondary education) of Britain was adopted. Teachers and teaching materials written in English for the European child were obtained from abroad. The medium of instruction at all levels became English (Teshome, 1979: 70-71).

Until 1947 the headmasters were preparing their own schedules and curricula to use in their schools after the approval of the Ministry of Education (MOE, 1949: 8). Consequently, there was no uniformity in the education of the Ethiopian schools. In 1947, however, an attempt was made to have the same curriculum through out the country. A curriculum committee, dominated by foreign staff of varying nationalities drew up a curriculum guide for the elementary school education: Elementary School Curriculum, Grade I-VI. And the plan became hardly practical, for the syllabi were simple topical outlines that initiated teachers to adhere to their own interests (Maaza, 1966: 82-85; Ayalew, 1964).

The question of relevance of the curriculum was started in 1956 after western educated Ethiopians came home. The Department of Research and Curriculum Development in the Ministry of Education was established in 1956. And the members of this departments in cooperation with the education Bureau of Research and Statistics, conducted a research on the then education practice. The results, as stated by Maaza (1961: 9), showed that:

- educational quality was very low and not adapted to the needs of the society;
- the medium of instruction was English in all grades and schools;
- the imported textbooks were unsuitable for Ethiopian students; etc.

Accordingly, a 6-2-3 education system was to replace the 8-4 system adopted in 1949. The curriculum included physical education, agriculture and handcraft in addition to the academic areas. Unfortunately, however, it was substituted by another 6-2-4 structure at its experimental stage (1957-61). The latter one was recommended by the Addis Ababa conference of African Ministers of Education in 1961, and became applicable since 1964 with Amharic as a medium of instruction at the elementary level (Grades 1-6) (Tekeste, 1990:6).

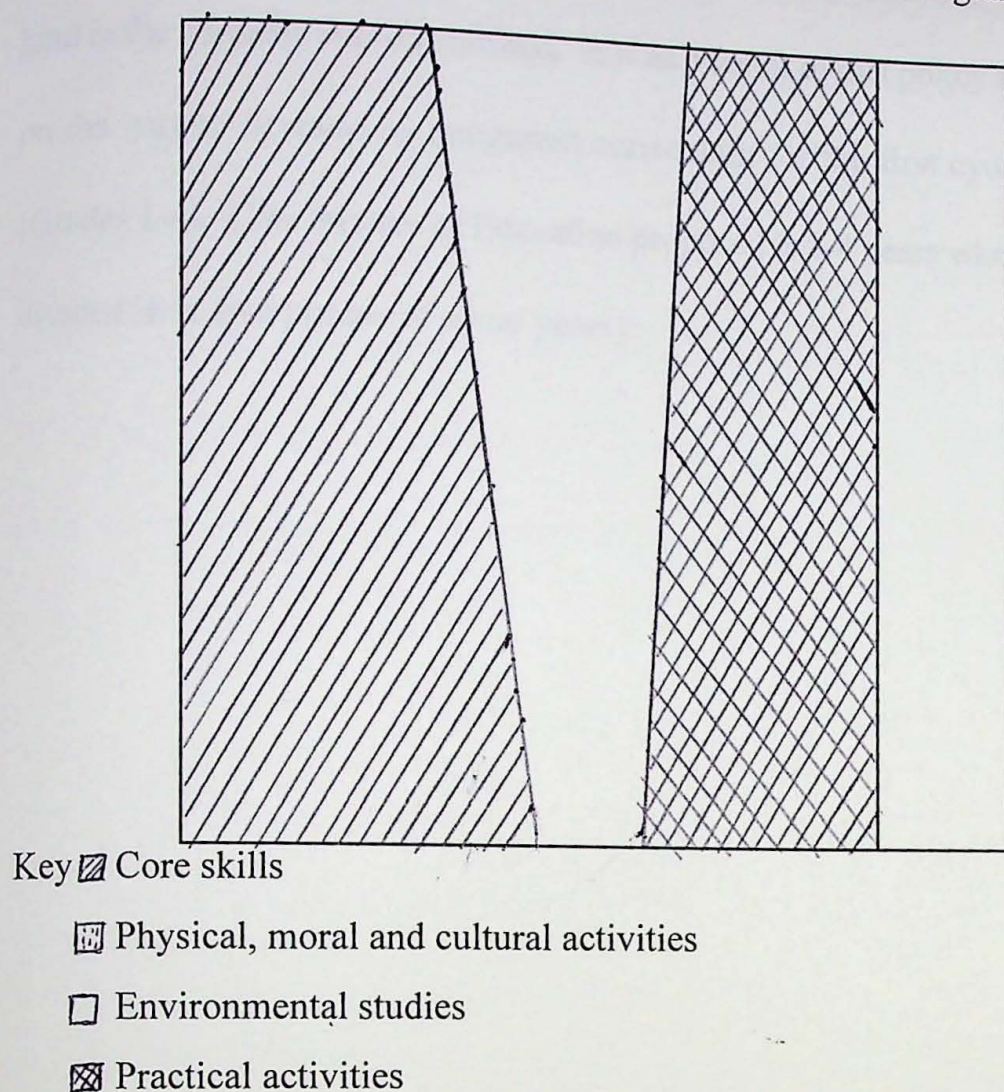
The sector review (1972) was another effort made in the education system of Ethiopia. It proposed 4-4-4 system of education (four years of elementary, four years of middle secondary and four years of secondary education). The first four years of education was called Minimum Formation Education (MFE).

The report of the Sector Review (Task force Curriculum and Methodology, 1972: 17-18) revealed that the curriculum of MFE was to be based on activities and experiences of students rather than on facts of subject matters. Thus, the following four broad areas were proposed to be taught in schools:

1. Core skills- communication and computational skills;
2. Practical activities - physical work and 'learning by doing';
3. Physical, moral and cultural activities;
4. Environmental studies - science and social studies related to the environment and practical activities.

Emphasis on physical, moral and cultural activities was the same throughout MFE; whereas on environmental studies it was to increase from grade one to four as opposed to the decrease in core skills and practical activities (see fig. 2).

Fig. 2 Relative Emphasis of Four Areas of Study in MFE Programme



(Source: Ethiopia, MOE (1972) Education Sector Review: Curriculum and Methodology, Addis Ababa: Curriculum and Development, p.19).

But the plan remained in a black and white as a result of the opposition of the Ethiopian people to its implementation (Teshome, 1979: 194-195). And since then (during the Derg era) no practical change was seen in the education system. Even the nationwide research called "Evaluative Research on the General Education system of Ethiopia (1986)" did not bring considerable change in the country's educational practice.

After the downfall of the Derg, a new education policy (1994) (the first of its kind in the country) was established. It is as a result of this policy that Ethiopia is now on the way to develop an integrated curriculum for the first cycle Primary Schools (Grades 1-4). (The System of Education proposed is 8-4 years where each of these are divided in to two phases of equal years).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

In this study the descriptive survey method was used for the intention was to analyse the current curricular needs of the respondents in integrating the first cycle primary school curriculum. This was done using the following curriculum development model. The subjects of study, instruments of data collection, sampling procedures and techniques, and methods of data analysis are also forwarded as stated here under.

3.1 The Model Used

The three principal curriculum development models are the objective model, the process model and the situational model.

The objective model, as systematized by Tyler (1949), is guided by:

- a. the analysis of the needs of the learners, the society and the subject matter structure to formulate objectives, select contents, identify organizational principles, and state evaluation and implementation strategies; and
- b. the formulation of educational objectives which are frames of reference to the success or failure of an educational programme.

Unlike the objective model, the process model emphasizes on ways of knowing rather than on the products of learning. Stenhouse (1983: 84-5), the founder of the model (Saila-Bao, 1989: 16), has said that activities are worthwhile by themselves rather than as means towards objectives. He has further argued that contents can be selected without reference to the behaviour of the learner or to prescribed ends, for it is the form of knowledge that determines the whole secret. The starting point of curriculum development is understanding principles and procedures inherent in areas of knowledge.

The other model is the situational model. It is based on the cultural analysis of a society and is a school-based curriculum development process under the assumption of making the school more responsive to the societal needs and values. But, the model does not present a different approach to curriculum development process; it adopts either the objective or the process model based on a guiding philosophy (Saila-Bao, 1989: 17-19).

Therefore, the objective model was adapted in this study for the following reasons:

- the Ethiopian education system is guided by predetermined objectives in which the first cycle primary school curriculum is "to attain literacy, numeracy and basic awareness about oneself and one's surrounding (Education Sector Strategy, 1994: 15).

- the Ethiopian Education and Training Policy (1994: 12) states that beneficiaries (students and society) are to participate in the preparation, implementation and evaluation of the curriculum, which to this effect were the main subjects of this study.

But the nature of the subject matters was only included in the instruments to be viewed by the subjects of the study. Because the researcher believes in that curriculum should be above all responsive to human needs. The "knowledge for its own sake" principle does not guarantee a match between school and environmental needs.

3.2. Subjects

As the study is aimed at the analysis of human needs in integrating the first cycle primary school curriculum, the subjects are of two types, both of which are from Tigray:

- a. Students - Grades 2, 3 and 4.
- b. Society - parents, professionals and pressure groups. The professionals were:
 - i. Classroom teachers and directors.
 - ii. Members of the regional Education Bureau - heads of the Elementary school education, Educational programmes, Examination, Curriculum Development and Research, Curriculum research and evaluation, representative of the Educational Mass media, and the Academic and Vocational curriculum development coordinators; and

- iii. The regional heads of the extension department and public health in the bureaus of Agriculture and Health respectively.

In the case of the pressure groups regional heads of the teachers' and women's associations are included.

3.3 Sampling Techniques and Sample Size

In this study two types of sampling techniques are used:

a. Cluster Sampling

In 1995/96 academic year, in Tigrai, there were 551 schools that can provide education at least upto grade four in 1996/97. In these schools there were 288,608 students and 6,134 teachers (Tigrai Education Bureau, 1996). These data were used as a basis for the selection of representative teachers, students and parents for this study. Because:

- the 1996/97 academic year school statistics was not yet ready;
- the target schools for this study should be those providing education at least upto grade four for the students were to be those housed in grades 2, 3, and 4; and
- parents were meant those who have had a child/children in school.

The above mentioned subjects were selected from four primary schools and the nearby dwellers using a simple random sampling technique. That is, following the principle of cluster sampling (stagewise random selection) using lots:

- from the four zones in Tigray (Western, central, eastern and southern excluding Mekele for it does not have a rural area) Eastern and central were selected;
- from each of these zones Adwa wereda from central zone and Wukro from Eastern zone were chosen; and
- from each wereda two primary schools, one from rural and one from urban, were selected (see the rationale at the end of section 3.3).

Consequently, the sample schools were Adi-Abeto and Mai-Daero from Adwa, and Megabit 30 and Adi-Worema from Wukro in which Adi-Abeto and Megabit 30 are urban schools whereas the others are in rural areas.

From each of these schools four teachers (one from each grade one through four) and thirty students (ten from each grade two to ~~four~~ four), and eight parents from each of the surrounding environment of these schools were selected randomly. The selection of the parents was based on the random selection of eight students, two from each grade (1-4) in each school, who were asked to bring the person responsible for their schooling.

b) Deliberate Sampling

Because of their social and governmental responsibilities the two social representatives of the education committee of each school, and the professionals (except teachers) and pressure groups mentioned in section 3.2 in this paper were deliberately included.

Hence, the total number of respondents in this study was 193. That is:

1.	students - three grades (2-4)x10 each x 4 schools	120
2.	society - a) 10 parents (including the members of education committee) x 4 schools	40
	b) Professionals	
	i. five teachers (one is the director)x 4 schools	20
	ii. officials (regional representatives)	11
	c) Pressure groups, i.e. regional representatives of two bureaus	<u>02</u>
	Total	<u>193</u>

Generally speaking, the size of the subjects from each group or subgroup was determined by considering:

- the representativeness and cruciality (to the study) of the responsibility they have;
- the capacity to give valid information; and
- the material and human resources available to carryout the study.

3.4 Variables Included in the Study

The major independent variables considered in this study were sex, educational background and domicile (urban and rural dwelling) of the subjects. Because these factors determine the social roles and economic bases of individuals which influence one's needs. Besides, in most developing countries like ours educational imbalance is a function of sex difference and urban-rural dwelling. In other words, educational

opportunity is better among males than among females, and in urban than in rural areas which are likely to affect educational needs.

Age difference among students too was considered from the point of view of Robert J. Havighurst. These are, as stated by McNeil (1990: 177):

- maturation of the biological organism sets the conditions for learning social tasks;
- social and cultural patterns demand that certain things be learned at a given time; and
- often a sequential pattern of preferences or dislikes is dictated by the individual personality.

3.5 Data Collection Instruments and Procedures

3.5.1 Instruments

Two types of data collecting instruments were used in this study. These were opinionnaire and Interview with "Agree" or "Disagree" responses plus an item based on a selection of an approach of integration.

Opinionnaire: is an instrument used to measure attitude or belief rather than facts. Thus, four separate, but basically related, opinionnaires were developed to collect data from;

- a) students, teachers (including directors), educational officials and the representative of the teachers' association;

- b) the representative of the regional bureau of agriculture;
- c) the representative of the regional bureau of health; and
- d) the representative of the regional bureau of the women's association.

Interview: This instrument was employed to collect data from the parent respondents for most of them were illiterates and unable to put their responses correctly by themselves. The purpose of the development of separate instruments for different subjects was to relate the items to the responsibility and area of exposure of the subject(s) and thereby increase the validity of the information to be obtained.

All the instruments included (a) three types of sample items-themes, activities and social problems-used to investigate the types of integrative elements needed by the majority of the subjects, (b) an item aimed at obtaining direct response to the philosophical approaches of integration. Such a method was helpful to check the consistency of the responses of the respondents.

Moreover, the instruments, in all cases, were administered personally. As a result, the return rate of the opinionnaires and interview was hundred percent.

3.5.2 Try-out of the Instruments

All the instruments were developed by the researcher in English language with reference to literatures. As it has been mentioned before, the items were of three types-

themes, activities and social problems, which were mixed up after enough items had been obtained.

Then, three intercoders were used to examine whether the items really belong to that category or not by rearranging the items into themes, activities and social problems. The intercoders were three second year graduate students in the department of curriculum and instruction. These three intercoders first grouped the items independently and discussed together with the researcher to arrive at the same decision - to improve or discard the items misplaced by either of the intercoders.

After having done this, the items selected were translated into Tigrigna (the mother tongue of the subjects) by the researcher and an assistant.

The opinionnaire prepared for students and educational professionals (including the representative of the teachers' association) and the interview for parents were tested on forty students (ten from each grade one to four) and ten parents respectively. These were selected randomly from Kenema primary school at Wukor town (Tigray) and the near by dwellers. Accordingly, corrections were made on all instruments based on the feedback obtained from these subjects.

The major finding of the try-out of the instruments was the inability of first grade students to read and give valid responses. Even when someone read for them,

either they agree or disagree with all the items depending on the response given to the first item. As a result first grade students were excluded from the main study.

3.6 Data Analysis Techniques

The data collected was presented using tables followed by qualitative descriptions. The quantitative techniques employed were:

- a) frequencies, where above 50% frequencies were said to be supportive or otherwise; and
- b) chi-square - to test the significance of the differences among frequencies.

The formula of the chi-square used is:

$$X^2 = \sum \frac{(f_o - f_e)^2}{f_e} \quad \text{where, } X^2 = \text{chi-square}$$

$\sum$ = sum of

f_o = observed frequency

f_e = expected frequency

Whenever any of the expected frequencies were less than five, Yates' correction for continuity was used.

$$\text{That is, } X^2 = \sum \frac{(|f_o - f_e| - \frac{1}{2})^2}{f_e}$$

where, $|f_o - f_e|$ = absolute value of $f_o - f_e$.

Yate's correction for continuity was used based on the rules stated by Richmond (1964: 301). These are:

1. Test the hypothesis in the usual way.
2. If the hypothesis is accepted, be satisfied.
3. If the hypothesis is rejected, apply Yate's correction
4. If the hypothesis is still rejected, be satisfied.
5. If the hypothesis is rejected without Yate's correction and accepted with the correction, then, a more exact procedure should be used.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

A collected data of a study may be of little or no use unless possible interpretations are made vis-a-vis the objective of the action, as a result of which theoretical and practical implications can be identified. Accordingly, the responses of students, parents, professionals and pressure groups are presented and discussed in this part. Factors such as age of students, sex, educational level and domicile are also considered when these are observed in the subjects.

4.1 Data Collected from the Student Respondents

Table 1 shows that the reactions of students do not have a coherent whole agreement or disagreement to either of the approaches of curriculum integration - thematic, activity or social problem based. The themes man, life, environment and symbols have got supports that range from 6(5%) (incase of man) to 50 (41.7%) (in case of environment). Whereas the other themes are selected by the majority of the students. The reason seems visibility of impact of the themes on the living conditions of students.

In the case of the student activities, most of the scientific skills received not more than 30 (25%) supporters each - fact finding (25%), exploring (22.5%), imitating (18.3%), demonstrating (10.8%), observing (14.2%) and creating (15%). That of

problem solving too is 49.2%. From such skills only three (experimentation, puzzle and reasoning) are accepted by 85%, 77.5% and 63.3% of the students respectively.

The number of students registered in support of the inclusion of planning, writing, reading and Arithmetic as integrative elements were 100(83.3%), 108(90%), 107(89.2%) and 80(66.7%) respectively. And these activities were the elements of the "expressive impulses" in Dewey laboratory school curriculum. Besides, writing, reading and Arithmetic are the basic skills of learning for two reasons:

- they are inseparable activities of the learning process at any level; and
- are the basic skills that distinguish literate from illiterate person.

Hence, the need for learning these skills in all subject areas seems reasonable, and that is why the new Ethiopian Education Policy gives priority for their development at the very beginning of schooling.

Dewey and Mariam's laboratory school curricula used folktale and games as means of learning and thereby socializing the child. In a similar sense, of all the respondent students in this study at least 90(75%) agreed to learn through these activities.

Table 1*

Responses of Students in Selecting Integrative Elements (N = 120)

Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents	
	Agree	Disagree		Agree	Disagree		Agree	Disagree
a. Themes			b. Activities			c. Social problems		
1. School	113(94.2)	7(5.8)	1. Planning	100(83.3)	20(16.7)	1. Disease	69(57.5)	51(42.5)
2. Nutrition	107(89.2)	13(10.8)	2. Fact-finding	30(25)	90(75)	2. Poverty/hunger	75(62.5)	45(37.5)
3. Man	6(5)	114(95)	3. Exploring	27(22.5)	93(77.5)	3. Family planning	99(82.5)	21(17.5)
4. Garden	92(76.7)	28(23.3)	4. Writing	108(90)	12(10)	4. Religion and work	95(79.2)	25(20.8)
5. Environment	50(41.7)	70(58.3)	5. Reading	107(89.2)	13(10.8)	5. War and peace	28(23.3)	92(76.7)
6. Communication	84(70)	36(30)	6. Arithmetic	80(66.7)	40(33.3)	6. Immigration	56(46.7)	64(53.3)
7. Life	13(10.8)	107(89.2)	7. problem-solving	59(49.2)	61(50.8)	7. Law and order	109(90.8)	11(9.2)
8. Weather	93(77.5)	27(22.5)	8. Games	90(75)	30(25)	8. Vandalism	47(39.2)	73(60.8)
9. Home	92(76.7)	28(23.3)	9. Experimentation	102(85)	18(15)	9. Pollution	26(21.7)	94(78.3)
10. Water	101(84.2)	19(15.8)	10. Puzzle	93(77.5)	27(22.5)	10. Deforestation	55(45.8)	65(54.2)
11. Animals	96(80)	24(20)	11. Folktale	96(80)	24(20)	11. Corruption	41(34.2)	79(65.8)
12. Crops	103(85.8)	17(14.2)	12. Imitating	22(18.3)	98(81.7)	12. Gender issues	69(57.5)	51(42.5)
13. Reproduction	85(70.8)	35(29.2)	13. Demonstrating	13(10.8)	107(89.2)	13. Expectancy	56(45)	64(55)
14. Culture	111(92.5)	9(7.5)	14. Reasoning	76(63.3)	44(36.7)	14. Ignorance	37(30.8)	83(69.2)
15. Transport	97(80.8)	23(19.2)	15. Observing	17(14.2)	103(85.8)			
16. Soil	100(83.3)	20(16.7)	16. Creativity	18(15)	102(85)			
17. Symbols	43(35.8)	77(64.2)						
18. Measurements	90(75)	30(25)						

* In all the tables, figures in parenthesis are percentages of the respective frequencies.

The other items were the social problem ones. Some social problems are caused by human activities; others happen as a result of the natural phenomenon. Some human activities affect man directly; others indirectly. Some social problems start from individuals and extend their effect to the masses (eg. family planning); others the other way round (eg. pollution). Accordingly, due consideration is given to such aspects in this analysis, which reveals the following facts:

- a) Disease, poverty, family planning, religion and work, law and order, and gender issues were given positive responses by at least 69 students (57.5%).
- b) To the contrary, Immigration, vandalism, expectancy and ignorance attracted less than or equal to 56 students (46.7%) each.

The result is attributable to the items indication of a direct impact upon and visibility of the practices to the students.

On the other hand, war and peace, pollution, deforestation and corruption, which have social harmfulness and are likely to affect the society, as an entity, were not attractive to the majority of the students. Moreover, pollution and deforestation designate man's activities on nature which can bring social problems.

That means, the number of items selected is 29(60.4%), of which 14(77.8%) are themes, 9(50.3%) activities and 6(42.9%) social problems.

TABLE 2

Proportions of Selected Items from Each of the Integration Approaches

No.	Integrative Elements	No. of Items			X ² Value
		Favoured	Not Favoured	T	
1.	Themes	14(77.8)	4(22.2)	18	4.235*
2.	Activities	9(56.3)	7(43.7)	16	
3.	Social problems	6(42.9)	8(57.1)	14	
	Total	29(60.4)	19(39.6)	48	

* Insignificant at 0.05 level.

Table 2 shows that from a total of 48 items 29(60.4%) were selected by the majority of the students. Of these 14 are themes, 9 activities and 6 social problems. The percentages of the selected items from each category are 77.8, 56.3 and 42.9 respectively.

The chi-square calculated ($X^2 = 4.235$), however, does not exceed the table value ($X^2 = 5.99$). That is, the difference of the proportions of the items selected from each of the integration approaches is not significant. Therefore, it is difficult to determine the philosophy that can guide the integration of the curriculum under discussion using the data in Table 2.

TABLE 3

Distribution of Students Vis-a-vis the Integration Approaches

No.	Integration Approach	Respondents		Chi-square Value (X^2)
		No.	%	
1.	Thematic	27	22.5	7.35*
2.	Activity	42	35.0	
3.	Social problems	51	42.5	
	Total	120	100.	

* Significant at 0.05 level.

From Table 3, it is clear that 27(22.5%), 42(35%) and 51(42.5%) of the students chose the thematic, activity and social problems principles respectively. And the difference between the frequencies is proved to be significant at 0.05 level (X^2 obtained = 7.350 > X^2 tabulated = 5.99, $p < 0.05$). That is, the students have shown an inclination towards the social problems approach. But, this contradicts to what was observed in Table 2. Though the difference is not significant, the proportion of selected social problem items is the least as compared to that of the others.

The possible explanation for this result is that students conceptualized the end and means of education differently. They wanted to learn basic concepts to change the society.

Age and Integration Approaches

According to Piaget's stages of cognitive development, the student respondents of this study can be grouped in to two:

- a. students in concrete operations period, i.e. 7-11 years of age = 82 (68.3%);
and
- b. those in formal operations period, i.e. above 11 years of age (in this case 12-16 years) = 38 (31.7%)

An analysis of the responses of students in terms of these two cognitive development stages, therefore, reveals that items selected by more than half of the total students or otherwise received similar number of responses in each of the age categories (see Appendix A). Furthermore, an investigation into the educational philosophy of students by age reveals that the majority of the students in both age categories (concrete and formal operations) supported the social problems approach, which is true for the whole group (Table 4). Thus, there is a grain of truth to say that the age difference of the students did not affect their selection of sample integrative elements and an approach of integration.

TABLE 4

Students' Needsⁱⁿ the Integration Approaches^{by} Age

No.	Integration Approach	Respondents			X ² Value
		7-11 Years	> 11 Years	T	
1.	Thematic	16(19.5)	11(28.9)	27	1.456*
2.	Activity	29(35.4)	13(34.2)	42	
3	Social problem based	37(45.1)	14(36.8)	51	
	Total	82(100.0)	38(100)	120	

* Insignificant at 0.05 level.

In Table 4 the chi-square calculated shows that age was not a factor of students' responses to determine the target area of their education. That is, the proportion of respondents of the whole group in each of the integrative approaches is maintained in the age categories. This may be due to the following reasons:

- the basis for Piaget's theory is the natural developmental process apart from the environmental factors;
- Piaget's Theory of stages of development are sequential but may be un even in their application (Stenhouse, 1985: 27); and
- the items were less abstract for the students.

Sex Difference and the Integration Approaches

Though the students were composed of both sexes (68 male and 52 female), the difference in integration need was not as such considerable. A decision that can be made using the number of female respondents on an item goes with that of male

respondents, except in the cases of the theme "symbols" and the activity "problem-solving" (see Appendix B). Thirty females (57.5%) and 13 males (19.1%) accepted the theme "symbols"; and 22 (42.3%) females and 37 (54%) males in the case of "problem-solving". Thus, needless to say that the majority of the females gave positive response to the theme but not to the activity which is the reverse of the case in males. This also has inconsistency with what has been said in relation to the whole student respondents on both items - the majority did not accept the items (symbols and problem-solving).

The possible explanation for this result can be related to what psychologists like Badger (1981) and Myers (1983: 1987-195) have said based on research findings:

- a) boys are superior in spatial visualization than girls which helps them to solve problems; and
- b) girls surpass boys in logical computation which make them rely on symbols.

TABLE 5

Students' Needs in the Integration Approach by Sex

No.	Integration Approach	Respondents			X ² Value
		M	F	T	
1.	Thematic	13(19.1)	14(26.9)	27	2.796*
2.	Activity based	28(41.2)	14(26.9)	42	
3.	Social problem based	27(39.7)	24(46.2)	51	
	Total	68(56.7)	52(43.3)	120	

* Insignificant at 0.05 level.

Table 5 shows that of the 120 students 68(56.7%) are males and 52(43.3%) are females. Their responses in selecting a principle of curriculum integration reveal that most of the males (41.2%) and females (46.2%) were in favour of the activity and social problems curricula respectively. The difference is, however, insignificant. Because the chi-square value obtained ($X^2 = 2.76$) is less than the critical values (5.99, for $p < 0.05$).

Students' Grade Level and the Integration Approaches

The student respondents of this study were grade 2 through 4 (40 from each grade). In selecting integrative threads, however, grade level was a factor in the activity "problem-solving", and the social problem items "immigration" and "deforestation" (see Appendix C). In the other items, the responses of students by grade level correspond one another.

In the case of the responses of the student population, problem-solving received 59 supporters (49.2%). These were 24 grade 4, 22 grade 3 and 13 grade 2 students. The percentages of these figures with respect to the number of students obtained from each grade are 60, 55 and 32.5 respectively. Hence, the number of students of grade 2 who selected problem-solving activity is very low, and number of supporters increases as grade level increases.

The other points of departure are immigration and deforestation. The first one was accepted by 27(67.5%) grade 4, 23(57.5%) grade 3 6(15%) grade 2 students which

indicates that majority of grade 2 student rejected it. Whereas deforestation was accepted by most of grade 4 students, but not by grade 3 and 2.

That means, all the three items were selected by the majority of grade 4, but rejected by the majority of grade 2. Most of grade 3 students, however, accepted problem-solving and immigration but not deforestation.

TABLE 6

Students' Responses in Selecting an Integration Approach, by Grade Level

No.	Integration Approach	Respondents			
		Grade 4	Grade 3	Grade 2	T
1.	Thematic	10(25)	13(32.5)	9(22.7)	27
2.	Activity	12(30)	8(20)	11(27.5)	42
3.	Social problem	18(45)	19(47.5)	20(50)	51
	Total	40(100)	40(100)	40(100)	120

Table 6 shows that in all grades the number of respondents who chose the social problems approach is the highest: 18(45%) in grade 4, 19(47.5%) in grade 3 and 20(50%) in grade 2. Thus, the inclination of the three grades is towards the same philosophy: social problems curriculum.

The possible explanations of the result are, therefore,

- a) the students were selected from homogeneous group;

- b) the gap in the grade levels (grade 2 to 4) is not so wide to affect the needs of the students; and
- c) living conditions are more influential than the grade levels.

Domicile and the Integration Approaches

An analysis of the responses of students in terms of area of living indicates that:

- a) "problem-solving" as an activity integrative thread is selected by 34(56.7%) rural and 25(41.7%) urban students; and
- b) each of the other items received similar supports from urban and rural students. That is, items chose by the majority or otherwise of either of the groups received similar support in the other (see Appendix D). To cite some examples school, planning, disease etc, are accepted by more than 50% of the urban as well as rural students; whereas man,exploring, pollution, etc, are favoured by less than the average number of students in each area.

Thus, their difference in the item "problem-solving" may be due to the difference in their living conditions: rural children are most likely to deal with independent activities to help parents than the urban children and are finding a means to solve the life problems that may encounter.

TABLE 7

Students' Responses in Selecting an Integration Approach, Rural-Urban Difference

No.	Integration Approach	Respondents		
		Urban Dwellers	Rural Dwellers	T
1.	Thematic	17(28.3)	10(16.7)	27
2.	Activity	19(31.7)	23.(38.3)	42
3.	Social problems	24(40)	27(45)	51
	Total	60(100)	60(100)	120

The data in Table 7 indicate that in both urban and rural areas students' supports are high to the social problems approach. That is, of the 60 urban dwellers 24(40%) supported the social problems, 19(31.7%) the activity and 17(28.3%) the thematic curricula. Similarly, 27(45%), 23 (38.5%) and 10(16.7%) of the rural students accepted these approaches respectively. On the other hand, the responses of the total number of students favour the approaches in the same order. Hence, it is safe to say that urban-rural dwellment is not a factor of the responses of students in this study.

4.2 Data Collected from the Members of the Society

4.2.1 Parents' Responses in the Curriculum Integration Approaches

Table 8 shows that the majority of the parents:

- a) have given positive responses on the themes economic sources, soil, seeds, animals, culture and virtue (each secured the support of not less than 27 or 67.5% respondents). The case in environment, measurements and parts of human body, however, is not supportive. This indicates that more of life oriented aspects are preferable to science oriented ones.
- b) have selected the activities writing, reading, arithmetic, gardening, demonstrating and handicraft but not exploring, observing, evaluating and creativity. That is, activities that involve mental and physical aspects to produce tangible results are preferable to abstract thinking development.
- c) have agreed with ~~of~~ the social problems soil and water protection, deforestation, diseases and food production improvement but not with war, gender issues, traditional beliefs and practices, family planning and ignorance which is a preference on changes in material world rather than on human thinking.

TABLE 8

Parents' Responses in Selecting Integrative Threads (N = 40)

Integrative Threads	No. of Respondents		Integrative Threads	No. of Respondents		Integrative Threads	No. of Respondents	
	Agree	Disagree		Agree	Disagree		Agree	Disagree
a. Themes			b. Activities			c. Social problems		
1. Our environment	15(37.5)	25(62.5)	1. Arithmetic	25(62.5)	15(37.5)	1. Soil and water protection	36(90)	4(10)
2. Economic sources	32(80)	8(20)	2. Evaluating	17(42.5)	23(57.5)	2. Deforestation	31(77.5)	9(22.5)
3. Soil	31(77.5)	9(22.5)	3. Gardening	38(95)	2(5)	3. Disease prevention	38(95)	2(5)
4. Seeds	37(92.5)	3(7.5)	4. Demonstrating	30(75)	10(25)	4. War	11(27.5)	29(72.5)
5. Culture	35(87.5)	5(12.5)	5. Exploring	17(42.5)	23(57.5)	5. Food production improvement	39(97.5)	1(2.5)
6. Animals	34(85)	6(15)	6. Observing	16(40)	24(60)	6. Gender issues	18(45)	22(55)
7. Measurements	11(27.5)	29(72.5)	7. Writing	37(92.5)	3(7.5)	7. Traditional beliefs and practices	17(42.5)	23(57.5)
8. Virtue	27(67.5)	13(32.5)	8. Reading	37(92.5)	3(7.5)	8. Family planning	14(35)	26(65)
9. Parts of human body	14(35)	26(65)	9. Creativity	13(32.5)	27(67.5)	9. Ignorance	10(25)	30(75)
			10. Handicraft	29(72.5)	11(27.5)			

TABLE 9

Proportion of Parent Selected Integrative Elements

No.	Integrative Elements	No. of Items			X ² Value
		Selected	Not Selected	T	
1.	Themes	6(66.7)	3(33.3)	9	0.237*
2.	Activities	6(60)	4(40)	10	
3.	Social problems	5(55.6)	4(44.4)	9	
	Total	17(60.7)	11(39.3)	28	

* Insignificant at 0.05 level.

The data in Table 9 show that the number of themes, activities and social problem items were nine, ten and nine respectively. Out of these six themes, six activities and five social problems were selected by the majority of the parent respondents. And the chi-square value obtained indicates that there is no significant difference in the proportions of selected items from each of the integration approaches. Hence, this data can not be used to determine the integration approach selected.

When it comes to be a matter of preference of either of the guiding principles of curriculum integration, however, parents responded as follows (see Table 10).

TABLE 10

Responses of Parents in Selecting an Integration Approach

No.	Integration Approach	No. of Respondents		X ² Value
		No.	%	
1.	Thematic	8	20.0	6.742*
2.	Activity	11	27.5	
3.	Social problem	21	52.5	
	Total	40	100.0	

* Significant at 0.05 level.

As it can be observed from Table 10 the social problem approach attracted most of the parents (52.5%). The other parents, 27.5%, and 20%, selected for activity and thematic integration respectively.

The chi-square calculated proved that the difference in the frequency distribution is significant. Hence, it can be concluded that parents have shown an inclination towards a social problems curriculum organization. That means, they wanted education to be responsive to their living conditions.

Sex Difference and the Integration Needs of Parents

An analysis of the responses of the forty parents in terms of sex difference reveals that:

- a) the male-female ratio is 27: 13.
- b) the frequencies of agreements and disagreements of males and females in each item correspond to that of the whole group, except for the item "Gender issues" (see Appendix E).

With respect to the parent population the item "Gender issues" received 18(45%) respondents in its favour. when sex difference is considered, however, 10(76.9%) of the females accepted it as opposed to the case in males (8 out of 27 or 29.6%). This may be due to the very reason that gender issues have negative connotation on females than on males.

To cross check the fact, the responses of both sexes in selecting an integration principle are examined separately (see Table 11).

TABLE 11

Parents' Sex Difference and the Choice of Integration Approach

No.	Integration Approach	Responses			X ² Value
		M	F	T	
1.	Thematic	5(18.5)	3(23)	8	1.115* (0.708)**
2.	Activity	6(22.2)	5(38.5)	11	
3.	Social problem,	16(59.3)	5(38.5)	21	
	Total	27(100)	13(100)	40	

* insignificant at 0.05 level.

** X² value obtained though the application of Yate's correction.

A look at Table 11 helps to visualize that equal number of females (i.e. five) selected activity and social problem approaches, whereas most of the males (59.3%) chose the latter only. Does this mean a real difference?

The chi-square test shows that the difference is insignificant (χ^2 calculated = $1.115 < 5.99$, at 0.05 level). Thus, the social problems approach seems to be a point of preference of the parents.

Domicile and the Integration needs of Parents

Similar to the case in sex difference of parents, the item "Gender issues" found to be the only point of departure between urban and rural dwellers (see Appendix F). The inclusion of "gender issues" was accepted by 13 (65%) and 5 (25%) of the parents from the respective areas. And the result is open to an interpretation related to the aspects of modernization. That is, metropolitans are more likely to understand the negative effects of gender practices upon the rights of women in particular and development in general, may be because of their (a) exposure to mass media and other agencies aimed at promoting female participation in the socio-economic activities; and (b) observation of the status of educated women in the society.

TABLE 12

Urban-Rural Differences and the Integration Needs of Parents

No.	Integration pproach	Respondents		
		Urban Dwellers	Rural Dwellers	T
1.	Thematic	3(15)	5(25)	8
2.	Activity	7(35))	4(20)	11
3.	Social problem based	10(50)	11(55)	21
	Total	20(100)	20(100)	40

The distribution of respondents in Table 12 shows choice of an integration approach by domicile. the number of urban dwellers who chose the thematic, activity and social problems approaches are three (15%), seven (35%) and 10(50%) respectively. Similarly, most of the rural parents (11 out of 20 (55%)) supported the social problems curriculum followed by 25% in thematic and 20% in activity principles. That means, the highest frequencies in both groups stand for the same approach. Hence, application of the test of difference (chi-square) between the responses of the urban and rural dwellers is not necessiated.

Educational Background of Parents and Curriculum Integration Approaches

Education enables people to understand their environment and living conditions. As a result, educational background of parents can affect the selection of the type of education their children have to learn in schools and the identification of the focus of

education in the country. Thus, trial is made in this study to examine the responses of parents vis-a-vis their educational background.

The forty parents were 28(70%) illiterates and 12(30%) literates whose education level ranges from Grade 1 to 4 (see Table 13). An analysis of their responses reveals that the selection of integrative elements is not affected by educational background. Items received the votes of the majorities in their favour in the whole group received similar support in each of the academic status categories, or otherwise, except the items "Gender issue" and "family planning" (see Appendix G). These two items were chosen by 18(45%) and 14(35%) parents respectively. But in the case of an analysis of educational background:

1. Gender issue as an integrative thread was accepted by 9(32.1%) illiterates and 9(75%) literates; and
2. Family planning too received 6(21.4%) and 8(66.7%) supporting views from illiterates and literates respectively.

The result, therefore, can be explained in terms of the helpfulness of education to create an awareness to differentiate harmful practices from useful ones and change the attitude accordingly.

TABLE 13

Parents' Educational Background and Their Selection of An Integration Approach

No.	Integration Approach	Educational Status		
		illiterates	Primary Education	T
1.	Thematic	4(14.3)	4(33.3)	8
2.	Activity	9(32.1)	2(16.7)	11
3.	Social problem	15(53.6)	6(50)	21
	Total	28(100)	12(100)	40

Table 13 shows that the highest frequencies of respondents in both groups belong to the social problems approach, which is the preference of most of the parent respondents as a whole. Thus, it is possible to say that, in this study, education does not show a considerable impact upon the needs of parents in the integration approaches. The reasons can be:

- the difference in educational level between the two groups is not pronounced;
- the individuals are engaged in similar economic activities (farming and clerical activities); and
- the long time alienation of the literates from school, i.e. hypothetically people tend to forget many things when they are away from school for a long time.

This is specially true at the lower grades.

4.2.2 Data Collected from Professionals

a) Educational Professionals' Needs in the Integration Approaches

Basically what has been said on the reactions of students and parents can be repeated here: the educational professionals selected integrative elements from the themes, activities and social problems. That is:

- the themes man, life, symbols and transport;
- most of the scientific skills (fact-finding, exploring, experimentation, imitating, demonstrating, reasoning, observing and creating); and
- the social problem items - poverty, war and peace, corruption, expectancy, immigration, law and order, vandalism and ignorance received less than 50 percent supports unlike the other items in each category (see Table 14).

This implies that (a) concreteness is preferred to abstractness. Both themes and social problems are wanted to be related to students' living activities that can be observed rather than to what can only be said. (2) the basic skills of learning (reading, writing and arithmetic) and home based activities (games, folktales, etc.) are required than school based ones (scientific skills).

TABLE 14
Responses of Educational Professionals in Selecting Integrative Elements (N=29)

Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents	
	Agree	Disagree		Agree	Disagree		Agree	Disagree
a. Themes			b. Activities			c. Social problems		
1. School	24(82.8)	5(17.2)	1. Planning	23(79.3)	6(20.7)	1. Disease	25(86.2)	4(13.8)
2. Nutrition	24(86.2)	4(13.8)	2. Fact-finding	7(24.1)	22(75.9)	2. Poverty/hunger	10(34.5)	19(65.5)
3. Man	10(34.5)	19(65.5)	3. Exploring	8(27.6)	21(72.4)	3. Family planning	27(93.1)	2(6.9)
4. Garden	26(89.7)	3(10.3)	4. Writing	28(96.6)	1(3.4)	4. Religion and work	21(72.4)	8(17.6)
5. Environemnt	28(96.6)	1(3.4)	5. Reading	23(79.3)	6(20.7)	5. War and peace	9(31)	20(69)
6. Communication	16(55.2)	13(44.8)	6. Arithmetic	27(93.1)	2(6.9)	6. Immigration	9(31)	20(69)
7. Life	3(10.3)	26(89.7)	7. Problem-solving	16(55.2)	13(44.8)	7. Law and order	7(24.1)	22(75.9)
8. Weather	19(65.5)	10(34.5)	8. Games	25(86.2)	4(13.8)	8. Vandalism	9(31)	20(69)
9. Home	19(65.5)	10(34.5)	9. Experimentation	5(17.2)	24(82.8)	9. Popllution	18(62.1)	11(37.9)
10. Water	27(93.1)	2(6.9)	10. Puzzle	22(75.9)	7(24.1)	10. Deforestation	28(96.6)	1(3.4)
11. Animals	25(86.2)	4(13.8)	11. Folktale	22(75.9)	7(24.1)	11. Corruption	12(41.4)	17(58.6)
12. Crops	28(96.6)	1(3.4)	12. Imitating	11(37.9)	18(62.1)	12. Gender issues	19(65.5)	10(34.5)
13. Reproduction	24(82.8)	5(17.2)	13. Demonstrating	7(24.1)	22(75.9)	13. Expectency	8(27.6)	21(72.4)
14. Culture	24(82.8)	5(17.2)	14. Reasoning	5(17.2)	24(82.8)	14. Ignorance	11(37.9)	18(62.1)
15. Transport	9(31)	20(69)	15. Observing	12(41.4)	17(58.6)			
16. Soil	26(89.7)	3(10.3)	16. Creativity	12(41.4)	17(58.6)			
17. Symbols	18(6.1)	11(37.9)						
18. Measurements	27(93.1)	2(6.9)						

TABLE 15

Proportions of Items Selected by Educational Professionals from each
Categories of Integrative Threads

No.	Integrative Threads	Item			X ² Value
		Selected	Not selected	T	
1.	Themes	15(83.3)	3(16.7)	18(100)	4.854* (3.147)**
2.	Activities	8(50)	8(50)	16(100)	
3.	Social problems	6(42.9)	8(57.1)	14(100)	
	Total	29(60.4)	19(39.6)	48	

* Not significant at 0.05 level.

** X² value obtained through the application of Yate's correction for continuity.

Table 15 shows that the total number of items selected by the majority of the respondents is 29 out of 48 (60.4%). These are 14 themes, 8 activities and 6 social problems. The proportions of these items with respect to the number of items in their categories are 0.833, 0.5 and 0.429 respectively. This implies that the ratio of the selected items is highest in the themes and lowest in social problems.

The chi-square calculated, however, indicates that the difference of the proportions is insignificant (X^2 obtained = 4.864 < X^2 critical = 5.99). Thus, the inclination towards the themes was a matter of chance.

In case of the selection of a principle of integration, the responses were as shown in Table 16.

TABLE 16

Educational Professionals' Choice of an Integration Approach

No.	Integration Approach	No. of Respondents		X ² Value
		N	%	
1.	Thematic	5	17.2	4.192*
2.	Activity	10	34.5	
3.	Social problem based	14	48.3	
	Total	29	100.0	

* insignificant at 0.05 level.

As shown in Table 16 most of the respondents (48.3%) selected the social problems approach. Very few number of subjects (17.2%) were in favour of the thematic one; and the rest chose the activity curriculum. What about the significance of the difference of the frequencies? The chi-square employed has shown that it is insignificant at 0.05 level. Because the calculated value (4.192) is less than the critical value (5.99) which implies that the difference in the magnitude of frequencies is a matter of chance rather than as a result of a difference in the needs of the respondents. Thus, the data hardly can help to identify the integration approach selected by the educational professionals.

Sex Difference in the Selection of an Integration Approach

In terms of sex, the 29 educational professionals were 19 males and 10 females. And, except for one item in the social problems category (i.e. law and order) what has been said for the whole group is true for the sex groups (see Appendix H). The item "law and order", however, was selected by a total of seven (24.1%) respondents, one male and six females (one out of the 19 males but six out of the ten females). Thus, it is less accepted among males than among females.

But, does such very limited difference in selection of integrative elements persist in the need of an integration principle?

TABLE 17

Educational Professionals' Needs in the Integration Approaches, in terms of Sex

No.	Integration Approach	Respondents			X ² Value
		M	F	T	
1.	Thematic	3	2	5	0.391* (0.07)**
2.	Activity	6	4	10	
3.	Social problem	10	4	14	
	Total	19	10	29	

* insignificant at 0.05 level.

** X² value obtained through the application of Yate's correction for continuity.

The data in Table 17 show that the ratios of the frequencies of male and female respondents in thematic, activity and social problem curricula are 3:6:10 and 2:4:4 (1:2:2) respectively. Thus, the thematic approach received the least

number of votes in its favour from both sexes. But supporting responses of both sexes for social problem based curriculum integration are not exceeded by that of other approaches. The chi-square obtained (0.37), too, indicates that the difference between the choices of the sexes is insignificant at 0.05 level.

Thus the choice of an integration approach is not a function of sex, in this study. The explanations that can follow the result are:

- the population from which the subjects were selected is composed of males and females with similar educational needs; and
- the approaches of integration are not sex based.

Educational Background and the Integration Approaches

As it is presented in Table 18 the educational professionals were composed of T.T.I., diploma, degree and MA/MSc. graduates. The first two groups were teachers (18 in number) and directors (two in number) respectively. Whereas the others are educational officials at regional level (four degree and five masters(one female)). Thus, the difference in educational qualification is associated with a difference in responsibility: the teachers are the curriculum implementers and the officials are planners and implementation inspectors.

Anyway, the only difference observed between the views of the teachers and educational officials is on the item "problem-solving". (see Appendix I). The respondents who chose the item are 8(40%) teachers and 8(88.9%) officials. Thus,

it is more accepted by the officials than by the teachers, may be that the teachers (a) are less aware of the significance of problem-solving technique in learning; (b) perceive it as time consuming activity; (c) view it in relation to the actual class sizes and their weekly loads which can affect the utilization of the technique.

TABLE 18

Responses of Educational Professionals in the Integration Approaches, by Educational Status

No.	Integration Approach	Respondents			X ² Value
		12+TTI and Diploma	12+4 and MA/MSc.	T	
1.	Thematic	4(20)	1 (11.1)	5	8.564* (8.044)**
2.	Activity	3(15)	7 (77.8)	10	
3.	Social problem	13(65)	1 (11.1)	14	
	Total	20(100.0)	9(100.0)	29	

* Significant at 0.05 level.

** a result of X² obtained through the application of Yate's correction

Furthermore, Table 18 shows that seven of the nine degree and MA/MSc. graduates are after the activity curriculum; but 13 of the 20 teachers and directors are favouring the social problem curriculum organization. And the chi-square calculated (8.564) exceeds the critical value (5.99, for $p < 0.05$), which shows a significant difference. That means, teachers viewed education as an instrument of social progress; but officials viewed it as an instrument of activity development.

The first group focused on the outcome of education whereas the second group gave priority to the nature of learning and the learner.

b) Views of the Regional Representatives of the Bureaus of Agriculture and Health in Curriculum Integration Approaches

Like in the cases of students, parents and educational professionals, the agricultural and health experts were provided with items selected from themes, activities and social problems followed by a direct question on the integration approaches.

Table 19 reveals that the agricultural expert was provided with nine themes, ten activities and eight social problems from which selection was to be made. Responses show that:

- a) the themes plants, animals, water, soil, crops and weather are selected whereas reproduction, environment and culture are not.
- b) the activities gardening, sewing, tool handling, demonstrating and problem solving are accepted, but writing, reading arithmetic, experimenting and folktale are rejected; and
- c) the social problems food production, religion & work, deforestation and ignorance are supported to be included in the curriculum, but not family planning, immigration, pollution and Gender issues.

TABLE 19
Responses of the Agricultural Expert in Selecting Integrative Threads

Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents	
	Agree	Disagree		Agree	Disagree		Agree	Disagree
a. Themes			b. Activities			c. Social problems		
1. Plants	√		1. Gardening	√		1. Food production	√	
2. Animals	√		2. Sewing	√		2. Family planning		√
3. Water	√		3. Writing		√	3. Religion and work	√	
4. Soil	√		4. Reading		√	4. Immigration		√
5. Crops	√		5. Tool handling	√		5. Pollution		√
6. Reproduction		√	6. Demonstrating	√		6. Deforestation	√	
7. Environment		√	7. Arithmetic computation		√	7. Gender issues		√
8. Weather	√		8. Experimentation		√	8. Ignorance	√	
9. Culture		√	9. Problem solving	√				
			10. Folktale		√			

Thus, the responses are in favour of agricultural related items. Even demonstrating and problem-solving have relevance to the duties of an agricultural expert. In case of demonstration experts are expected to show how something should be done and is done by others; in problem solving the effort of the country is to develop self-supporting activities in the society based on agricultural development which is part of problem-solving activity.

The other items are the social problem ones. Food production implies an improvement of the means of subsistence; religion and work refers to the number of work days in a week (as accepted by the society); deforestation is to avoid destruction of plants; and ignorance means resistance to accept new ideas and practices which should be avoided. Thus, all are aspects that are likely to be faced while working with the society (especially with peasants). Whereas family planning, immigration, pollution and Gender issues have indirect relation to the duties of the agricultural professional and were not given priority.

Anyway, is there a tendency towards either of the approaches of integration? The ratios of the items selected from each category are 0.667 for themes, and 0.5 for activities and social problems. That is, the number of items selected from the themes exceeds the other two (see Table 20).

TABLE 20

Proportions of Items Selected by the Agricultural Expert

from each Categories of Integrative Threads

No.	Integrative Threads	Items			X ² Value
		Selected	Rejected	T	
1.	Themes	6(66.7)	3(33.3)	9(100)	0.067* (0.121)**
2.	Activities	5(50)	5(50)	10(100)	
3.	Social problems	4(50)	4(50)	8(100)	
	Total	15(55.5)	12(44.4)	27(100)	

* insignificant at 0.05 level.

** X² value obtained through the application of Yate's correction for continuity.

The chi-square shows that the difference in the proportions of items selected from each category is not significant (X^2 value obtained = 0.67 < X^2 value tabulated = 5.99). That means the difference is a matter of chance. However, the agricultural expert chose the social problems approach to be the principle of curriculum integration in Tigray - learning should be to bring necessary changes in the living conditions of the society.

TABLE 21
Responses of the Public Health Expert in Selecting Integrative Threads

Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents	
	Agree	Disagree		Agree	Disagree		Agree	Disagree
a. Themes			b. Activities			c. Social problems		
1. Water	√		1. Feeding	√		1. Disease	√	
2. Environmental awareness		√	2. Clothing		√	2. Family planning	√	
3. Weather		√	3. Writing	√		3. Pollution		√
4. Culture		√	4. Reading	√		4. Ignorance	√	
5. Reproductive organs	√		5. Arithmetic	√		5. Gender issues	√	
6. Nutrition	√		6. Reasoning		√	6. Personnel and environmental hygiene	√	
7. Parts of human body	√		7. Experimenting		√	7. Traditional beliefs and practices		√
8. Measurements		√	8. Recording		√			
			9. Problem solving	√				
			10. Folktale		√			

The other respondent was the expert of the health sector of the region under discussion. Table 21 shows that:

- a) water, reproductive organs, nutrition and parts of human body are the themes chosen, unlike the case in environmental awareness, weather, culture and measurements. Thus, the response seems influenced by the area of responsibility of the respondent. Because the first group of items are more related to health activities than the others.
- b) In case of the activities, the three R's (reading, writing and arithmetic) plus feeding and problem-solving are chosen, but not clothing, reasoning, experimenting, recording and folktales; and
- c) all the social problems asked are accepted, except two-pollution, and traditional beliefs and practices. These are disease, family planning, ignorance, gender issues, and personal and environmental hygiene. The first two and the last one are directly the issues of medical aspects; and ignorance and gender issues are conditions which are likely to affect the realization of the required changes in the society because of the need to preserve cultural beliefs.

The ratios of the selected items to the number of items in the respective categories are 0.5 for activities and themes, but 0.714 for social problems (Table 22).

TABLE 22

Proportions of Selected Items by the Health Expert from the Categories of the Integrative threads

No.	Integrative Threads	Items			X ² Value
		Selected	Rejected	T	
1.	Themes	4	4	8	0.973*
2.	Activities	5	5	10	(0.389)**
3.	Social problems	5	2	7	
	Total	14	11	25	

* insignificant at 0.05 level.

** X² value obtained by applying Yate's correction for continuity.

The chi-square calculated in the number of themes, activities and social problems selected reveals insignificant difference, which shows no indication as to which philosophy of integration should be implemented (Table 22). In a direct response to the approaches of integration, however, the health expert supported the social problems approach.

Such choice of an approach, in part of both the agricultural and health experts, can be associated to the existing conditions of the country in general: disease and shortage of food are some of the main problems in the country which are the target issues of these ministries.

4.2.3 Pressure Groups and Their Ideas in the Integration Approaches

The respondents included in this study were the regional representatives of the teachers' and women's associations. Since the data collecting instruments given to each of these were not the same, however, their responses are presented separately.

The data in Table 23 presented the teachers' association representative responses. Though the reaction doesn't show any pattern, it is clear that 14 themes (out of 18), 15 activities (out of 16) and 4 social problems (out of 14) were given positive responses. That is, all activities listed received positive responses except fact-finding. In case of themes man, communication, weather and crops were outside the interest of the respondent unlike the others in the list.

TABLE 23
Responses of the Teachers' Association Representative in Selecting Integrative Threads

Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents	
	Agree	Disagree					Agree	Disagree
a. Themes			b. Activities			c. Social problems		
1. School	√		1. Planning	√		1. Disease	√	
2. Nutrition	√		2. Fact-finding		√	2. Poverty/hunger		√
3. Man		√	3. Exploring	√		3. Family planning	√	
4. Garden	√		4. Writing	√		4. Religion and work		√
5. Environemnt	√		5. Reading	√		5. War and peace		√
6. Communication		√	6. Arithmetic	√		6. Immigration		√
7. Life	√		7. Problem-solving	√		7. Law and order	√	
8. Weather		√	8. Games	√		8. Vandalism		√
9. Home	√		9. Experimentation	√		9. Popllution		√
10. Water	√		10. Puzzle	√		10. Deforestation	√	
11. Animals	√		11. Folktale	√		11. Corruption		√
12. Crops		√	12. Imitating	√		12. Gender issues		√
13. Reproduction	√		13. Demonstrating	√		13. Expectency		√
14. Culture	√		14. Reasoning	√		14. Ignorance		√
15. Transport	√		15. Observing	√				
16. Soil	√		16. Creativity	√				
17. Symbols	√							
18. Measurements	√							

The last category of items is that of social problems out of which disease, family planning, law and order, and deforestation are accepted. Thus, the distribution of the responses is in favour of the activity curriculum.

TABLE 24

Proportions of Items Selected by the Representative of the
Regional Teachers' Association

No.	Integrative Threads	Items			X ² Value
		Selected	Rejected	T	
1.	Themes	14(77.8)	4(22.2)	18(100)	15.712*
2.	Activities	15(93.8)	1(6.25)	16(100)	
3.	Social problems	4(28.6)	10(71.4)	14(100)	
	Total	33(68.75)	15(31.25)	48(100)	

* Significant at 0.05 level, and even at 0.01 level.

Table 24 shows that the difference of the proportions of items selected from themes (0.778), activities (0.938) and social problems (0.286) is significant at 0.05 level. This means, the highest number of items selected from the activities was not as a matter of chance but deliberate. It reflects the belief of the respondent that emphasis should be given to the development of skills.

Furthermore, the respondent strengthens his idea by supporting the activity approach to be used in integrating the curriculum under discussion; i.e., not only he favoured activities from the list but also accepted the general philosophical thought of child study perspective.

The reasons may be:

- a. the need to develop skills rather than mere concepts;
- b. to facilitate the self actualization of the learner;
- c. to apply the principle of "learning by doing" etc.

The representative of the regional women's associations, on the other hand, was in favour of the:

- a) themes school, water, animals, plants, home and human reproduction, but not communication, environment and crops;
- b) activities like the 3 R's, handicraft, planning, problem-solving and folktale, but not home management, feeding, recording, experimenting ; and
- c) Social problems disease, gender issues, family planning and food production improvements; but not ignorance, law and order, education and immigration (see Table 25)

The pattern of the selection from each category hardly reveals a specified criteria.

TABLE 25

Responses of the Representative of the Regional Women's Association

Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents		Integrative Elements	No. of Respondents	
	Agree	Disagree					Agree	Disagree
a. Themes			b. Activities			c. Social problems		
1. School	✓		1. Writing	✓		1. Diseases	✓	
2. Communication		✓	2. Reading	✓		2. Gender issues	✓	
3. Water	✓		3. Arithmetic	✓		3. Ignorance		✓
4. Animals	✓		4. Handicraft	✓		4. Law and order		✓
5. Plants	✓		5. Planning	✓		5. Family planning	✓	
6. Home	✓		6. Home management		✓	6. Education		✓
7. Environment		✓	7. Feeding		✓	7. Food production improvement	✓	
8. Crops		✓	8. Recording		✓	8. Immigration		✓
9. Human reproduction	✓		9. Experimenting		✓			
			10. Problem solving	✓				
			11. Folktale	✓				

TABLE 26

Proportion of Selected Items by the Regional Women's Association Representative

No.	Integrative Threads	Items			X ² Value
		Selected	Rejected	T	
1.	Themes	6(66.7)	3(33.3)	9(100)	0.576* (0.1)**
2.	Activities	7(63.6)	4(36.4)	11(100)	
3.	Social problems	4(50)	4(50)	8(100)	
	Total	17(60.7)	11(39.3)	28(100)	

* insignificant at 0.05 level.

**X² value after the application of Yate's correction.

Table 26 indicates that there were 9 themes, 11 activities and 8 social problem items in the instrument of data collection. Out of these only six themes 6(66.7%), seven activities (63.6%) and four social problems (50%) were selected. Does this indicate a focus on the thematic approach to curriculum?

The chi-square value calculated reveals that the difference of sample items selected from each category is insignificant which means the number of items favoured does not indicate a philosophical position in curriculum integration approach. The reaction to the last item, which requires a response to either of the integration approaches, however, indicates that the social problem based was preferred.

In summary, the responses of the members of the society in selecting an integration approach show the following result.

TABLE 27

Responses of Members of the Society in Selecting an Integration Approach
(Summary Table)

No.	Integration Approach	No. of Respondents		X ² Value
		No.	%	
1.	Thematic	13	17.8	13.197*
2.	Activity	22	30.1	
3.	Social problem based	38	52.1	
	Total	73	100	

* Significant at 0.05 level.

Table 27 shows that 13 (17.8%) of the members of the society (parents, professionals and pressure groups) have selected the thematic, 22(30.1%) the activity and 38 (52.1%) the social problems approach to curriculum integration. That means, the responses are infavour of the social problems curriculum. Besides, the chi-square obtained (13.197) is greater than the critical value (5.99). Thus, the data in Table 27 are showing a preference of statistically significant number of respondents to the social problems approach to integration.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The focus of this study is to determine the type of curriculum integration needed in the first cycle primary schools of Tigray. Accordingly, the following basic questions were raised to be answered;

1. What type of curriculum integration (thematic, activity based or social problem based) should be used in the first cycle primary schools of Tigray according to the needs of the
 - a) students?
 - b) society (parents, educational and non-educational professionals, and pressure groups)?
2. Is there a significant difference in the choice of an integration approach as a result of:
 - a) cognitive development stages of students?
 - b) sex variations of students, parents and educational professionals?
 - c) differences in educational background of students, parents and educational professionals?
 - d) urban and rural dwelling differences in students and parents?

To this effect 120 students (40 from each grades 2 through 4), 20 parents and 20 teachers were selected randomly, from four schools (two from urban and two from rural areas) obtained in the same manner. Whereas educational officials (9 in number),

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eight social representatives of the education committee of the school, and the regional representatives of the bureaus of agriculture, health, women's association and teachers' association were included deliberately. That is, the total number of subjects was 193.

The data gathering instruments were interview for the parents and opinionnaires for the other respondents. Both instruments included sample items derived from themes, activities and social problems with a summarizing question seeking a choice of either of the approaches (thematic, activity based and social problem based) to curriculum integration.

The responses collected were interpreted using percentages and the chi-square which showed the following principal findings:

1. The proportion of sample themes selected (77.8%) by the majority of the student respondents exceeds, though statistically insignificant, that of the activities (56.3%) and social problems (42.9%) (table 2) . But, in terms of philosophical approach, the social problem based was supported by significantly large number of students (42.5%) (Table 3).
2. Statistically insignificant difference in selecting sample themes, activities and social problems was reflected among the parents (Table 9). Considerable number of them (52.5%), however, have chosen the social problems approach (Table 10).

3. In case of the educational professionals (teachers and officials), the percentage of selected sample items is in favour of the themes (83.3%). The approach of integration supported by the majority (48.3%) is, however, the social problem based one. In both cases the chi-square shows insignificant difference among the frequencies which means inclinations observed were largely due to chance.
4. The responses of the regional agricultural expert show that 66.7% of the themes, and 50% of the activities and social problem sample items were selected. But the difference of these percentages is found to be insignificant (Table 20). Besides, the philosophy of integration supported was the social problem approach.
5. The regional health expert has supported 50% of the sample themes and activities, and 71.4% of the social problem items (Table 22). And, though the difference in the percentages of the selected sample items is statistically insignificant, the view in the integration approaches was after the social problem one.
6. The regional representative of the teachers' association has chosen 77.8%, 93.8% and 28.6% of the sample themes, activities and social problems respectively. The chi-square value indicates that the difference is significant at 0.05 level (Table 24) which shows a leaning to the activities curriculum. This was assured too by selecting the activity approach to curriculum integration.

7. In a statistically insignificant level the regional representative of the women's association has selected more sample themes (66.7%) than the others (Table 26). However, the thought in terms of philosophical approach is found to be the social problem based one.
8. The cognitive development stages of students seems less influential to the need of curriculum integration approach (Table 4).
9. The responses obtained from students, parents and educational professionals seems hardly affected by sex differences.
10. The needs of students and parents in curriculum integration approach were not functions of urban-rural dwelling.
11. Educational background seems less influential to the responses of students and parents. But there is a statistically significant difference associated with educational background among the educational professionals, in which majority of the 12+ TTI and diploma (65%) have selected the social problems approach and the B.A./B.Sc. and M.A./M.Sc. (1977.8%) were after the activity curriculum.
12. Like the students (Table 3), statistically significant number of members of the society have supported the social problems approach to integration (Table 27).

5.2 Conclusion

From the results obtained the following generalization can be drawn.

1. Most of the respondents agree on the social problems approach to curriculum integration. Thus:

- a) Education is viewed as an instrument of social change rather than a means to develop activities and understand scientific concepts. The child should confront many severe problems prevailing in his society to propose practical solutions. The main intent is not what will happen on the part of the learner but in what he can do to the society.
 - b) Curricular contents are need to be the existing social problems, not scientific concepts. As indicated by the founders of the perspective (social reconstructionists), therefore, learning contents must "(a) be real, (b) require action and (c) teach values" (McNeil, 1990: 32-33). That is, students learn through involvement in the existing social conditions.
 - c) There is a need to develop problem-solving skill upon the learner for he/she is to deal with and give solutions to real life problems, i.e. the student is not to be provided with predetermined solutions to problems but the opportunity to findout the solutions.
 - d) Single universally accepted solutions to problems should be avoided and objective treatment of local conditions in terms of the norms of the society should be facilitated. Solutions to problems are to originate from within the society, not from without.
 - e) a student is expected to take his/her stand on controversial issues, not to accept what others do, say and believe.
2. The subjects have selected items from the sample themes and activities while advocating social problems approach for:
- a) they assume that these are prerequisite aspects to give solutions to social problems; and/or

- b) they believe that the selected themes and activities can be dealt with while discussing on social problems.

That is, take the activity "writing" and the social problem "disease". The students of Grade 1 to 4 may be expected to develop the skill of writing in order to learn by listing the types of diseases prevailing in a given society; or the topic "disease" may be discussed and used to develop the writing skills of the students.

5.3 Recommendations

In the light of the results of this study and their implications, it appears fair to forward the following suggestions:

1. Curriculum planners should identify the problems of the society in detail before developing the integral curriculum for the first cycle primary schools of Tigray. Thus, parents, students, professionals, governmental agencies and NGOs should participate to identify the priority areas of the region that can be included in the curriculum under discussion.
2. NGOs (Non-governmental organizations) dealing with sustenance activities in the region should integrate the target schools to their programmes for, according to the social problems perspective, schools are human laboratories to (a) develop the sense of self-reliance, and (b) generate indigenous strategies to solve local problems.

3. Social problem curriculum integration is new to the region in particular and Ethiopia in general. Besides, teachers are expected to relate the curriculum to the child's environment. Hence, the regional bureau of education and other concerned NGOs should prepare workshops to acquaint the first cycle primary school teachers with the skills of identifying, analysing and providing solutions to local problems in order to guide the students' learning activities properly.
4. It is clear that the effectiveness of teachers is largely a function of the training they receive. Thus, to create a correspondence between the training programmes and the primary school curriculum, the curriculum of the would be teacher should correspond that of the primary level curriculum intent.
5. Finally, educational needs vary from society to society depending on the prevailing conditions in the environment. Hence, interested researchers (particularly curriculum planners) can deal with the issue to investigate the local needs in other regions to make the curriculum responsive to local and regional intents.

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Appendix A

Responses of Students, by Age

Integrative elements	No. of Respondents			
	7-11 Yrs of age (N= 82)		>11 (12-16) Yrs (N=38)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. School	79 (96.3)	3 (3.7)	34 (89.5)	4 (10.5)
2. Nutrition	73 (89)	9 (11)	34 (89.5)	4 (10.5)
3. Man	4 (4.9)	78 (95.1)	2 (5.3)	36 (94.7)
4. Garden	61 (74.4)	21 (25.6)	31 (81.6)	7 (18.4)
5. Environment	36 (43.9)	46 (56.1)	14 (36.8)	24 (63.2)
6. Communication	56 (68.3)	26 (31.7)	28 (73.7)	10 (26.3)
7. Life	6 (7.3)	76 (92.7)	7 (18.4)	31 (81.6)
8. Weather	65 (79.3)	17 (20.7)	28 (73.7)	10 (26.3)
9. Home	62 (75.6)	20 (24.4)	30 (78.9)	8 (21.1)
10. Water	74 (90.2)	8 (9.8)	27 (71.1)	11 (28.9)
11. Animals	67 (81.7)	15 (18.3)	29 (76.3)	9 (23.7)
12. Crops	72 (87.8)	10 (12.2)	31 (81.6)	7 (18.4)
13. Reproduction	63 (76.8)	19 (23.2)	22 (57.9)	16 (42.1)
14. Culture	76 (92.7)	6 (7.3)	35 (92.1)	3 (7.9)
15. Transport	67 (81.7)	15 (18.3)	30 (78.9)	8 (21.1)
16. Soil	68 (82.9)	14 (17.1)	32 (84.2)	6 (15.8)
17. Symbols	30 (36.6)	52 (63.4)	13 (34.2)	25 (65.8)
18. Measurements	64 (78)	18 (22)	26 (68.4)	12 (31.6)
b. Activities				
1. Planning	70 (85.4)	12 (14.6)	30 (78.9)	8 (21.1)
2. Fact-finding	19 (23.2)	63 (76.8)	11 (28.9)	27 (71.1)
3. Exploring	12 (14.6)	70 (85.4)	15 (39.5)	23 (60.5)
4. Writing	75 (91.5)	7 (8.5)	33 (86.8)	5 (13.2)
5. Reading	73 (89)	9 (11)	34 (89.5)	4 (10.5)
6. Arithmetic Computation	57 (69.5)	25 (30.5)	23 (60.5)	15 (39.5)
7. Problem - Solving	40 (48.8)	42 (51.2)	19 (50)	19 (50)
8. Games	66 (80.5)	16 (19.5)	24 (63.2)	14 (36.8)
9. Experimentation	72 (87.8)	10 (12.2)	30 (78.9)	8 (21.1)
10. Puzzle	68 (82.9)	14 (17.1)	25 (65.8)	13 (34.2)

Appendix A (Cont'd)

Integrative elements	No. of Respondents			
	7-11 Yrs of age (N= 82)		>11 (12-16) Yrs (N=38)	
	Agree	Disagree	Agree	Disagree
11. Folktale	65 (79.3)	17 (20.7)	31 (81.6)	7 (18.4)
12. Imitating	9 (11.0)	73 (89.0)	13 (34.2)	25 (65.8)
13. Demonstrating	8 (9.8)	74 (90.2)	5 (13.2)	33 (86.8)
14. Reasoning	51 (62.2)	31 (37.8)	25 (65.8)	13 (34.2)
15. Observing	14 (17.1)	68 (82.9)	3 (7.9)	35 (92.1)
16. Creativity	10 (12.2)	72 (87.8)	8 (21.1)	30 (78.9)
C. <u>Social problems</u>				
1. Disease	47 (57.3)	35 (42.7)	22 (57.9)	16 (42.1)
2. Poverty / hunger	51 (62.2)	31 (37.8)	24 (63.2)	14 (36.8)
3. Family Planning	65 (79.3)	17 (20.7)	34 (89.5)	4 (10.5)
4. Religion & work	69 (84.1)	13 (15.9)	26 (68.4)	12 (31.6)
5. War & Peace	19 (23.2)	63 (76.8)	9 (23.7)	29 (76.3)
6. Immigration	39 (47.6)	43 (52.4)	17 (44.7)	21 (55.3)
7. Law & order	75 (91.5)	7 (8.5)	34 (89.5)	4 (10.5)
8. Vandalism	37 (45.1)	45 (54.9)	10 (26.3)	28 (73.9)
9. Pollution	17 (20.7)	65 (79.3)	9 (23.7)	29 (76.3)
10. Deforestation	38 (46.3)	44 (53.7)	17 (44.7)	21 (55.3)
11. Corruption	26 (31.7)	56 (68.3)	15 (39.5)	23 (60.5)
12. Gender issues	45 (54.9)	37 (45.1)	24 (63.2)	14 (36.8)
13. Expectancy	39 (47.6)	43 (52.4)	17 (44.7)	21 (55.3)
14. Ignorance	25 (30.5)	57 (69.5)	12 (31.6)	26 (68.4)

* figures in parenthesis are percentages.

Appendix B

Students responses, by sex

Integrative elements	No of Respondents			
	Males (N=68)		Females (N=52)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. School	62 (91.2)	6 (8.8)	51 (98.1)	1 (1.9)
2. Nutrition	58 (85.3)	10 (14.7)	49 (94.2)	3 (5.8)
3. Man	3 (4.4)	65 (95.6)	3 (5.8)	49 (94.3)
4. Garden	50 (73.5)	18 (26.5)	42 (80.8)	10 (19.2)
5. Environment	28 (41.2)	40 (58.8)	22 (42.3)	30 (57.7)
6. Communication	49 (72.1)	19 (27.9)	35 (67.3)	17 (32.7)
7 Life	10 (14.7)	58 (85.3)	3 (5.8)	49 (94.3)
8. Weather	52 (76.5)	16 (23.5)	41 (78.8)	11 (21.2)
9. Home	53 (77.9)	15 (22)	39 (78)	13 (25)
10. Water	57 (83.8)	11 (16.2)	44 (84.6)	8 (15.4)
11. Animals	55 (80.9)	13 (19.1)	41 (78.8)	11 (21.2)
12. Crops	56 (82.4)	12 (17.5)	47 (90.4)	5 (9.6)
13. Reproduction	45 (66.2)	23 (33.8)	40 (76.9)	12 (23.1)
14. Culture	65 (95.6)	3 (4.4)	46 (88.5)	6 (11.5)
15. Transport	57 (83.8)	11 (16.2)	40 (76.9)	12 (23.1)
16. Soil	57 (83.8)	11 (16.2)	43 (82.7)	9 (17.3)
17. Symbols	13 (19.1)	55 (80.9)	30 (57.7)	22 (42.3)
18. Measurements	55 (80.9)	13 (19.1)	35 (67.3)	17 (32.7)
b. Activities				
1. Planning	57 (83.8)	11 (16.2)	43 (82.7)	9 (17.3)
2. Fact-finding	19 (28.0)	49 (72)	11 (21.4)	41 (78.8)
3. Exploring	15 (22.1)	53 (77.9)	12 (23.1)	40 (76.9)
4. Writing	60 (88.2)	8 (11.8)	48 (92.3)	4 (7.7)
5. Reading	60 (88.2)	8 (11.8)	47 (90.4)	5 (9.6)
6. Arithmetic Computation	50 (73.5)	18 (26.5)	30 (57.7)	22 (42.3)
7. Problem - Solving	37 (54.4)	31 (45.6)	22 (42.3)	30 (57.7)
8. Games	52 (76.5)	16 (23.5)	38 (73.1)	14 (26.9)
9. Experimentation	58 (85.3)	10 (14.7)	44 (84.6)	8 (15.4)
10. Puzzle	53 (77.9)	15 (22.1)	40 (76.9)	12 (23.1)

Appendix B (Cont'd)

Integrative elements	No of Respondents			
	Males (N = 68)		Females (N=52)	
	Agree	Disagree	Agree	Disagree
11. Folktale	55 (80.9)	13 (19.1)	41 (78.8)	11 (21.2)
12. Imitating	9 (13.2)	59 (86.8)	13 (25)	39 (75)
13. Demonstrating	7 (10.3)	61 (89.7)	6 (11.5)	46 (88.5)
14. Reasoning	42 (61.8)	26 (38.2)	34 (65.4)	18 (34.6)
15. Observing	11 (16.2)	57 (83.8)	6 (11.5)	46 (88.5)
16. Creativity	9 (13.2)	59 (86.8)	4 (7.7)	48 (92.3)
C. Social problems				
1. Disease	37 (54.4)	31 (45.6)	32 (61.5)	20 (38.5)
2. Poverty / hunger	46 (67.6)	22 (32.4)	29 (55.8)	23 (44.2)
3. Family Planning	53 (78.0)	15 (22)	46 (88.5)	6 (11.5)
4. Religion & work	53 (78.0)	15 (22)	42 (80.8)	10 (19.2)
5. War & Peace	17 (25)	51 (75)	11 (21.2)	41 (78.8)
6. Immigration	32 (47.1)	36 (52.9)	24 (46.1)	28 (53.9)
7. Law & order	61 (89.7)	7 (10.3)	48 (92.3)	4 (7.7)
8. Vandalism	28 (41.2)	41 (58.8)	19 (36.5)	33 (63.5)
9. Pollution	16 (23.5)	51 (76.5)	10 (19.2)	42 (80.8)
10. Deforestation	33 (48.5)	35 (51.5)	22 (42.3)	30 (57.7)
11. Corruption	24 (35.3)	44 (64.7)	17 (32.7)	35 (67.3)
12. Gender issues	36 (53)	32 (47)	33 (63.5)	19 (36.5)
13. Expectancy	32 (47.1)	36 (52.9)	22 (42.3)	30 (57.7)
14. Ignorance	25 (36.8)	43 (63.2)	12 (23.1)	40 (76.9)

Appendix C

Students' responses, by Grade Level

Integrative elements	Number of Respondents					
	Grade 4 (N=40)		Grade 3 (N=40)		Grade 2 (N=40)	
	Agree	Disagree	Agree	Disagree	Agree	Disagree
a. Themes						
1. School	38 (95)	2 (5)	39(97.5)	1 (2.5)	36 (90)	4 (10)
2. Nutrition	34 (85)	6 (15)	38 (95)	2 (5)	35(87.5)	5 (12.5)
3. Man	2 (5)	38 (95)	2 (5)	38 (95)	2 (5)	38 (95)
4. Garden	34 (85)	6 (15)	30 (75)	10 (25)	28 (70)	12 (30)
5. Environment	17(42.5)	23(57.5)	18(45)	22(55)	15(37.5)	25(62.5)
6. Communication	24(60)	16(40)	28(70)	12(30)	32(80)	8(20)
7 Life	3(7.5)	37(92.5)	5(12.5)	35(87.5)	5(12.5)	35(87.5)
8. Weather	30(75)	10(25)	32(80)	8 (20)	31(77.5)	9(22.5)
9. Home	29(72.5)	11(27.5)	31(77.5)	9(22.5)	32(80)	8 (20)
10. Water	34(85)	6(15)	35(87.5)	5(12.5)	32(80)	8(20)
11. Animals	30(75)	10(25)	35(87.5)	5(12.5)	31(77.5)	9(22.5)
12. Crops	35(87.5)	5(12.5)	33(82.5)	7 (17.5)	35(87.5)	5(12.5)
13. Reproduction	23(57.5)	17(42.5)	31(77.5)	9(22.5)	31(77.5)	9(22.5)
14. Culture	34(85)	6(15)	38(95)	2 (5)	39(97.5)	1(2.5)
15. Transport	28(70)	12(30)	34(85)	6(15)	35(87.5)	5(12.5)
16. Soil	33(82.5)	7(17.5)	33(82.5)	7(17.5)	34(85)	6(15)
17. Symbols	14(35)	26(65)	18(45)	22(55)	11(27.5)	29(72.5)
18. Measurements	32(80)	8(20)	28(70)	12(30)	30(75)	10(25)
b. Activities						
1. Planning	30(75)	10(25)	34(85)	6(15)	36(90)	4(10)
2. Fact-finding	14(35)	26(65)	9(22.5)	31(77.5)	7(17.5)	33(82.5)
3. Exploring	6(15)	34(77.5)	10(25)	30(75)	11(27.5)	31(77.5)
4. Writing	34(85)	6(15)	36(90)	4(10)	38(95)	2(5)
5. Reading	36(90)	4(10)	35(87.5)	5(12.5)	36(90)	4 (10)
6. Arithmetic Comp...	24(60)	16(40)	29(72.5)	11(27.5)	27(67.5)	13(32.5)
7. Problem - Solving	24(60)	16(40)	22(55)	18(45)	13(32.5)	27(67.5)
8. Games	29(72.5)	11(27.5)	31(77.5)	9(22.5)	30(75)	10(25)
9. Experimentation	32(80)	8 (20)	35(87.5)	5(12.5)	35(87.5)	5(12.5)
10. Puzzle	30(75)	10(25)	32(80)	8(20)	31(77.5)	9(22.5)

Appendix C (Cont'd)

Integrative elements	Number of Respondents					
	Grade 4 (N=40)		Grade 3 (N=40)		Grade 2 (N=40)	
	Agree	Disagree	Agree	Disagree	Agree	Disagree
11. Folk tale	27(67.5)	13(32.5)	35(87.5)	5(12.5)	34(85)	6(15)
12. Imitating	8(20)	32(80)	8(20)	32(80)	6(15)	34(85)
13. Demonstrating	7(17.5)	33(82.5)	4(10)	36(90)	2(5)	38(95)
14. Reasoning	24(60)	16(40)	27(67.5)	13(32.5)	25(62.5)	15(37.5)
15. Observing	8(20)	32(80)	3(7.5)	37(92.5)	6(15)	34(85)
16. Creativity	4(10)	36(90)	5(12.5)	35(87.5)	9(22.5)	31(77.5)
C. Social problems						
1. Disease	26(65)	14(35)	27(67.5)	13(32.5)	16(40)	24(60)
2. Poverty / hunger	29(72.5)	11(27.5)	22(55)	18(45)	24(60)	16(40)
3. Family Planning	34(85)	6(15)	30(75)	10(25)	35(87.5)	5(12.5)
4. Religion & work	28(70)	12(30)	34(85)	6(15)	33(82.5)	7(17.5)
5. War & Peace	9(22.5)	31(77.5)	8(20)	32(80)	11(27.5)	29 (72.5)
6. Immigration	27(67.5)	13(32.5)	23(57.5)	17(42.5)	6(15)	34(85)
7. Law & order	35(87.5)	5(12.5)	37(92.5)	3(7.5)	37(92.5)	3(7.5)
8. Vandalism	15(37.5)	25(62.5)	17(42.5)	23(57.5)	15(37.5)	25(62.5)
9. Pollution	7(17.5)	33(82.5)	4(10)	36(90)	15(37.5)	25(62.5)
10. Deforestation	25(62.5)	15(37.5)	17(42.5)	23(57.5)	13(32.5)	27(67.5)
11. Corruption	11(27.5)	29(72.5)	16(40)	24(60)	14(35)	26(65)
12. Gender issues	21(52.5)	19(47.5)	25(62.5)	15(37.5)	23(57.5)	17(42.5)
13. Expectancy	22(55)	18(45)	21(52.5)	19(47.5)	13(32.5)	27(67.5)
14. Ignorance	15(37.5)	25(62.5)	9(22.5)	31(77.5)	13(32.5)	27(67.5)

Appendix D

Students responses by domicile

Integrative elements	No of Respondents			
	Urban students (N=60)		Rural students (N=60)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. School	57(95)	3(5)	56(93.3)	4(6.7)
2. Nutrition	53(88.3)	7 (11.7)	54(90)	6(10)
3. Man	3 (5)	57(95)	3(5)	57(95)
4. Garden	47(78.3)	13(21.7)	45(75)	15(25)
5. Environment	27(45)	33(55)	23(38.3)	37(61.7)
6. Communication	41(68.3)	19(31.7)	43(71.7)	17(28.3)
7 Life	6(10)	54(90)	7(11.7)	53(88.3)
8. Weather	45(75)	15(25)	48(80.0)	12(20)
9. Home	50(83.3)	10(16.7)	42(70.0)	18(30)
10. Water	52(86.7)	8(13.3)	49(81.7)	11(18.3)
11. Animals	53(88.3)	7(11.7)	43(71.7)	17(28.3)
12. Crops	55(91.7)	5(8.3)	48(80.0)	12(20)
13. Reproduction	43(71.7)	17(28.3)	42(70.0)	18(30)
14. Culture	55(91.7)	5(8.5)	56(93.3)	4(6.7)
15. Transport	46(76.7)	14(23.3)	51(85.0)	9(15)
16. Soil	46(76.7)	14(23.3)	54(90.0)	6(10)
17. Symbols	25(41.7)	35(58.3)	18(30.0)	42(70.0)
18. Measurements	48(80.0)	12(20)	42(70.0)	18(30.0)
b. Activities				
1. Planning	50 (83.3)	10(16.7)	50(83.3)	10(16.7)
2. Fact-finding	14(23.3)	46(76.7)	16(26.7)	44(73.3)
3. Exploring	17(28.3)	43(71.7)	10(16.7)	50(83.3)
4. Writing	56(93.3)	4 (6.7)	52(86.7)	8 (13.3)
5. Reading	53(88.3)	7(11.7)	54(90.0)	6(10)
6. Arithmetic Computation	43(71.7)	17(28.3)	37(61.7)	23(38.3)
7. Problem - Solving	25(41.7)	35(58.3)	34(56.7)	26(43.3)
8. Games	48(80.0)	12(20)	42(70.0)	18(30)
9. Experimentation	54(90)	6(10)	48(80.0)	12(20)
10. Puzzle	46(76.7)	14(23.3)	47(78.3)	13(21.7)

Appendix D (Cont'd)

Integrative elements	No of Respondents			
	Urban students (N=60)		Rural students (N=60)	
	Agree	Disagree	Agree	Disagree
11. Folktale	50(83.3)	10(16.7)	46(76.7)	14(23.3)
12. Imitating	11(18.3)	49(81.7)	11(18.3)	49(81.7)
13. Demonstrating	6(10)	54(90)	7(11.7)	53(88.3)
14. Reasoning	42(70)	18(30)	34(56.7)	26(43.3)
15. Observing	8(13.3)	52(86.7)	9(15)	51(85)
16. Creativity	10(16.7)	50(83.3)	8(13.3)	52(86.7)
C. Social problems				
1. Disease	31(51.7)	29(48.3)	38(63.3)	22(36.7)
2. Poverty / hunger	41(68.3)	19(31.7)	34(56.7)	26(43.3)
3. Family Planning	52(86.7)	8(13.3)	47(78.3)	13(21.7)
4. Religion & work	51(85)	9(15)	44(73.3)	16(26.7)
5. War & Peace	16(26.7)	44(73.3)	12(20)	48(80)
6. Immigration	28(46.7)	32(53.3)	28(46.7)	32(53.3)
7. Law & order	56(93.3)	4(6.7)	53(88.3)	7(11.7)
8. Vandalism	23(38.3)	37(61.7)	24(40)	36(60)
9. Pollution	19(31.7)	41(68.3)	7(11.7)	53(88.33)
10. Deforestation	29(48.3)	31(51.7)	26(43.3)	34(56.7)
11. Corruption	23(38.3)	37(61.7)	18(30)	47(70)
12. Gender issues	38(63.3)	22(36.7)	31(51.7)	29(48.3)
13. Expectancy	29(48.3)	31(51.7)	27(45)	33(55)
14. Ignorance	17(28.3)	43(71.7)	20(33.3)	40(66.7)

Appendix E

Responses of parents, by sex

Integrative elements	No. of Respondents			
	Male (N=27)		Female (N=13)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. Our environment	10(37)	17(63)	5(38.5)	8(61.5)
2. Economic source	22(81.5)	5(18.5)	10(76.9)	3(23.1)
3. Soil	20(74.1)	7(25.9)	11(84.6)	2(15.4)
4. Seeds	25(92.6)	2(7.4)	12(93.3)	1(7.7)
5. Culture	22(81.5)	5(18.5)	13(100)	-
6. Animals	23(85.2)	4(14.8)	11(84.6)	2(15.4)
7. Measurements	9(33.3)	18(66.7)	2(15.4)	11(84.6)
8. Virtue	18(66.7)	9(33.3)	9(69.2)	4(30.8)
9. Parts of human body	7(25.9)	20(74.1)	7(53.8)	6(46.2)
b. Activities				
1. Arithmetic Computation	16(59.3)	11(40.7)	9(69.2)	4(30.8)
2. Evaluating	11(40.7)	16(59.3)	6(46.2)	7(53.8)
3. Gardening	26(96.3)	1(3.7)	12(92.3)	1(7.7)
4. Demonstrating	20(74.1)	7(25.9)	10(76.9)	3(23.1)
5. Exploring	11(40.7)	16(59.3)	6(46.2)	7(53.8)
6. Observing	11(40.7)	16(59.3)	5(38.5)	8(61.5)
7. Writing	24(88.9)	3(11.1)	13(100)	-
8. Reading	25(92.6)	2(7.4)	12(92.3)	1(7.7)
9. Creativity	7(25.9)	20(74.1)	6(46.2)	7(53.8)
10. Handicraft	19(70.4)	8(29.6)	10(76.9)	3(23.1)
C. Social Problems				
1. Soil and water protection	24(88.9)	3(11.1)	12(93.3)	1(7.7)
2. Deforestation	21(77.8)	6(22.2)	10(76.9)	3(23.1)
3. Disease presentation	26(96.3)	1(3.7)	12(93.3)	1(7.7)
4. War	6(22.2)	21(77.8)	5(38.5)	6(61.5)
5. Food production improvement	26(96.3)	1(3.7)	13(100)	-
6. Gender issues	8(29.6)	19(70.4)	10(76.9)	3(23.1)
7. Traditional belief and practices	22(44.4)	15(55.6)	5(38.5)	8(61.5)
8. Family planning	9(33.3)	28(66.7)	5(38.5)	8(61.5)
9. Ignorance	6(22.2)	21(77.8)	4(30.8)	9(69.2)

Appendix F
Responses of parents, by domicile

Integrative elements	No. of Respondents			
	Urban (N=20)		Rural (N=20)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. Our environment	6(30)	14(70)	9(45)	11(55)
2. Economic source	16(80)	4(20)	16(80)	4(20)
3. Soil	13(65)	7(35)	18(90)	2(10)
4. Seeds	17(85)	3(15)	20(100)	-
5. Culture	18(90)	2(10)	17(85)	3(15)
6. Animals	18(90)	2(10)	16(80)	4(20)
7. Measurements	4(20)	16(80)	7(35)	13(65)
8. Virtue	15(75)	5(25)	12(60)	8(40)
9. Parts of human	8(40)	12(60)	6(30)	14(70)
b. Activities				
1. Arithmetic Computation	14(70)	6(30)	11(55)	9(45)
2. Evaluating	9(45)	11(55)	8(40)	12(60)
3. Gardening	20(100)	-	18(90)	2(10)
4. Demonstrating	15(75)	5(25)	15(75)	5(25)
5. Exploring	8(40)	12(60)	9(45)	11(55)
6. Observing	8(40)	12(60)	8(40)	12(60)
7. Writing	18(90)	2(10)	19(95)	1(5)
8. Reading	19(95)	1(5)	18(90)	2(10)
9. Creativity	7(35)	13(65)	6(30)	14(70)
10. Handicraft	13(65)	7(35)	16(80)	4(20)
C. Social Problems				
1. Soil and water protection	17(85)	3(15)	19(95)	1(5)
2. Deforestation	13(65)	7(35)	18(90)	2(10)
3. Disease presentation	19(95)	1(5)	19(95)	1(5)
4. War	6(30)	14(70)	5(25)	15(75)
5. Food production	19(95)	1(5)	20(100)	-
improvement				
6. Gender issues	13(65)	7(35)	5(25)	15(75)
7. Traditional belief and practice	8(40)	12(60)	9(45)	11(55)
8. Family planning	7(35)	13(65)	7(35)	13(65)
9. Ignorance	6(30)	14(70)	4(20)	16(80)

Appendix G

Responses of parents by Educational background

Integrative elements	No. of Respondents			
	Illiterates (N=28)		Literate (1-6) (N=12)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. Our environment	10(35.7)	18(64.3)	5(41.7)	7(58.3)
2. Economic source	23(82.1)	5(17.9)	9(75)	3(25)
3. Soil	19(67.9)	9(32.1)	9(75)	3(25)
4. Seeds	25(89.3)	3(10.7)	12(100)	-
5. Culture	24(85.7)	4(14.3)	11(91.7)	1(8.3)
6. Animals	24(85.7)	4(14.3)	10(83.3)	2(16.7)
7. Measurements	6(21.4)	22(78.6)	5(41.7)	7(58.3)
8. Virtue	20(71.4)	8(28.6)	7(58.3)	5(41.7)
9. Parts of human	10(35.7)	18(64.3)	4(33.3)	8(66.7)
b. Activities				
1. Arithmetic Computation	17(60.7)	11(39.3)	8(66.7)	4(33.3)
2. Evaluating	13(46.4)	15(53.6)	4(33.3)	8(66.7)
3. Gardening	27(96.4)	1(3.6)	11(91.7)	1(8.3)
4. Demonstrating	20(71.4)	8(28.6)	10(83.3)	2(16.7)
5. Exploring	12(42.9)	16(57.1)	5(41.7)	7(58.3)
6. Observing	13(46.4)	15(53.6)	3(25)	9(75)
7. Writing	25(89.3)	3(10.7)	12(100)	-
8. Reading	27(96.4)	1(3.6)	10(83.3)	2(16.7)
9. Creativity	8(28.6)	20(71.4)	5(41.7)	7(58.3)
10. Handicraft	19(67.9)	9(32.1)	10(83.3)	2(16.7)
C. Social Problems				
1. Soil and water protection	26(92.9)	2(7.1)	10(83.3)	2(16.7)
2. Deforestation	20(71.4)	8(28.6)	11(91.7)	1(8.3)
3. Disease presentation	28(100)	-	10(83.3)	2(16.7)
4. War	8(28.6)	20(71.4)	3(25)	9(75)
5. Food production improvement	27(96.4)	1(3.6)	12(100)	-
6. Gender issues	9(32.1)	19(67.9)	9(75)	3(25)
7. Traditional belief and practice	12(42.9)	16(57.1)	5(41.7)	7(58.3)
8. Family planning	6(21.4)	22(78.6)	8(66.7)	4(33.3)
9. Ignorance	6(21.4)	22(78.6)	4(33.3)	8(66.7)

Appendix H

Responses of Educational professionals, by sex

Integrative elements	Number of Respondents			
	Males (N=19)		Females (N=10)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. School	16(84.2)	3(15.8)	8(80)	2(20)
2. Nutrition	16(84.2)	3(15.8)	9(90)	1(10)
3. Man	7(36.8)	12(63.2)	3(30)	7(70)
4. Garden	17(89.4)	2(10.6)	9(90)	1(10)
5. Environment	18(94.7)	1(5.3)	10(100)	-
6. Communication	10(52.6)	9(47.4)	6(60)	4(40)
7. Life	1(5.3)	18(94.7)	2(20)	8(80)
8. Weather	12(63.2)	7(36.8)	7(70)	3(30)
9. Home	12(63.2)	7(36.8)	7(70)	3(30)
10. Water	18(94.7)	1(5.3)	9(90)	1(10)
11. Animals	18(94.7)	1(5.3)	7(70)	3(30)
12. Crops	18(94.7)	1(5.3)	10(100)	-
13. Reproduction	16(84.2)	3(15.8)	8(80)	2(20)
14. Culture	17(89.5)	2(10.5)	7(70)	3(30)
15. Transport	6(31.6)	13(68.4)	3(30)	7(70)
16. Soil	17(89.5)	2(10.6)	9(90)	1(10)
17. Symbols	12(63.2)	7(36.8)	6(60)	4(40)
18. Measurements	18(94.7)	1(5.3)	9(90)	1(10)
b. Activities				
1. Planning	16(84.2)	3(15.8)	7(70)	3(30)
2. Fact-finding	5(26.3)	14(73.7)	2(20)	8(80)
3. Exploring	6(31.6)	13(68.4)	2(20)	8(80)
4. Writing	18(94.7)	1(5.3)	10(100)	-
5. Reading	17(89.4)	2(10.6)	6(60)	4(40)
6. Arithmetic Computation	18(94.7)	1(5.3)	9(90)	1(10)
7. Problem - Solving	10(52.6)	9(47.4)	6(60)	4(40)
8. Games	17(89.4)	2(10.5)	8(80)	2(20)
9. Experimentation	3(15.8)	16(87.2)	2(20)	8(80)
10. Puzzle	14(73.7)	5(26.3)	8(80)	2(20)

Appendix H (Cont'd)

Integrative elements	Number of Respondents			
	Males (N=19)		Females (N=10)	
	Agree	Disagree	Agree	Disagree
11. Folktale	15(78.9)	4(21.2)	7(70)	3(30)
12. Imitating	7(36.8)	12(63.2)	4(40)	6(60)
13. Demonstrating	5(26.3)	14(73.7)	2(20)	8(80)
14. Reasoning	3(15.8)	16(84.2)	2(20)	8(80)
15. Observing	8(42.1)	11(57.9)	4(40)	6(60)
16. Creating	9(47.4)	10(52.6)	3(30)	7(70)
C. Social problems				
1. Disease	17(89.5)	2(10.5)	8(80)	2(20)
2. Poverty / hunger	7(36.8)	12(63.2)	3(30)	7(70)
3. Family Planning	17(89.5)	2(10.5)	10(100)	-
4. Religion & work	14(73.7)	5(26.3)	7(70)	3(30)
5. War & Peace	5(26.3)	14(73.7)	4(40)	6(60)
6. Immigration	6(31.6)	13(68.4)	3(30)	7(70)
7. Law & order	1(5.3)	18(94.7)	6(60)	4(40)
8. Vandalism	7(36.8)	12(63.2)	2(20)	8(80)
9. Pollution	11(57.9)	8(42.1)	7(70)	3(30)
10. Deforestation	19(100)	-	9(90)	1(10)
11. Corruption	8(42.1)	11(57.9)	4(40)	6(60)
12. Gender bias	11(57.9)	8(42.1)	8(80)	2(20)
13. Expectancy	5(26.3)	14(73.7)	3(30)	7(70)
14. Ignorance	7(36.8)	12(62.2)	4(40)	6(60)

Appendix I

Responses of Educational professionals, by Educational status

Integrative elements	Number of Respondents			
	12+TTI and 2 (N=20)		12+4 and above (N=9)	
	Agree	Disagree	Agree	Disagree
a. Themes				
1. School	16(80)	4(20)	8(88.9)	1(11.1)
2. Nutrition	18(90)	2(10)	7(77.8)	2(22.2)
3. Man	7(35)	13(65)	3(33.3)	6(66.7)
4. Garden	19(95)	1(5)	7(77.8)	2(22.2)
5. Environment	20(100)	-	8(88.8)	1(11.1)
6. Communication	11(55)	9(45)	5(55.6)	4(44.5)
7. Life	2(10)	18(90)	1(11.1)	8(88.9)
8. Weather	11(55)	9(45)	8(88.9)	1(11.1)
9. Home	13(65)	7(35)	6(66.7)	3(33.3)
10. Water	19(95)	1(5)	8(88.9)	1(11.1)
11. Animals	18(90)	2(10)	9(100)	-
12. Crops	20(100)	-	8(88.9)	1(11.1)
13. Reproduction	18(90)	2(10)	6(66.7)	3(33.3)
14. Culture	17(85)	3(15)	7(77.8)	2(22.2)
15. Transport	5(25)	15(75)	4(44.5)	5(55.6)
16. Soil	19(95)	1(5)	7(77.8)	2(22.2)
17. Symbols	12(60)	8(40)	6(66.7)	3(33.3)
18. Measurements	18(90)	2(10)	9(100)	-
b. Activities				
1. Planning	16(80)	4(20)	7(77.8)	2(22.2)
2. Fact-finding	5(25)	25(75)	2(22.2)	7(77.8)
3. Exploring	4(20)	16(80)	4(44.5)	5(55.6)
4. Writing	19(95)	1(5)	9(100)	-
5. Reading	15(75)	5(25)	8(88.9)	1(11.1)
6. Arithmetic Computation	19(95)	1(5)	8(88.9)	1(11.1)
7. Problem - Solving	8(40)	12(60)	8(88.9)	1(11.1)
8. Games	18(90)	2(10)	7(77.8)	2(22.2)
9. Experimentation	2(10)	18(90)	3(33.3)	6(66.7)
10. Puzzle	15(75)	5(25)	7(77.8)	2(22.2)

Appendix I (Cont'd)

Integrative elements	Number of Respondents			
	12+TTI and 2 (N=20)		12+4 and above (N=9)	
	Agree	Disagree	Agree	Disagree
11. Folktale	14(70)	6(30)	8(88.9)	1(11.1)
12. Imitating	7(35)	13(65)	4(44.5)	5(55.6)
13. Demonstrating	4(20)	16(80)	3(33.3)	6(66.7)
14. Reasoning	3(15)	17(85)	2(22.2)	7(77.8)
15. Observing	8(40)	12(60)	4(44.4)	5(55.6)
16. Creating	8(40)	12(60)	4(44.4)	5(55.6)
C. Social problems				
1. Disease	18(90)	2(10)	7(77.8)	2(22.2)
2. Poverty / hunger	7(35)	13(65)	3(33.3)	6(66.7)
3. Family Planning	18(90)	2(10)	9(100)	-
4. Religion & work	14(70)	6(30)	7(77.8)	2(22.2)
5. War & Peace	6(30)	14(70)	3(33.3)	6(66.7)
6. Immigration	5(25)	15(75)	4(44.4)	5(55.6)
7. Law & order	3(15)	17(85)	4(44.4)	5(55.6)
8. Vandalism	7(35)	13(65)	2(22.2)	7(77.8)
9. Pollution	12(60)	8(40)	6(66.7)	3(33.3)
10. Deforestation	20(100)	-	8(88.9)	1(11.1)
11. Corruption	9(45)	11(55)	3(33.3)	6(66.7)
12. Gender bias	12(60)	8(40)	7(77.8)	2(22.2)
13. Expectancy	6(30)	14(70)	2(22.2)	7(77.8)
14. Ignorance	8(40)	12(60)	3(33.3)	6(66.7)

Appendix J
ADDIS ABABA UNIVERSITY

School of Graduate Studies
Department of curriculum and instruction
Opinionnaire

This opinionnaire is prepared to collect data for the study aimed at investigating the approach of curriculum integration appropriate to the first cycle primary schools of Tigray. Thus, since your genuine responses are the only means to arrive at reliable conclusion, please indicate your true feeling on each item.

In this opinionnaire, there is no right or wrong answer for each item. It is your own judgment for the item that is considered correct.

Thank you in Advance

1. General information

Please fill in the blanks correctly.

Name of the school/office _____

Status _____

Educational level _____

Area of specialization _____

Sex _____ Age _____ Service _____

2. Instruction

Please indicate the learning experiences that should be used as integrative elements for the first cycle primary school curriculum of Tigray by encircling the number corresponding to your answer (1 or 2) where:

"2" means Agree and

"1" means Disagree.

A. Opinionnaire to be filled by students,
educational professionals and the representative
of the regional teachers' association.

No	Learning experience	Responses	
		Agree	Disagree
	a. <u>Themes</u>		
1	School		
2	Nutrition	2	1
3	Man	2	1
4	Garden	2	1
5	Environment	2	1
6	Communication	2	1
7	Life	2	1
8	Weather	2	1
9	Home	2	1
10	Water	2	1
11	Animals	2	1
12	Crops	2	1
13	Reproduction	2	1
14	Culture	2	1
15	Transport	2	1
16	Soil	2	1
17	Symbols	2	1
18	Measurements	2	1
	b) <u>Activities</u>		
19	Planning	2	1
20	Fact-finding	2	1
21	Exploring	2	1
22	Writing	2	1
23	Reading	2	1
24	Arithmetic	2	1
25	Problem-solving	2	1
26	Games	2	1
27	Experimentation	2	1
28	Puzzle	2	1
29	Folktale	2	1
30	Imitating	2	1
31	Demonstrating	2	1
32	Reasoning	2	1
33	Observing	2	1
34	Creativity	2	1

No	Learning experience	Responses	
		Agree	Disagree
	c. <u>Social problems</u>		
35	Disease		
36	Poverty/hunger	2	1
37	Family planning	2	1
38	Religion and work	2	1
39	War & peace	2	1
40	Immigration	2	1
41	Law and order	2	1
42	Vandalism	2	1
43	Pollution	2	1
44	Deforestation	2	1
45	Corruption	2	1
46	Gender issues	2	1
47	Expectancy	2	1
48	Ignorance	2	1

49. Which of the following approaches of integration should be used in developing the first cycle primary school curriculum of Tigray:

- Thematic
- Activity based
- Social problem based

B. Opinionnaire to be filled by the Agricultural expert

No	Learning experience	Responses	
		Agree	Disagree
	a. <u>Themes</u>		
1	Plants		
2	Animals	2	1
3	Water	2	1
4	Soil	2	1
5	Crops	2	1
6	Reproduction	2	1
7	Environment	2	1
8	Weather	2	1
9	Culture	2	1
	b. <u>Activities</u>		
10	Gardening		
11	Sewing	2	1
12	Writing	2	1
13	Reading	2	1
14	Tool-handling	2	1
15	Demonstrating	2	1
16	Arithmetic	2	1
17	Experimentation	2	1
18	Problem solving	2	1
19	folktale	2	1
	c. <u>Social problems</u>		
20	Food production	2	1
21	Family planning	2	1
22	region & work	2	1
23	Immigration	2	1
24	Pollution	2	1
25	Deforestation	2	1
26	Gender issues	2	1
27	Ignorance	2	1

28. Which of the following approaches of integration should be used in developing the first cycle primary school curriculum of Tigray?
- Thematic
 - Activity based
 - Social problem based

C. Opinionnaire to be filled by regional health expert

No	Learning experience	Responses	
		Agree	Disagree
	a. <u>Themes</u>		
1	Water		
2	Environmental awareness	2	1
3	Weather	2	1
4	Culture	2	1
5	Reproductive organs	2	1
6	Nutrition	2	1
7	Parts of human body	2	1
8	Measurements	2	1
	b. <u>Activities</u>		
9	Feeding		
10	Clothing	2	1
11	Writing	2	1
12	Reading	2	1
13	Arithmetic	2	1
14	Reasoning	2	1
15	Experimenting	2	1
16	Recording	2	1
17	Problem-solving	2	1
18	Folktale	2	1
	c. <u>Social Problems</u>		
19	Disease	2	1
20	Family Planning	2	1
21	Pollution	2	1
22	Ignorance	2	1
23	Gender issues	2	1
24	Personal & environmental hygiene	2	1
25	Traditional beliefs and practices		

26. Which of the following approaches of integration should be used in developing the first cycle primary school curriculum of Tigrai?
- Thematic
 - Activity based
 - Social problem based

D. Opinionnaire to be filled by the representative of the regional women's association.

No	Learning experience	Responses	
		Agree	Disagree
	a. <u>Themes</u>		
1	School		
2	Communication	2	1
3	Water	2	1
4	Animals	2	1
5	Plants	2	1
6	Home	2	1
7	Environment	2	1
8	Crops	2	1
9	Human reproduction	2	1
	b. <u>Activities</u>		
10	Writing	2	1
11	Reading	2	1
12	Arithmetic	2	1
13	Handicraft	2	1
14	Planning	2	1
15	Home management	2	1
16	Feeding	2	1
17	Recording	2	1
18	Experimenting	2	1
19	Problem-solving	2	1
20	Folktale	2	1
	c. <u>Social Problems</u>		
21	Diseases	2	1
22	Gender issues	2	1
23	Ignorance	2	1
24	Law & order	2	1
25	Family planning	2	1
26	Education	2	1
27	Food production improvement	2	1
28	Immigration	2	1

29. Which of the following approaches of integration should be used in developing the first cycle primary school curriculum of Tigray?

- Thematic
- Activity based
- Social problem based

Appendix K
ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF CURRICULUM AND INSTRUCTION
INTERVIEW QUESTIONS TO PARENTS

This instrument is prepared to collect data for the study aimed at investigating the approach of curriculum integration appropriate to the first cycle primary schools of Tigrai. Thus, since your genuine responses are the only means to arrive at a reliable conclusion, please indicate your true feeling on each item.

In this interview, there is no right or wrong answer for each item. It is your own judgment for the item that is considered correct.

Thank you in Advance

1. General information

Name of town/village _____

Sex _____ Age _____

Educational level _____ Occupation _____

2. Instruction

Please indicate the learning experiences that should be used as integrative elements for the first cycle primary school curriculum of Tigrai by saying "Agree" or "Disagree" on each item.

No	Learning experience	Responses	
		Agree	Disagree
	a. <u>Themes</u>		
1	Our environment		
2	Economic sources		
3	Soil		
4	Seeds		
5	Culture		
6	Animals		
7	Measurements		
8	Virtue		
9	Parts of human body		
	b. <u>Activities</u>		
10	Arithmetic		
11	Evaluating		
12	Gardening		
13	Demonstrating		
14	Exploring		
15	Observing		
16	Writing		
17	Reading		
18	Creativity		
19	Handicraft		
	c. <u>Social problems</u>		
20	Soil & water protection		
21	Deforestation		
22	Disease prevention		
23	War		
24	food prod. improvement		
25	Gender issues		
26	Traditional beliefs & practices		
27	Family planning		
28	Ignorance		

29. Which of the following approaches of integration should be used in developing the first cycle primary school curriculum of Tigray?
- Thematic
 - Activity based
 - Social problem based

ሀ. ብተም ሃር፣ ብሰብ ሙያ ቶ/ትን ተወካሊ ማሕበር
መምህራንን ዝምህሉ መመይቾ

ተ. ቁ.	መግረፂታት	ጠመተ ይወሃቦ	ጠመተ እይወሃቦ
1	ቤተ ቶ/ት		
2	ምጽን ምገቢ	2	1
3	ወዲሰብ	2	1
4	ኣተክል ቲ	2	1
5	ከባቢ	2	1
6	ርክብ	2	1
7	ህይወተ	2	1
8	ኩነታት ኣየር	2	1
9	ገዛ	2	1
10	ማይ	2	1
11	እንጥባቶ	2	1
12	ዘርኢታቶ	2	1
13	ምርባሕ /ምውሳድ/	2	1
14	ባህሊ	2	1
15	መጊዓዝያ	2	1
16	ሰመድ	2	1
17	ምልክታት	2	1
18	መዐቀኒታት	2	1
19	ምቕላም	2	1
20	ምእሳብ	2	1
21	ምህዞ	2	1
22	ምፅብፍ	2	1
23	ምንባብ	2	1
24	ቁፅራ ዊ ፀብፃብ	2	1

አዲስ አበባ የህግ ሰነድከፍሊ ተምህርት ትምህርት ስርዓት ለገቢነትናይ ፀሐይ መጠይቅ

እዚ መጠይቅ እዙይ ካብ ቀዳማይ አስከባኝ ልብዓይ ዘወሃክ ትምህርት ተገራይ ካብ ምንታይ ጠመተ ዘገበረ ክኸውን ከምዘለዎ ሓበሬታ ንምእካብ ዘተዳለወ እዩ። ስለዚ ነቲ ዘተዘርዘሩ መግረዲታት ካብታላብ ብምሃን ክገብሩ (3) መልሲ ንክህቡ/ባ/ እላቡ። ትክክል ወይ ንጋ ዘበሃል መልሲ የለን። ባዕሎም/ለን/ ዘእዘዙ/ናሉ/ ቀሉል እዩ።

ካብኻም የመሰገን።

1. ሓፈሻዊ ሓበሬታ

ጽሑፍ ቤት ፋ/ት /ቢ/ _____

ሓፈሻ ነት/ምድብ ቦራሕ/ _____

ደረጃ ፋ/ት _____

ዓይነት ዘሰለጠንሉ ፋ/ት _____

ፀታ _____ ዕድሜ _____

ዘመን ገለገሉት _____

2. ዘርዘር ሓበሬታ

ጸቢ ጸቢ ዘሰዕቡ መግረዲታት ብምንባብ ካብ 1ይ - 4ይ ካብ ዘሉ ደረጃ ፋ/ት ጠመተ ይወሃብ እንተይሉም/ለን/ ቀፅሪ 2 ጠመተ ካይወሃብ እንተይሉም/ለን/ ገና ቀፅሪ 1 ብምኽባብ ይመለሱ/ባ/።

ሀ. በተመሳሳይ የሥራ ስራ ደረጃ/የሥራ ተወካዮች ማህበር

መመሪያዎችን ዘመናዊ መደብ

ተ. ቁ.	መግለጫ	መመሪያ ደረጃ	መመሪያ አደረጃ
1	ቤተ ክ/ተ	2	1
2	መጠን መገቢያ	2	1
3	ወደብ	2	1
4	አተክላት	2	1
5	ከገቢ	2	1
6	ርክብ	2	1
7	ህይወት	2	1
8	ኩነታት አዋር	2	1
9	ገዛ	2	1
10	ማይ	2	1
11	አንባቢ	2	1
12	ዘርፊያ	2	1
13	መርከብ /መውሰድ/	2	1
14	ባህሪ	2	1
15	መገንጠያ	2	1
16	ጠቃሚ	2	1
17	መልክታት	2	1
18	መዐቀፊያ	2	1
19	መቼት	2	1
20	መለሰ	2	1
21	መሀዘ	2	1
22	መጠን	2	1
23	መገቢያ	2	1
24	መጠን ወይም ጠቃሚ	2	1

ተ. ቁ.	መግለጺ	ጠመተ ደውሃብ	ጠመተ አደውሃብ
25	ገደል	2	1
26	ፀዋታ	2	1
27	ፈተነ መከያደ	2	1
28	ሕገቅሕገቅሊቲይ	2	1
29	ነበረ ያ ነበረ /ፀውፀዊ/	2	1
30	መቼዳሕ /ዘረአካዳ/	2	1
31	ሰራሕካ መርሳይ	2	1
32	መከንያተ መቼራብ	2	1
33	መስቸውዓል	2	1
34	ናይ ፈጠራ ሰራሕ	2	1
35	ሕጻን	2	1
36	ደገነ	2	1
37	መጣነ ሰደራሴ	2	1
38	ሃይማኖትን ስራሕን	2	1
39	ሰላምን ጸርነትን	2	1
40	ሰደት	2	1
41	ሕገን ሰነድዓትን	2	1
42	ዘፈኑ	2	1
43	ዐብላጅ	2	1
44	በርሰት አገራብ	2	1
45	ገብን በጽነትን	2	1
46	ፀታዊ ዛዕባታት	2	1
47	ተባባይነት	2	1
48	ለውጤ ዘይመሕባል	2	1

49. ካብ ቀዳማይ እስካብ ፊብዓይ ዘወሃብ ትምህርቲ ነፃናይ ቀደሚያ ክህብ ይገባኦ?

- ሀ. ንባይንባዊ ክልስ ሓባባት
- ለ. ንተገባራዊ ንጥፈታት ተምሃሮ
- ሐ. ንፀገም ሕ/ሰብና መፍታሕ

ተ. ቁ.	መግለጫ	ጠመተ ደውሃ	ጠመተ አደውሃ
1	ተክሊት		
2	አንባባት	2	1
3	ማይ	2	1
4	ሳጣይ	2	1
5	ዘርሊት	2	1
6	መርባሕ / መውሳይ/	2	1
7	ከባቢ	2	1
8	ኩነት አዩር	2	1
9	ባህሊ	2	1
10	ተጠሊት መቸገሪያ መከላከያ	2	1
11	መስፋይ	2	1
12	መጠፍ	2	1
13	መገባባ	2	1
14	አጠቃቀም መሰርዳት	2	1
15	ሰራሕገ መርሳይ	2	1
16	ቀፅራ ዊ ፀብባብ	2	1
17	ፈተነ መክያይ	2	1
18	ገደል	2	1
19	ነበረ ያ ነበረ / ፀውፀ ዋይ/	2	1
20	መሀር ቲ መደገፋፀ	2	1
21	መጣ ነ ሰደራሲት	2	1
22	ሃይማኖትን ሰራሕገ	2	1
23	ሰደት	2	1
24	ዐብላግ	2	1
25	ብርሰት አገራብ	2	1
26	ፀታዊ ዛዕባታት	2	1
27	ለውጧ ዘይመቐባል	2	1

28. ከብ 1ይ-4ይ ዘወሃብ ተ/ ቲ ነዩይ ቀደሚያ ክህብ ይገባኦ?

- ሀ. ንባይንባዊ ክልሰ ጣባባት
- ለ. ንተገባራዊ ንጥፈታት ተምሃሮ
- ጠ. ንፀገም ሕ/ሰብና መፍታሕ

ጠ. ባናይ ጥዕና ሌክሰፒት ዘምላላ መይቸ

ተ. ቁ.	መግረፊታት	ጠመተ ይወሃብ	ጠመተ እይወሃብ
1	ጫይ	2	1
2	ኩነታት ከባቢ	2	1
3	ኩነታት አዋር	2	1
4	ባህልና	2	1
5	አካላት ምርባቅ	2	1
6	ምጽን ምገቢ	2	1
7	ክፍሊ አካላትና	2	1
8	መዐቀኒታት	2	1
9	አመጋገባ	2	1
10	አከፋይና	2	1
11	ምፅባቹ	2	1
12	ምንባብ	2	1
13	ቀፅራ ዊ ፀብዳብ	2	1
14	ምክንያት ምቕራብ	2	1
15	ፈተነ ምክንያድ	2	1
16	ፀብዳብ ምብዛ	2	1
17	ገደል	2	1
18	ነበረ ያ ነበረ /ፅውፅ ዋይ/	2	1
19	ሕጻዎ	2	1
20	ምጣነ ሰድራቤት	2	1
21	ዕብላጅ	2	1
22	ለውጤ ዘይምቐባል	2	1
23	ፀታዊ ዛዕባታት	2	1
24	ዓርሶ ፅረትን ፅረተ ከባብን	2	1
25	ባህላዊ እምነታትን ተገባራትን	2	1

26. ካብ 1^ይ - 4^ይ ዘወሃብ ት/ቲ ነዩይ ቀድሞይ ክህበ ይገባኦ?

- ሀ. ንባይንባዊ ክልስ ሓሳባት
- ለ. ንተገባራዊ ንጥፈታት ተምሃሮ
- ጠ. ንፀገም ሕ/ሰብና ምፍታሕ

ጠ. ንተወካሊት ማሕበር ደቂ ስንበት ያዘተጻለው መጠይቅ

ተ. ቁ.	መግለጫ	ጠመተ ደወሃ	ጠመተ አደወሃ
1	ቤተ ክ/ቲ		
2	ርክብ	2	1
3	ማይ	2	1
4	አንስታት	2	1
5	ተክሊታት	2	1
6	ገዛ	2	1
7	ከባቢ	2	1
8	ዘርኢታት	2	1
9	መርባሕ /መወላዊ/ ደቂ ሰባት	2	1
10	መፅፍ	2	1
11	መንባብ	2	1
12	ቀፅራዊ ፀብፀብ	2	1
13	አደ ጥበብ	2	1
14	መቼላ	2	1
15	አተክሕዛ ገዛ	2	1
16	አመጋገባ	2	1
17	ፀብፀብ መጣዘ	2	1
18	ፈተነ መክያድ	2	1
19	ገደል	2	1
20	ነበረ ያ ነበረ /ፀውፀዊ/	2	1
21	ሕጻን	2	1
22	ፀታዊ ዘዕባታት	2	1
23	ለውጧ ዘይመቐባል	2	1
24	ሕገን ስነ ስርዓትን	2	1
25	መጣነ ስድራቤት	2	1
26	ትምህርት	2	1
27	መሀርቲ መደገፋዕ	2	1
28	ስደት	2	1

29. ከባ 1^ይ - 4^ይ ዘወሃኦ ተ/ቲ ነዩይ ቀደሚያ ከህብ ይገባሉ?

ሀ. ንሳይንስዊ ክልሰ ሓባባት

ለ. ንተገባራዊ ንጥፈታት ተምሃሮ

ጠ. ንፀገም ሕ/ሰብና መፍታሕ

ንወለዲ ዘተላለወ ቃለ መጠይቅ

እዚ ቃለ መጠይቅ እዙይ ካብ ቀዳሚ እስካብ ራብዓይ ዘወሃብ ተምህርቲ ተገራይ ኣብ ምገታይ ጠመተ ዘገበረ ክኸውን ከምዘለዎ ሓበሬታ ንምእካብ ዘተላለወ እዩ። ስለዚ ነዞም ዘተዘርዘሩ መግረፂታት ኣቓልቦ ብምሃብ ሰጪዖም/ዐን/ መልሲ ንዝህቡ/ባ/ እሳቦ። ተጠቅሞ ወይ ጌን ዘበሃል መልሲ የለን። ባዕሉም /ለን/ ዘላመንሱ/ናሉ/ ቆሱል እዩ።

ኣቐዲሞ የመሰገን።

1. ሓፈሻዊ ሓበሬታ

ጽዕ ዓቢይ / ቀበሌ / _____

ፀቓ _____ ዕድሜ _____

ናይ ተምህርቲ ደረጃ _____ ስራሕ _____

2. ዘርዘር ሓበሬታ

ነዞም ዘሰዑ መግረፂታት ካብ 1^ይ _ 4^ይ ኣብ ዘሉ ደረጃ ተምህርቲ " ጠመተ ይወሃቦ " ወይ " ጠመተ ኣይወሃቦ " ብምባል ይመልሱ /ባ/።

ተ.ቁ.	መግረፂታት	ጠመተ ይወሃቦ	ጠመተ ኣይወሃቦ
1	ከባቢ		
2	ናይ ኢኮኖሚ ፍልፍላት		
3	ሓጻን		
4	ዘርኢታት		
5	ባህልና		
6	እንገባታት		
7	ዓይነታት መዐቀኒ		
8	ብኣ ምግባር		
9	ክፍሊ ኣካላትና		
10	ቀፀራዊ ፀብፀብ ምግባር		

ተ.ቁ.	መግለጫ	ጠመተ ይወሃብ	ጠመተ አይወሃብ
11	መገመገም		
12	ተከለታት መቼካላን መክንኻንን		
13	ሰራሕይ መርከቢ		
14	መሀዞ		
15	ናይ መስቲውዓል ክእለት		
16	መፅፍ		
17	መንግብ		
18	ናይ ፈጠራ ሰራሕ		
19	ኢይ ጥበብ		
20	ሳይንስ ሳይንስ ዕቅድ		
21	ብርሰት አገራዊ		
22	ሕግ መክላከል		
23	ጠር ነት		
24	መሀር ቲ መደንፋዕ		
25	ፀታዊ ዘዕባታት		
26	ባህላዊ እምነታት		
27	መግነ ሰድራ ቤት		
28	ለውጤ ዘይመዝገብ መደብ		

29. ካብ ቀዳሞይ እስከብ ራብዓይ ዘወሃኦን ትመሀር ቲ ነዩናይ ቀደሚያ ክህብ ይገባኦ?

ሀ. ንባይንባዊ ክልስ ጠባባት

ለ. ንተገባራዊ ንጥፈታት ተመሃር

ጠ. ንፀገም ሕ/ሰብና መፍታሕ

DECLARATION

I, hereby declare that this study is my original work done under the guidance of Ato Ambaye Tsehay, Department Head of Curriculum and Instruction. All relevant sources are duly acknowledged.

12/12/2019
9/89 E.C. . Abraha Asfaw