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SCHOOL OF GRADUATE STUDIES

EVALUATION OF PRIMARY SCHOOL TEXTBOOKS IN OROMIA REGION

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ABSTRACT

The essential and defining characteristics of textbooks are that they are designed for students as written guides to the subject contents of a course of a study. The basic task of a text is the presentation of data from the subject field, facts, description...etc. Textbook sets forth relationships in the organization of knowledge in varying range and depth depending upon the competence and maturity of the students. Textbook in contrast to other kinds of books contains exercises, study questions and other materials for practice.

The purpose of this study is to evaluate the quality of primary school textbooks of core subjects in Oromia Region, which have been prepared since 1995 based on the New Education and Training Policy of 1994.

Content Analysis was used as the research method. By using stratified and random sample technique, 6 (14%) textbooks were selected. These six textbooks were selected by sub grouping them into five (Languages, Mathematics, Natural science, Social studies and Environmental science). The sample of unit depended on the nature of textbooks' quality category selected for this study. Accordingly, textbook as a whole was used for layout category, while for the categories of objective-content relation, quality of illustrations, learning exercises, readability and gender balance, 50 percent of each textbook chapters were randomly selected

The coding units also vary depending on the character of the categories. Accordingly, point size, of relation of objectives and contents, number of syllables and sentences, clarity of illustrations, type of exercises and gender features were coded and analyzed. An inter coder reliability index of 95

percent was agreed and achieved. Percentage and statistical test of T- test was used to analyze the difference between the variables, particularly differences between objectives and contents as well as gender difference.

The result showed that textbooks are inadequate in layout, some contents are not in harmony with objectives in the corresponding syllabus; the readability level of the textbooks is not appropriate to the corresponding grade level; the illustrations are related to the topics, but are not clear; and the textbooks portrayed gender bias, and this favored male.

Hence, it is recommendable that there should be textbook policy both at National and Regional level, which determines the standard and procedures of textbook preparation and evaluation. At the same time, the Regional Education Bureau has to revise the existing primary school textbooks in line with the inadequacies observed in this study. Similarly, a thorough study has to be conducted on the other aspects of textbook quality.

CHAPTER I

BACKGROUND OF THE STUDY

Statement of the problem

Books are not as such a mere commodity for they convey different information reflecting explicit values, ideas, aesthetics and knowledge. Because of these characters they are considered as part of mass media, which require a systematic follow up for their efficiency and effectiveness. As indicated by Askerud (1997:17), books and other printed materials are part of the mass media. Access to and control of these media are source of power. According to Askerud, books as a media need to be controlled for the purpose of maintaining their quality to render service(s) they are intended for.

Textbooks are means of communication developed to help students confront with organized way of knowledge. McMurray et al. (1955:31) also stated as that text materials are communication devices that help the learner to interpret and respond to his own environment. This means that texts help the learner take the advantage of the experience of others.

There are different positions on the advantages and disadvantages of textbooks to learning. For instance, Ornstein in Behar (1994:13) outlined the importance of textbooks both for educators and the learners as: -

1) A uniform mode for course

2) A synthesis of materials in a systematic and organized format
3) Visual presentations to facilitate understanding of the structure of a discipline
4) An outline that teachers can use for planning courses, units and lessons and
5) Readymade curriculum that allows teachers more time for preparing course materials.

Wood ward in the same author pointed that many present day teachers would have difficulty in maintaining instructional programs in basic subjects without multi grade textbooks. Additionally, textbook programs also serve as training tools for novice teachers who lack instructional experience in specific subject areas. Similarly, as cited by Aggarwal (1996: 130) Unesco (1970) has pointed out the importance of textbooks as, classroom teaching depends heavily on the textbook .In situations in which the teacher is not very well qualified, the textbook is a guide and support to teaching. For the pupil, the textbook serves as a basis for systematic learning, for reinforcement, review and further study.

On the other hand, there are views on the demerits of textbooks. For instance, Tanner in Behar (1994:14) stressed that, textbooks should not constitute the principal source of curriculum guides and lesson plans, nor should they be the sole medium for instruction. This reminds one that textbooks should not be exhaustive. In America in the 1950s many educators have urged that teachers adopt methods, which place less reliance on text or have argued for discarding texts all together (Cronbach, 1955:3).

The other criticism from Ornestein (1990) says, in spite of authors attempts to maintain objectivity, students might still be recipients of the author's personal viewpoints and biases.

Hubbach in Behar (1994:18) have asserted that textbooks retard the ability to think critically and analyze important social, political, and societal issues. These criticisms towards textbooks consider textbooks as indoctrination and one way flow of information, which is deemed as an ineffective way of communication.

Though there are different stances on the necessity and importance of textbooks, it seems that there is no strong position that disregards them from teaching learning process. Even most scholars (Ferning et al 1989:199) asserted that the contemporary electronic educational materials and educational mass media could not replace textbooks in this regard. The application of the mass media to education demands carefully prepared indigenous programming. It is difficult to organize full multi media distance education system without a high level of related technology in the society. Hence, for most developing countries, the mass media are used in partially. What is more, the media do not replace textbooks. Related to this, Cronbach above reported that in America, teachers have not had sufficient confidence in the substitutes offered for the texts to abandon their standby. For this reason, the issue of whether or not textbooks should be used is a false.

According to him, the real problem is to grip the problem, which is to find specific way of improving textbooks for instruction.

Improvement in the quality of education depends to a greater extent on whether or not relevant and high quality books and other learning materials can be made available to teachers and students, the problem of textbook quality has important implication in educational policies, in the interpretation of educational function of textbooks, in the practical application of textbooks in the classrooms, and in the way textbooks are designed and evaluated (Munoz 1990:18). Stressing on this, Askerud (1997:17) stipulated that there is now an international emphasis on the qualitative aspect of education, such as the monitoring and sustainable provision of learning quality materials. As already indicated, textbooks are one of these materials.

There is no doubt that the quality of a textbook depends on the rigorous emphasis made during its development. However, the qualities of textbooks, in almost all developing nations, show similar drawbacks in this aspect. A study made by the World Bank (1989) has identified the problems of textbooks in different developing countries. According to this study , over the past ten to fifteen years, nations throughout the developing world have been investing resources in providing textbooks. Nonetheless, millions of school children in developing world still have no textbooks at all, or an insufficient

number of books, or books which are inappropriate for their age level (Farell 1989:86).

The study also pointed out that the keys to effective textbook development are not massive fiscal expenditures, but rather careful coordination, attention to the articulation between education system and the publishing industry (public organization), linking the curricular development, and the involvement of the necessary expertise in the development of relevant and high quality textbooks. According to this study, the textbook situation in any country depends on the state of publishing industries, which is the responsibility of public sector in most developing nations, the presence of competent authors and the research and testing facilities to ensure relevant textbooks which are the main pitfalls.

Some scholars have asserted that textbook studies are not yet developed and require more attention. For instance, Brunswic (1990:52) underlined that the whole range of issues and activities involved in book production should be the subject of pre- project sector study in exactly the same way as in education sector analysis is now widely seen as a necessary foundation on which to build an educational policy. In the same vein, Venezky (1996: 457) stressed on the necessity of textbook studies as whether for promotion of school reform or simply for understanding better a vital component of the schooling process, textbook studies should become a more active pursuit within educational research.

There is no satisfactory study made on the textbook preparation and evaluation in Ethiopia. A recently prepared paper by Ethio-Education Consultants (ETEC: 1998) for a guide to textbook preparation, production and distribution., has accounts in this regard. According to this paper, there was no textbook publishing in the country until the invasion by Italy. It was in 1942-52 that some textbooks in Amharic and English languages appeared by the Ministry of Education. The ministry established a textbook translation and preparation unit. It was in 1952 that a systematic curriculum was prepared and textbook publishing section established in the ministry. Accordingly, there after, there was an effort to prepare textbooks appropriate to the grade level and age of the learners. Starting from 1975, due to increment of enrollment, and literacy eradication program a large number of books were printed and distributed to schools.

Due to political and social changes in 1991,the education system was accorded to the new demands of the change. Decentralization and federal form of government became the mode of administration in the country.

According to the New Education and Training Policy of MOE (1994), Regional States have the power to manage educational affairs below the tertiary level. Accordingly, regions can develop their own curricula for primary (1-8) schools to make education responsive to local needs, which necessitate the preparation of the textbooks at this level. Therefore, regional education beraux are responsible for writing, publish and distribute textbooks to

schools. Since all grades at primary level are exercising a revised and improved curriculum, all the duties constituted in the process of textbook provision require the necessary skills, so that they can fit to different pedagogical and psychological set up of the learners.

Accordingly, the new curriculum for primary schools started in 1995 for grades 1 & 5, which in the subsequent years continued for pairs of the grades next to these grades. Formative evaluation was conducted for revising and improving the curricular materials, which could not go to the details of some aspects of textbook quality. At the same time it was carried out almost by either curriculum developers or the textbook publishers.

In their study 'Options for a sustainable provision of textbooks and instructional materials', the aforementioned consultants have identified the problems that are reflected in the preparation of textbooks in Ethiopia as, content difficulty, size and less number of periods allotted to cover topics, inappropriateness of illustrations etc., (ETEC, 1998). The suitability of the existing textbooks for the age level of the students was confirmed by asking head teachers and teachers. There is no other source of data in their study that augments this finding. This study didn't evaluate a sample of textbooks corresponding to the objective of the study, or didn't investigate some features of textbook quality, which could have helped for comprehensive study.

Less developed experience of textbook preparation and evaluation against some criteria for quality textbooks contributes to poor quality textbooks. Andrian(1990) in Farell (1989:91) reminds us that besides availability, an equally important problem that has been neglected but requires urgent attention in the quality of textbooks, in terms of content and pedagogy, as well as production standards. As experiences and observations reveal, this is a prevailing condition in our country. Thus, the study of quality of textbooks becomes an urgent call, in which this study may be a response in some aspects.

This study is thus, intended to investigate the level of quality of primary school textbooks of Core subjects in terms of objective-content relation, layout, readability, illustrations, learning assignments, and gender issues, and provide possible recommendations based on the findings.

Research Questions

In order to attain the above objectives, this study attempts to answer the following questions.

1. Are the layout formats appropriate to the level of the learners?
2. Are topics in the texts in harmony with the objectives in the respective Syllabus?
3. Is the readability level of the textbooks appropriate to the respective grade level?
4. Are illustrations clear?

5. Do the learning exercises encourage problem solving?
6. Is there significant difference between male and female features?

Significance of the study:

A textbook mode of production includes various social and technical conditions that were active in the production, which determines the quality of textbook and eventually learning.

Though exhaustive and exclusive criteria cannot be prescribed to determine the quality of a textbook, this study:-

- Provides information on the level of quality of existing primary school textbooks.
- Provides some basic criteria to be used by curriculum experts and textbook publishers and teachers for preparing and evaluating textbooks.
- Helps to improve the quality of the existing primary school textbooks
- It also helps the Region Education Bureau to improve the quality of textbook preparation in the forth-coming deliberations.

Delimitation of the study:

This study is delimited to the evaluation of the quality of primary school textbooks in Oromia Region, which have been prepared based on the New Education and Training policy of 1994. The quality of textbooks can have

different features, among which this study stresses on, the relation of text contents and objectives in the syllabus, layout, readability, illustrations, assignments, and gender balance.

Limitation of the study:

Evaluation of textbook requires a critical analysis of every unit in the textbook. This could be done with a reasonable available resource. However due to shortage of resource and time, it was not possible to consider textbooks' features in terms of the New Education and Training Policy. Other aspects of textbook qualities such as up to datedness, relevance of contents, size, binding, clarity and appropriateness of objectives to the general education objectives and some details were not dealt with.

Definition of terms:

Caption of illustration: is a provision of topic, name or title, which describes the illustration.

Core subjects: are those academic subjects which include language (Afan Oromo, Amharic, English), Mathematics, Natural Sciences, Social studies and Environmental science (at lower primary).

Gender balance: not favoring either male or female traits in different uses of grammar parts (nouns, pronouns, adjectives) pictures, activities in the text.

Illustrations: those printed materials in the text as to make concepts and ideas comprehensible. Includes pictures, graphs, maps and tables. Illustrations are said to be appropriate when they are clear (captioned, labeled, and related to the content).

Learning assignment: Exercises evaluating (checking) mechanisms which includes questions, projects in the textbook. Are appropriate when they, vary in type, and encourage problem solving.

Layout: discernible physical features and organization of textbook in to different parts.

Labeling of illustration: providing names or appropriate description for different parts of an illustration.

Partial relation of objective and topic: refers to the contents in the chapter/unit that do not contain all but some of the necessary topics to accomplish corresponding objectives.

Pictures: a representation of an object in the textbook includes photographs and diagrams.

Not related topics to objectives: refers to the contents that do not contain any of the topics that help to accomplish the objectives.

Readability: refers to those elements (length of sentence, syllable, per hundred words) within printed material that affects the success that a group of readers have with it, and defined by the success of reader(s) and appropriateness to the level of readers it is intended for.

Relation of topics to objectives: refers to presence of all the topics reflecting the objective in the chapter/unit.

Syllable: is a phonic syllable in a word, which are vowel sounds per hundred words in the textbooks.

Sentence: a sentence is a group of words that tells a complete thought, which can be in a form of statement, question, commands and exclamations, per hundred words in the textbooks.

Textbook: a book prepared for primary education according to the new education policy, (1994), for the study of a particular subject. It is a book designed to explain basic information of a field, including theory, research and practice, which teachers and students use as a source of instruction and handy to them.

Organization of the study:

This study is organized into five chapters. Chapter one is the introductory part, which deals with background and statement of the problem. In addition to this significance, delimitation of the study and operational definitions are provided. Chapter two deals with conceptual framework (literature review) related to the basic categories in the research questions. Chapter three deals with the methods used in the research. This part specifies the procedures followed in the process of the study and instruments used for data collection. Data presentation and analysis is presented in chapter four. Chapter five is the last chapter, which summarizes the findings, provides conclusions and recommendations.

At the end, list of reading materials pertinent to this study are provided and appendices attached.

CHAPTER II

Literature Review

Textbook and Learning

A textbook is considered to be an instructional manual for a particular subject. This connotes to the texts to be organized on the basis of a particular body of knowledge. As Behar (1994:16) said, textbooks define much of the content, sequence, and aims of curriculum. They provide an overview of a particular body of knowledge for students. A student textbook; (a) is written at a level suitable for particular group of children; (b) is carefully sequenced and illustrated; (c) includes exercises and questions (Marsh 1992:51).

In the same vein, others (McMurray and Cronbach 1955) placed primary emphasis on the knowledge transmission role of textbooks. Accordingly, they derived a four-way classification of textbook knowledge content, based upon types of verbal knowledge: narration and description, prescription and directive, generalization, and theory. The textbook sets forth relationships in the organization of knowledge, in varying range and depth, depending upon the competence and maturity of the students. In this role, the textbook is an explicator. As Deighton (1971: 210) asserted, contemporary textbooks make far greater use of graphic devices to organize and dramatize relationship of data; they also use illustrations.

Thomas and Kobayashi, as cited in Aggarwal (1996:130) have seen the importance of textbooks to learning from three perspectives:

1) A textbook contains authoritative knowledge. This is to say that the text's contents are not only true, but they are of such great value that learners should commit them to memory.
2) Textbooks offer records of prior-events, which will influence future events, so textbooks can help learners envision the future.
3) A textbook reflects a particular viewpoint or set of value from which to perceive life.

The basic task of a textbook is the presentation of data from the subject field, such as mathematical data, dates, or descriptions of physical characteristics. The data may also be of higher order concepts rules and generalizations.

Much of what students receive through their studies at the elementary, secondary, and post secondary level is contingent upon the textbooks selected for their studies. As Eisner explained in Behar, (1994:17) the task of textbooks as, they discuss the basic syntax, tenets, foundation, and important areas of content within a given discipline. Accordingly, this assists students in acquiring the basic structures of knowledge, which is not available through ordinary experiences. They also influence the way certain topics will be regarded. This demands textbooks to have pedagogical qualities.

Venezky (1996:438) identified pedagogical manifests of a textbook as the arrangement of topics, its presentation techniques, its cohesive elements, and overt didactic mechanisms, quizzes, practices, metaphors, diagrams, and teaching suggestions. Gage in Agarwal (1996:132) pointed out that textbook is a constant companion of a student, a self-teaching device and generate educational interaction.

These characteristics make textbooks peculiar from other books as stated by Deighton (1971:211). A novel or a biography may be used as a text in literature or social science courses; these books appear on the shelves of trade bookstores. But if these books are supplied with study questions and other teaching apparatus, they become textbooks... trade editions of novels, biographies, and works of other genres have been used in colleges and secondary school courses. They have been used as textbook; but if they lack the characteristic of a textbook (content, study questions, exercise, and practice materials), they are not textbooks.

In every school subject, skills of one sort or another are among the outcomes. The skills may be manual, as in typing, machine maintenance and apparition. May be interpretive, as in history or literature or may be manipulative as in mathematics or foreign language. Whether or not skill development is considerable part of the school subject, it is generally agreed that the opportunity for application of concepts and other generalizations is

required. It is the ability to use what has been learned that indicates whether or not it has been learned (Desghton: 210).

Merits and Demerits of Textbook

Merits:

In a communication process, books are considered one type of media. The arguments on merits and demerits of textbooks may be attributed to the differed stances on the poison of media in communication. One of the advocates is Finkelteins (1968).

According to McLuhan (1968), the media or process of our time (electronic technology) is shaping and restructuring patterns of social interdependence and every aspect of our personal life. He contrasts the alphabet print technology and electric technology. The alphabet and print technology fostered and encouraged a fragmenting process.

Textbooks provide a level of content expertise in an organized and logical arrangement that teachers may not possess. Textbooks facilitate instruction by mapping the journey that the teacher and the students will share.

To Ornstein (1990), as advantageous to both educators and students, textbooks provide: (1) a uniform mode for course study; (2) a synthesis of material in a systematic and organized format; (3) visual presentations to facilitate understanding of the structure of a discipline; (4) an outline that teachers can use for planning courses, units and lessons; and (5) ready made

to be filled by

curriculum that allows teachers more time for preparing course materials. By the same token Callahan and Clark (1988:447) stipulated that textbooks (1) provide an organization or structure for the source; (2) provide selection of subject matter that can be used as a basis for determining course content (3) provide a certain number of activities and suggestions for teaching strategies and tactics; and (4) provide information about other readings, sources of information, audiovisual and other aids, and other teaching materials and teaching tools.

In almost all educational systems, textbooks are considered as curriculum in school and classroom. Ornestein ((1996:358), put this assertion that textbooks for much of this century have been the linchpin of the curriculum. Ask teachers and public alike what the curriculum is in a certain grade or area, and they most frequently will point to a textbook.

As cited in Aggarwal (1996:128) some scholars asserted the importance of textbooks to teachers. Accordingly textbooks substitute for gaps in teacher knowledge and skills (Altbach 1983). Textbooks complement existing skills by providing more able teachers with a resource that increase their effectiveness, (Bee by C.E 1986). Textbooks enable the teacher to assign higher quality homework (Leather stone, H. 1985).

Textbooks have special importance to students in learning process. Textbooks provide a basic exposure to students to written material otherwise unavailable in the environment (Heyneman 1981). Textbooks enable

students to learn independent of the teacher, particularly through completion of homework (Rohlen, T.P. 1983).

Demerits:

Though textbooks serve as an important instructional tool, they have some limitations. Behar (1994:14) stipulated that textbooks serve as valuable instructional tool too, but they should not constitute the principal source of curriculum guides and lesson plans, nor should they be the sole medium for instruction. Deighton (1971:213) further explained this; a textbook cannot present all that is known about anything. Nor can it be wholly current in the information it provides. Supplementary materials, current journals, magazines, and reports are needed to update textbook content.

The most serious limitations of the textbook lie in the generality of its address. The extended explanation of Deighton above reveals that textbooks are produced for nation wide or region wide and cannot take into account significant regional or zonal variations. A second limitation in generality of address arises from the necessity to speak to the entire spectrum of student abilities within a given grade level.

Others see limitation of textbooks in terms of their up to datedness. As Ornestein (1996:358) pointed, a key problem facing many textbooks is that with knowledge explosion, they become quickly outdated. However, because

textbooks are costly, they are often used long after they should be replaced. Ornestein presented another criticism on textbooks authors that since information in textbooks results from an author's interpretation, we are becoming more aware that different authors can create different texts, depending on their philosophical orientations. Even "facts" in textbook are open to interpretation. In his study of literature textbooks, George Hillocks (1990) in McNeil (1999:205) faulted the writers when he said, disparate writers are clumped together by literally form or chronology, so that each work is treated as an end in itself, rather than as preparation for reading other works students are unprepared for independent reading of subsequent selections and forced into the role of passive recipients of knowledge about individual writers and works. Callahan and Clark (1988:447) said that textbooks are far from being the ideal tool that some teachers take them to be, their construction is often rigid to allow them to fit in easily in today's enlightened classroom situation.

Though there are drawbacks on the function and use of textbooks, many scholars agree that textbooks are indispensable for classroom teaching. For instance, Aggarwal (1982:204) said, it is neither desirable nor feasible for most of the teachers to do without textbooks, the only point is that textbook should be used very skillfully and intelligently... should be treated as an obedient slave not " a commanding master". When providing answer to the question "will textbooks be replaced by the new technologies?" Ferning, et al (1989:197) disclosed the existing status of textbooks as for the immediate

future the textbook is likely to retain its primary among instructional materials. On the other hand, Douglas Pearce (1982) asserted the irreplaceable of textbooks as follows:

> "The importance of the role of the textbook as the least expensive and most effective way of improving academic standards now almost universally accepted. Forecasts that textbooks would be replaced to a large extent by educational radio or television programmes, tape recorders, and learning machines, etc, have not proved to be correct, especially in the Less Developed Countries (LDCs). In fact, although these valuable electronic aids to education have played a more prominent role in the last twenty years or so, it seems likely that have stimulated further demand for textbooks rather than replacing them."

Qualities of Textbooks

Though there is a difference in specification and generalization, most educators have similar position on the features and qualities of textbooks. In appraising the worth of a textbook the following qualities stressed by these [Aggarwal 1982, Deighton 1971, Jarolimek, 1967, March 1992, Ornestein 1996] authors are worth mentioning. Coincidence of the text with the objective of the course, up to dateless and accuracy, adaptability to students abilities and interest, portraying gender balance, reinforcing critical thinking and problem solving, appropriateness of learning exercises, layout and organization, size, binding; clarity of objectives, summaries and headings, sufficient and appropriate illustrations---etc. Despite the importance of

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evaluating these qualities, it is beyond the objective of this study to treat all these. Therefore some, which are pertinent to this study, shall be reviewed.

Layout (Organization) of textbooks

Organization and structure of textbooks has a great influence on learning of the basic information in the text. This has a rigor concern of educators as the basic variable in textbook writing. Two problems for the designer here are (1) how to present the material economically, and (2) how, at the same time, to make it easy to use.

Success readers are to follow the author's ideas, how these ideas are tied together or related, and which ideas are more important than others. Often the way chapters are designed and their format will enable readers to perceive the structure. Mayer and Rice (1984) in Tonjes (1991:73) have found that knowledge of the way texts are organized is a critical variable in both learning and remembering information from that text. The two basic kinds of text structures are external and internal organization (Tonjes, 1991:75). External organization is the overall design of the text-the format within chapters; the beginning and end of the text (preface, introduction table of contents summaries references, appendix, index, and so on. Internal organization is characterized by how topics and ideas are related-whether they are superordinated or subordinated, whether they are central or peripheral, how cohesive they are, how they are tied together.

Hartley (1985) and Aggarwal (1982) provided the following guidelines on organizing texts.

Tittles: Titles seem to contain the fewest words possible to describe the content of a text and sometimes these are supplemented with a subtitle. Such succinct descriptions help to focus attention and expectations, and studies have shown that titles affect the reader's perception and interpretation of ambiguous text. One would hardly expect titles to have much effect on the comprehension of instructional text.

Headings: Headings may be written in the form of questions, statements. Headings may be placed in the margin or in the text

Summaries: summaries in text have several possible positions and roles. Beginning summaries can tell readers what the text is about; they can help readers decide whether or not they want to read it. Interim summaries can summarize the argument so far, and indicate what is to come. End summary can list or review the main points made, and thus aid the later recall of important points in the text. There has been some research on the effects of including summaries and their position (before or after the text). As reported by Hartley (1985), a series of five experiments using a short semi technical text with the same summary placed either before or after it was carried out. In four of the five, the summaries aided the recall of the text. Summaries can be typeset in many different ways-in medium, bold or italic, in large or small type, boxed in etc.

Type size and Spacing: According to Hartley, above, the primary dimension to be considered in relation to type size is the width of the character groups and synthetically structured word strings, not the vertical dimension of a character. Line spacing is the dimension measured perpendicularly from the base line of one line of text to the base line of the next line.

Contents page: According to savage (1987; 282) content pages provide relatively straightforward, and usually called table of contents. These can help students grasp the nature of the content covered, the organization of the content, and the relative importance assigned to the various context elements. There are different formats of preparing content pages depending on the nature of the text (in boxes, at the beginning of every chapter, in tables...etc).

References (Bibliography): A typical bibliography might contain a list of entries ordered alphabetically by the author, with each entry. This usually contains five sub elements, the author's surname and initials, date of publishing, the title of the book, the publisher and, place of publishing. There are, of course many different ways of presenting such a list of structure. Providing such information helps both teachers and students to see for more explanation of ideas, theories, etc.

Aggarwal (1982) provided additional components of text organization to these as appropriate title page, introduction that explains the purpose and scheme of the text. Suitable glossary-which describes technical terms.

Harmony of Objectives, contents, and exercises /assignments

Instructional design technology involves correction and revision of instructional based upon the results of empirical testing. It is essential that the desired outcomes of the instruction be clearly and unambiguously stated. These outcomes are variously referred to as behavioral objectives, learning objectives, or performance objectives (Gagne' et al 1992).

As stated by Taba (1962) and Krathwol (1974), performance objectives are precise statements of a capability that, if possessed by the learner can be observed as a performance. These objectives have levels of specificity and precision.

At the first and most abstract level are the quiet broad and general statements are the most helpful in the development of programs of instruction, for the laying out of types of courses and areas to be covered.

At the second and more concrete level, a behavioral objective orientation helps to analyze broad goals in to specific ones that are useful as the building blocks for curricular instruction. These behaviorally stated objectives are helpful in specifying the goals of an instructional course, a unit or a sequence of course.

Third and finally, there is the level needed to create instructional materials. This kind of detailed analysis brings into focus the objectives of specific lesson plans, the sequence of goals, in these plans, and the level of

achievement required for each goal or objectives if successful accomplishment of the next goal in this sequence is to be achieved.

All levels of specification of objectives are needed to guide the planning of the instructional process. The first level guides the development of the second, the second guides the third.

Functions of Objectives

Objectives have varieties of functions. As rightly stated by Taba (1962:197), the most important one is that of guiding decisions about the selection of content and learning experiences and of providing criteria on what to teach (content) and how to teach (method) it. Because of the possibilities of knowledge and of learning are boundless, curriculum makers and teachers always face the problem of selection of what content, which learning activities are the most important, most necessary and most effective.

A clear statement of objectives helps to select from vast areas of knowledge in various disciplines that which is necessary for some valid outcome.

Since education does not consist solely of mastery of content, objectives also serve to clarify the type of powers, mental or otherwise which need to be developed. According to Taba, above, the definition of these powers determines how subject matter is selected and how it is handled in the classroom. This is determining depth and breadth of the content to be selected and learned.

As further stated by Taba, concept of scope would include such matters as the methods of interpretation and generalization to be cultivated, the type of logical processes to be mastered, the type and level of application to be pursued, the kind of attitudes to be generated, or the sensitivities to be developed- in other words the behavioral objectives.

Objectives also serve as a guide for the evaluation of achievement. Taba (1962:201), in her words said, discrepancy between what is taught, and what is evaluated is a common fault of school programs. The scope of evaluation of achievement is usually much narrower than the scope of the objectives for the program. Partly this discrepancy is caused by the limitations in the available means of measuring a sufficiently broad range of achievement.

Seels and Glasgow (1998:130), have shown the type of tests that can be matched to a categories of behavioral objectives. According to them what information is collected as evidence of learning achievement will depend on the nature of the competency being measured. The details are summarized here below.

For learning requiring acquisitioning of knowledge, the appropriateness of paper and pencil tests is self-evident. Verbal chains may be measured by recitation. Knowledge of facts and other types of information may be assessed by test questions that require the student to make mastery explicit. Having a student solve problems, apply rules, or classify objects assesses

intellectual skills. Unobservable cognitive tasks are usually made visible by some form of a written test. All these are deemed to be cognitive tests.

Performance tests measure a student's ability to do something as contrast to cognitive tests. In this test the student is directed to perform a task and his performance is evaluated against some predetermined standard. If the output is a process, performance is evaluated as it occurs. Tasks evaluated this way include actions performed by athletes, performing artists, and equipment operators.

According to Seels (1998), performance tests include process and products and the two forms of product are portfolio and projects.

Process: Objectives can be process objectives. This means students are expected to learn ways of doing things such as problems solving and discussing. Students are expected to learn procedures for problem solving. To assess such outcomes, criteria are established and applied sometimes through rubrics and sometimes through observation checklists.

Products: The outcome of a procedure is a product, which is evaluated against a standard. Products may take many forms. A sample of the student's handwriting may be compared to an ideal sample of correct penmanship. It can be in the form of written language, such as a report; or it can be in graphic form, such as a chart, or it can be in edible form, such as a cake, or it can be dramatic performance or a speech.

Portfolios: It is purposeful, integrated collection of student work showing student effort, progress or achievement in one or more areas. The collection is guided by performance standards and includes evidence of students' self-reflection and participation in setting the focus, selecting contents and judging merits (Paulson et al, 1994 in Seels).

Projects: Another form for product assessment is project. To Seels (1998:141), a project is an in-depth investigation of a topic worth learning more about. The key feature of a project is that it is a research effort deliberately focused on finding answers to question about a topic. The goal of a project is to learn more about the topic rather than to seek the right answers to questions posed by. When an objective is assessed through projects, rubric or checklist can be used.

Attitudinal objectives can be assessed through different mechanisms. These include interviews, surveys questionnaires and rating scales. Socio-metric procedures, observation reports, and examination of records are also valid techniques.

Appropriateness of items is equally important with selection of the forms of exercises. Scholars raise a question on how does one go about writing valid criterion items. Many (Bloom, Englehart, Furst, Hill & Krath Wohl, 1956, Krathwohl, Bloom, & Masia, 1964; Harrow 1972, in Seel, 1998), agree that, you write a criterion item consistent with the objective.

There are several bases on which the logical consistency between assessment and other aspects of design can be determined. One is matching the objectives to the criterion, another is matching the type of assessment to the type of learning; and a third method is matching the data collection method to the purpose of assessment. (Mager, 1993 in Seels).

Provision of assessments and using different techniques in the textbooks is not only for assessing purpose, but also to enhance learning. Therefore evaluation techniques in textbook are deemed to be important as part of the quality of textbooks. Their location may vary depending on the nature of the topic or learning experience. As Hartley (1985:165) stated questions may be interspersed in the text itself or presented in a list at the end of a chapter in the form of exercises. Factual questions, interspersed in a passage before paragraphs of relevant material, often lead to specific learning. Given after relevant content, sometimes lead to more general learning.

Illustrations

Different concepts may not be easily communicated and made comprehensive to the reader. By understanding the essence of the concept, idea, thought etc and the interest or emotion of his audience, an author can effectively communicate to his reader through pictures, diagrams or other pictorial devices. If taken literally, this illustration is to illuminate, to

explain, to make clear what is not clear etc. To Marsh (1992:54), Illustration usually consists of photographs, art work (cartoons, drawings), tables, and graphs.

In connection to education, Aggarwal (1996:13) explained the meaning and importance of illustrations, the term illustration implies the use of those aids which make ideas clear to children and help them to acquire correct knowledge and understanding. Illustrations secure better attention and possess as fixing power.

Functions of Illustrations in textbooks: Textbook authors and designers need to be aware of the various functions that are best fulfilled by illustrations. A summary of the functions of illustrations is presented by Hartley (1978) as follows.

Illustrations are interesting in their own right thus they may attract or distract the reader. Because illustrations are interesting they may lead to the reading of the text. Illustrations are good for conveying concrete images (e.g. a picture of an elephant may be worth a thousand words'), and thus they are good for providing support material when teaching a concept. Words, on the other hand, are good for conveying abstract ideas and for communicating concepts which have already been learned, words can convey prepositional concepts such as 'would be', 'might be' better than illustrations. If the information can be readily conveyed in words, then there may be no need for a picture.

Illustrations are useful for conveying visual concepts (e.g. what a zebra looks like), and spatial concepts (e.g. the relative size of objects).

Htartley (1985:81) suggested that illustrations may fulfill one or more of the following roles in instructional text. (1) an affective role - enhancing interest and motivation,(2) an attention role - attracting and directing attention, (3) a didactic role - facilitating learning by showing rather than telling and by providing additional information, (4)a supportive role - enhancing the learning of less able readers, (5).a retention role - facilitating long term recall.

Quality of illustrations:

Since illustrations are such an important part of any book for primary children, attention needs to be given to the quality. Huey (1965) accounted on this by stressing on pictures, Children like pictures that have bright bold colors and pictures that have only the details necessary to carry the meaning, illustrations in children's book should be pictures that children can live with them and may pore overtime and time again. They should be a source of rich visual imaginary be good art with child appeal.

As in Hartley (1978) some researches suggested that in many cases, particularly with less able children, simple line drawings are preferable to complex pictorial illustrations in instructional text. This assertion is in conformity with the notion that simple sentences are probably to be preferred

to complex ones, although this doesn't necessarily mean that the concept being conveyed by the illustration or the text need be simple.

Textbooks are fine when the text and illustrations tell the same story, when they are well integrated and well coordinated with one another. These and other qualities of illustrations are provided by different authorities (Aggarwal 1996, Hartley 1985, 1978, Huey 1965)and below are some:

1. Interesting: illustrations should appeal to the students. People are attracted by relative complexity and change. Given a choice, children will spend more time looking at figures that have numerous elements, which have an irregular arrangement of elements and which have elements in groups that differ in structure. This makes to read it slowly which contributes to concentration and discover the meaning. An illustration can also create emotion; if the publication is intended to create a response in the reader then an emotional illustration may be more effective than words

2. Simple but comprehensible: illustrations should be so simple that they can be easily comprehended by the students and should need little comments and explanations. Pictorial symbols must show intelligent selection of detail to be most useful for young people with limited schooling. Comprehension is reduced either by excessive unnecessary detail or by excessive deletion of details.

4.Relevant to the topic: Illustrations should be related to the subject matter (text) at hand and should not be used for the sake of using as essential instrument of teaching. In relation to this they should subordinate to the topic. As Huey (1965) pointed out, in many ways illustrations support the purpose of the book.

5.Position and labeling: Illustrations are frequently put at the top or the bottom of a page without reference to where they are mentioned in the text. Often, because of their size they may be positioned on a following page. As revealed by Hartley (1985) when illustrations were positioned close to their textual references, then placement to the left, right, above below or even randomly in the text had no effect on the performance or preference of her ten - year old participants. Nonetheless one might imagine that readers would prefer illustrations to appear immediately after the first textual reference than to have them positioned inconsistently in this respect.

The position of illustrations is important because of their attention role. If illustrations are divorced from the text then readers are less likely to look at them for less time. Hartley, above, suggested that one way to focus attention on illustrations is to refer to them directly in the text (using such phrases 'see figure 1'). Another is to label deferent parts of the illustration. A third way is to use captions. Hartley reported that Gombrich in Brody (1982) deemed captions to be one of the most critical variables in the understanding of pictures and other illustrations. Labels and captions need to be presented

in a consistent manner throughout the text, and their positioning is important too.

Tables, graphs and diagrams

Tables vary enormously in their complexity and detail. They vary from those, which are entirely numerical, such as logarithmic tables, to those that are entirely verbal or use other symbolic notation such as periodic table of chemical elements.

According to Wright (1980) three processes determine how easy it is for readers to use a table.

1. Comprehension process - do readers understand how the tables has been organized?

2. Search processes - do readers know where to look to find the answers to their question?

3. Interpretive process - do readers know how to interpret the answers that they find in the table? Do the answers provide all they need to know or do they need the compare these figures with other figures in this, or other table?

The more complex the table, the more difficult is each of these three processes. Children in particular have trouble with complex tables and it is necessary that we all have to acquire the conventions of reading and using

graphic materials. Using table can be easier when they are presented in simplified way .

How children and adults understand graphs is of comparison kind. This is because there are different kinds of graphs. One may not be assertive to say that line graph is better than a bar chart. This depends in part upon the requirements of the reader.

Hartley (1985) provided guidelines for constructing graphs and summarized as, (a) keep graphs simple, (b) use line graphs or bar charts where possible, (c) if more than two or three lines are presented this can be confusing, and it is probably best to separate the lines by typographic cues (e.g. different symbols or colors) or to use separate graphs, (d) label the lines on a line graph directly, rather than use a key, (e) letter horizontally both the vertical and the horizontal axes, it is sometimes helpful to put actual numbers on the sides of the bars in a vertical bar chart or on the top of the bars in a horizontal one, (f) write a clear and complete title. (g), test out the graph with appropriate learners to see what happens when they are asked to use it.

Diagrams are another tools for illustrating concepts. Children and even adults have difficulties in interpreting complex diagrams. Some authors attribute this to proper labeling problems. For instance Jones et al(1984) in Hartley(1985) argue that many diagrams are difficult to understand because there is no underlying organization to their labels. They argue that labels should be chunked. Chunking involves grouping related labels under

appropriate headings, which has a marked effect upon comprehension and recall.

Readability

With regard to the communication role of reading, Haftner (1977:3) says, how many millions of adolescents and adults would like to read a letter or a newspaper but cannot? They are also unable to communicate in writing with friends and family. They enjoy the comic section of a newspaper but miss many of the subtle ties conveyed through the dialogue... these unfortunate people cannot read bedtime stories to their children or check the program schedule in TV guides. This comment stresses on the problem that illiterates have in their daily experience and in turn the uses of reading.

Extending the uses of reading Haftner provided an example in this regard and says, millions of dollars were spent on farm and industrial equipment that stood idle, because the workers and farmers could not read the technical manuals that explained how to operate and repair the equipment, instructional manuals for repairing automobiles effectively and efficiently, for example, are quite technical and are written on a high school or college level.

While reading, a person reconstructs the facts that lie behind the symbols. This implies that symbols reflect experience and reading is an active process.

The basic tasks of reading show that reading begins from the readers readiness (knowledge that print is "talk written down") to word recognition. It

is from this fixed stance that comprehension of words, phrases and sentence develop. To Haflner (1977:9), in reading sentences, the reader need to perceive the words accurately, decode them correctly, and understand their meanings in the particular array of the sentence.

Reading and Readability in content areas.

The confidence of an individual to pursue the study of a subject is increased if he develops facility in using the language of the subject. This facility in turn is developed by meaningful, correctly paced exposure to this language (Hafner 1977:324). Lerch (1974) in Hafner (1977) pointed out that in reading English, in reading Mathematics, or in reading any kind of language one uses the same basic process. The importance and imperative of reading and readability of instructional materials has become a rigorous endeavor and dealt by scholars.

Stressing on the importance of determining reading difficulty of social studies materials, Savage (1977 :210) gods that the general grade-level difficulty of a given prose selection is an item of interest to elementary social studies teacher , it makes sense for teachers to have some way of determining how difficult, on an average, a given prose selection might be.

The notion that reading is the basis to understand a print material applies to all subject materials. In conformity to this and stressing on Mathematics, Hafner (1977:253) said, Mathematics deals with relationships of quantities

by the use of numerals and symbols. An individual confidence in pursuing the study of a subject is increased as he or she develops facility in using the language subject. Mathematics is no exception.

The language of mathematics is written in verbal and mathematical symbols. These symbols or signs represent words and also concepts or phrases with complex meanings. As Haftner (1977:231) explained, in studying mathematics one goes from the use of a simple sign representing a quite simple concept to the use of more complex symbolization, which often represents concepts that are more complex or hard to understand. He pointed out some difficulties related to mathematics reading and summarized as introduction of different kinds of symbolism from one mathematics series to another conceptual difficulties provide a stumbling block for students if the student has word-recognition difficulties with either general or technical vocabulary, then he or she is on an inappropriate level. Part of this is a function of the poor writing by text producers and a function of having students placed in inappropriate materials for their level of development.

Hafner noted that, the mathematics teacher and other content-area teachers, as well as reading specialists, must face the facts about appropriateness of reading materials for students.

Many of the general comprehension skills transfer directly to reading science materials. "By doubting we are led to inquire and by inquiry we perceive truth." Students can advance to a certain point and learn various concepts

and principles without having to read, but in order to become an independent learner, one who can gather information from the written accounts of others, one must be able to read (Hafner 1977:293).

Regarding the readability of science instructional materials Hafner says, to recite the titanic of findings regarding the lacunae between readability of science texts and the reading ability of students for whom they were designed would be an endless and dull task; the hiatuses are great and many. As he noted the readability of textbooks must commensurate with the reading level of the students who are being asked to use the books.

Reading in languages is synonymous with that of other content areas. However different forms of describing nature makes it somewhat complex. This is because languages contain readings in biographies, folk literature, poetry, fiction, drama and essays with their differed style of writing. A reader on fiction should note characters, the scene, the theme and the setting of the text as to comprehend the whole history. This implies that the writers should make clear these components relating them to the level of the reader.

As noted by Tonjes(1991:13), most people would agree that the amount of reading required today for success, or even survival in our technologically advanced society has grown rapidly. Those who fall behind in reading competency will have an increasingly difficult time in the world of tomorrow. One potential solution to the problem of increased reading requirements has been to make writing easier to understand.

Measurement of Readability

a) Readability Formulas

There are factors that make writing easy or difficult to understand. As this exists, scholars suggest methods to measure how easy or difficult it is to understand a piece of writing.

The study of readability is important for two reasons. First it may give us a way to measure the readability of written material. Second, the search for a formula could provide some information about the most important aspect of style influencing ease of understanding, which could lead to some helpful advice for writers.

As reviewed by Severin et al (1997:136) historical background of readability measurement goes back counting of words in biblical times. But the first attempts to develop a readability formula were made by educators such as Lively and Pressey (1923) appears to be the first investigation of sentence length.

The Lively and Pressey study - a frequent choice for the first readability formula was based on the assumption, common among educators at that time, that vocabulary difficulty was a key factor in determining the difficulty of understanding for written material.

Gray and Leary published a more comprehensive look at the elements that might influence readability in 1935. These authors were particularly

interested in the problem that many American adults were not reading widely and apparently found much of the available reading material too difficult. Gray and Leary listed five key element of their findings for this difficulty as, the number of different hard words in a passage of 100 words; the number of first-, second-, and third- person pronouns; the average sentence length in words, the average of different words; and the number of prepositional phrases.

The readability Laboratory or Teachers college, Colombia University became the scene of the next two important developments in readability measurement. Two of the researchers, Irving Lorge and Rudolf Flesh (1939) were worth mentioning here. Lorge suggested that a formula of two-element combination is enough. These are number of prepositional phrases and number of different hard words, average sentence length and number of different hard word, and number of prepositional phrases and average sentence length.

Flesh took as his starting point the finding that the Gray and Lary formula failed to indicate clear differences in readability beyond a certain level of difficulty. Flesh kept the sentence length measure to be a good measure of readability. He included a count of personal words and decided to disregard all neuter pronouns and count all words referring to people either by names or by words meaning people. The result of this research was the first Flesh readability formula, based on average sentence length in words, number of

affixes within a 100-word sample, and a number of personal references within a 100-word sample. In 1988 he came with a revised formula. This formula dropped the count of personal references and used it to create a new" human interest" formula. Another change was that a measure of word length, the number of syllables per 100 words had replaced the count of affixes. The results were two formulas, the reading ease formula and the human-interest formulas. His reading ease measure doesn't show the condition below grade five, which shows its drawback.

The Flesh reading formula has produced a number of useful offshoots. The Gunning fog index, developed by Robert Gunning (1952), is based on two elements; average sentence length in words and number of words of three syllables or more per 100 words. These two numbers are added and multiplied by.4, and the resulting number is the approximate grade level at which the material can be read. The main advantage of the Gunning fog index over the Flesh reading ease formula is that the former gives a grade level immediately while that of the latter has to be looked up in a table to produce a grade level.

Wyne Danielson and Samdunu Bryan (1963) developed a simplified and computerized readability formula. In this the computer does the counts and computations and gives a readability score. The formula is based on two element that are similar to the two in the Flesh reading ease formula except that they are defined in units, that the computer can recognize easily. They

are average number of characters per space (essentially a measures of word length) average number of characters per sentence (length). The resulting score is very much like a reading ease score.

A slightly different approach to readability is the Fry 's readability estimate Graph , developed by Edward B. Fry(1968). The researcher using this method first determines the average number of syllables per 100 words and the average number sentences per 100 words for the text in question. These figures are then looked up on a graph, and the point where the two values intersect gives an approximate grade level at which the material can be read. Initially, this formula was for intermediate grade levels which later extended to the lower and collage grade levels Savage (1977:210).

As Tonjes(199:184) noticed, many attempts have been and still being made to broaden the base for readability formulas. But still, most formulas have not taken into consideration concepts density: how many explanations, illustrations, or examples are given, and whether concept, are concrete or abstract as well as over all organization pattern of text .

Criticisms were forwarded to these formulas. Scholars responded for the changes over the formulas from different perspectives, Chall (1979) in Tonjes, for instance, responded to the charge that formulas were causing the oversimplification of texts, that it is teachers not formulas who are responsible for the trend toward easier text, because they continue to request

them from publishers. She also pointed out that formulas could help us select harder as well as easier books.

As stated by Fry (1968:578), on a lower level the Readability Graph has been compared with Spache formula in the study done by Martin Kling and Clement Haimowitz. They concluded that, there was a very close agreement between the readability levels according to both formulas. It is probably more efficient to use the Fry Readability formula at the primary grade level.

b) The close Test: A very different approach to measuring readability has been introduced by Wilson L.Taylor (1953). He noticed that readability formulae had a weakness in that their basic assumptions are based on short word is easier to understand than long word. He argues that this is not always true (Severin etal, 1997:147).

Taylor invented another procedure for measuring readability that he says measures the entire potential element that influences readability. He called this method "Close Procedure" .

The close procedure consists of a simple teacher-made test constructed from a part of the textbook or other prose selection that tests group of subjects to be asked to read. The common way is to delete every fifth word to be filled in by the group. The cloze score becomes the number or percentage of blanks that are filled in correctly, which doesn't consider synonyms. There are

different finding on the leveling appropriateness of the score obtained and the work of three scholars is here below.

	Hafner (1977)	Savage (1982)	Severin (1997)
Independent	50%	58%	61%
Instructional	42%	44-57%	41%
Too difficult	< 42%	< 43%	< 41%

Gender Balance: -

One of the common distinctions employed in the literature on sex roles and sex equality is that drawn between sex and gender. According to Diller (1996:62) Sex refers to the biological differences between females and males and gender refers to social differences between the sexes. Therefore we can say that gender is an analytical term to help distinguish between the biological dimension and the socialization(cultural) one.

As defined (Almaz Eshete 1992:2) socialization is the process by which individuals acquire knowledge skills and dispositions that enable them to participate as more or less effective members of a group and the society. Accordingly, the socially learned patterns of behavior that differentiate men from women in a given society are referred to as one's gender role, which is a learned behavior, not biological.

Socialization is a process, which begins from the moment of birth, which is influenced by the family, school, religions institutions media and work place.

The family is the primary context writhe which the child receives initial socialization. Gender role stereotype or sexism as called by some is a role designated by the society to either male or female depending on socio cultural background of that society.

Why is that girls and boys who go into the same schools and classroom systems come out with different experiences, interests, achievement levels, and expectations? Scientific research addresses these and other questions about the differences in the school experiences of boys and girls. Theoretical explanations of the different educational experience focus on socialization, the role of societal systems, and "biological destiny"

As experiences reveal, in Ethiopia, parents, educators and educational planners as well as youngsters accept patriarchal views. Most parents prepare their sons and daughters for different roles or occupation. Therefore their education follows this aspiration and expectation.

The socialization function takes place in schools where students are expected to spend six hours a day in class and school related activities. Teachers and schools become important sources of information on sex appropriate behavior; children learn by observing and imitating adult roles, including the roles of teachers and administrators. They observe the ratio of males to females and the authority structure in the educational hierarchy. They learn their appropriate behavior through positive and negative sanctions, as well as through textbooks.

As Ballantine (1993:105) stated societal systems are dependent on schools to pass along crucial beliefs and values-among them, sex role behaviors and expectations. In part, this occurs formally through courses and texts used in the curriculum or through the structure that assigns privileges and tasks by sex. But many of society's expectations are passed on through the informal or "hidden" curriculum...sex roles in schools mirror those in society.

Evaluation of the Quality of Textbooks.

It is obvious that evaluation of textbooks is one way of getting rid of the running curriculum. This connotes to that textbooks are parts of curriculum; hence the quality contributes to the quality of the curriculum. With referring to curriculum evaluation, Lewy (1977) says, evaluation is concerned with the efficiency of a program as a whole...quite frequently evaluation may deal with specific components. The focus of small-scale evaluation study may be particular chapter of the program, the organization of the dissemination network, the textbook, the teachers' guide, audiovisual aids etc. More over an evaluation study may be concerned only with specific features of these components.

It seems unanimous that textbooks need to be evaluated against their qualities, which are stated by scholars, (Ornestein 1996, Hartley 1977,1988, Spalding 1955, Marsh 1992). According to Spalding, what he calls Scorecard formula is used to evaluate the quality of textbooks. As for this theory, the sum of the ratting of the individual item is believed to be a

measure of the quality of a text. In general, however, it is over mechanized and substitutes analysis of parts for understanding of the whole. The scorecard contains authorship, content, instructional aid, format or mechanical features.

Most scholars who write on textbooks agree on these features of textbooks. The difference may exist on specificity and generality or incorporating main elements as sub elements and vise versa. For instance, Hartley (1985) sees in two categories, format of the textbook or organization and content.

Though different methods could be used for evaluating textbooks, scholars advise to use content analysis. As cited by Leid (1977:182), Grobman described content analysis as it involves systematic, replicable quantification in analysis and description of communication contents (written, verbal or visual) with a particular focus on the purpose of description.

To perform content analysis one first needs to define a series of relevant categories and determine the units of analysis.

Researches on Textbooks

Possibly, researches made on textbooks can be categorized in to two main prospective. These are management prospective which includes the preparation and publication, selection (in some countries) condition of distribution and physical conditions. The other aspect is related to academic

qualities (objectives, relevance, organization, readability enhancing problem solving...etc).

A survey study made by UNESCO (1959) is a comprehensive and earlier on textbook studies. It was conducted on different countries as subjects. The emphasis of the study was on publication, selection, distribution and method of utilization. The survey was based on filling in questionnaires sent to 69 countries to be responded by their respective Ministry of Education. The finding of this study reveals that private authors compile textbooks; acting individually or in groups in two third of the countries under survey, while in the rest adhoc committee or combination of these will perform this activity.

In over half of the countries the authors and private publishing firms take up on themselves the task of publishing their books .The second larger group is those countries whose state itself takes over the publishing of all textbooks, while the third group exercises both experiences. Concerning the length of service year, there is no considerable variation, from two to twenty years. Half of the countries do not have any serious consideration in physical condition of textbooks, except its aesthetic quality. The distribution and mode of preparation also varies, from one book for different subjects to one book for one subject at primary schools.

Though this study showed the experience of some countries in regard to the above categories, there was no comprehensive conclusion provided

Other studies dealt with some specific categories of quality of textbooks. For instance, a study reviewed by Ballantine, which was conducted by Newjersy (1989) on American primary school textbook on gender issue is worth mentioning. This study called " women on words and Images" has evaluated sexism in children's readers and the publishers have updated their textbooks as new editions based on the findings. The content analysis of textbooks looks at the sex of the main characters, illustration, possessive and negative images of men and women, stereotypes, and many other factors related to the portrayal of sex roles in the societal system. According to this report recent analyses show improvements, but imbalances still favor males and in rate of portrayal and types of roles assigned.

Kalia (1982) reports a content analysis made on 41 Indian textbooks. The analysis was based on counting male and female characters, male and female as leading figures, males and females as subjects of biography, the frequency of the favorable images by which men and women are portrayed in the Indian textbooks. Occupational stereotyping was studied by counting the frequency of occupation assigned to male and female characters and examined the range of occupational open to each sex. Conclusion from the findings was that the messages given to schoolchildren in the Indian textbooks sanction the dominance of male and patriarchal. The author concluded that such textbooks do not serve modern India.

Less research attempt is made on the current primary school textbooks in Ethiopia. The Ethio-Education Consultants (1998) study on "Options for Sustainable Provision of Textbooks and Instructional Materials" is a study attempted on the existing primary schools in Amhara, Oromia, Southern Nations & Nationalities People Region(SNNPR), Gambella and Addis Ababa regions. The data were collected through questionnaire and interviews of headmasters, teachers and parents. According to this study, illustrations in the textbook were found too difficult to understand by the children. Problems in typesets, less experience of authors, distribution, less capacity in publishing and printing skills were reported. Since the emphasis of the study was on logistic and publishing, it could not show some features on the quality of textbooks with the help of descriptive data.

As a regular duty, the Institute for Curriculum Development and Research (ICDR) conducted a program evaluation on the Tryout curriculum (primary school), of which textbook was one of the components. Since the try out curriculum begins from the first grades (1,5) of the two cycles and show progress to the next grades, the evaluation also followed this pattern. The objective of this evaluation was to ensure the quality and standard of the newly developed curriculum materials in line with the policy. The data was collected from 24 headmasters, 219 teachers 124 pupils, 130 parents classroom observation and school documents According to this formative evaluation; some contents do not cover the fundamentals of the subject matter of Oromo language of the two grades, contents not up-to date, some

contents do not encourage critical thinking and problem solving , exercises found to be inadequate and lack variety, and some contents do not match with the objectives in the respective subject syllabus.

The study was conducted by curriculum experts who were either directly or indirectly had been involved in the curriculum preparation. There is a doubt whether or not this can bring much change for the improvement. At the same time there was no checking mechanism reported on the coding reliability of the coders ("analysts"), which puts the reliability in doubts.

CHAPTER III

RESEARCH METHOD AND PROCEDURES

Content analysis is used as major research method in this study. Close test procedure and discussions are also used as augmenting techniques. As Budd (1967:2) defined, Content analysis is a systematic technique for analyzing message content and message handling- it is a tool for observing and analyzing the overt communication behavior of selected communication. Berlson in Stemple III (1981:120) defined Content analysis as a research for the objective, systematic, and quantitative description of the manifest content of communication, (Berlson 1952 in Stemple 111,1981:120).

Stemple III (p120-21) further described objectives, systematic, quantitative description and manifest of content in content analysis as follows:

a. Objectivity is having the categories of analysis defined so precisely that different persons can apply them to the same content and get the same result.

b. Systematic refers to that: -

-a set procedure is applied in the same way to all the contents being analyzed

-categories are set up so that all relevant content is analyzed.

- the analyses are designed to secure data relevant to a research question or hypothesis.

c. Quantitative refers to the recording of numerals values or frequencies which the various defined types of content occur.

d. Manifest of content is the apparent content which means that content must be coded as it appears rather than as the content analyst feels it is intended.

In the same vein, Lomax in Wube (1995:6) emphasized the diagnostic power of content analysis for its simplicity and directness. He stated that it deals with frequent and easily identifiable qualities in behavior that can be expressed in numerical terms and on which inter-rater consensus can be tested.

These definitions are almost the same thing to reflect on characteristics of content analysis. That is, it has to be systematic, objective and quantified. On the other hand they talk on contents of communication whether it is verbal, or nonverbal (printed or non printed).

Close test procedure is constructing a test from a part of the textbook to be read and answered by the students. According to Savage (1977:213), the common way is to delete every fifth word to be filled in by the subjects. The score is the percentage of blanks that are to be filled in correctly.

Accordingly, a score of 58 and above is operating at an independent level and 43 or lower performing at frustration level of reading.

Primary school textbooks in the aforementioned region, which were prepared to be used in all primary schools since 1994 are the population for this study. These texts are 44 in number (See Appendix -A).

Sampling:

As Budd (1967:19) noted, most content studies require multi stage sampling procedure, i.e., several different sampling procedures have to be used before the final sampling of content to be analyzed is obtained.

The question of sample size has received considerable attention from a number of researchers involved in content studies. According to Berlson (1952) in Budd (1967:22), a small, carefully chosen sample of the relevant content will produce just as valid results as the analysis of a great deal more- and with the expenditure of much less time and effort. The sample size of the study is six textbooks which is about 14 percent of the population

Multi stage sampling is used to select the required number of textbooks and Chapters.

The textbooks were sub grouped (Stratified) into five groups (Languages, Maths, Natural science social, Studies and environmental science). Depending on the proportion of the groups the texts were randomly selected from each group.

Selection of unit of analysis.

The second major step is to determine units of analysis. The selection of these units depends on the purpose of the study and the kind of content being analyzed, (Budd et al 1967:19). Since this study deals with different textbook qualities, the selection of unit of analysis depended on this character. Accordingly for textbook layout category, the whole text was used; While for the others except for readability, nearly 50 percent of the Chapters /units from each textbook were randomly selected. This is 37 from 71 chapters or 53 percent of the chapters. Passages for readability estimate were selected by dividing the textbook in to three parts, that is the beginning, middle and last part. The range of the pages was from 114 for grade 6 Afan Oromo textbook and 219 for grade 3 Environmental science textbooks. From each part, one passage containing more than 100 words was randomly selected from which the syllables and sentences were counted and the average computed against the standard set for the specific grade levels. A passage from each textbook that contained at least 250 words was used for close test. The sampled subjects and their respective chapters are presented in table I.

Table I: Sampled Textbooks and chapters

Textbook	Year of publishing	Total No of chapter	No. Of chapters	Sampled chapters
Grade 3 Environmental science	1997	4	2	1, 3
Grade 4 Mathematics	1998	4	2	1, 3
Grade 5 English	1995	23	12	1,3,5,7,9,11,13,15, 17,19,21,23
Grade 6 Social studies	1996	7	4	1,3,5,7,
Grade 6 Afan Oromo	1996	23	12	1,3,5,7,9,11,13,15, 17,19,21,23
Grade 7 Biology	1997	10	5	1,3,5,7,9

The other is selecting student for which the close text is administered. Two zones (one randomly and the other purposive) were selected. These were Arsi (purposive because the problem was first felt there) and North Shewa. From each, two Woredas and from each Woreda four schools were randomly selected.From each school 15 students (3 for each subject) were randomly selected .The total number of the students was 120 (15x8).

The students were selected from top, middle and bottom academic rank based on their first semester result. This was performed by randomly selecting from the top 10, middle 10 and last 10 students.

Constructing Categories and Coding Units:

Categories in content analysis are a conceptual scheme. Categories are in fact, variables; they are linked to the problem and the theories on which the research is based. Budd et al (1967 39) rightly put, that the analyst looks for classification cues(categories)in the nature of the research problem itself, the specific hypothesis formulated or questions to be answered, the content to be analyzed.

Categories are developed within the framework of three primary requirements (Amare 1998:5,Budd et al 1967:39) ;(1) categories must be pertinent to the objectives of the study,(2) categories must be exhaustive(related to the problem),and (3) be mutually exclusive (manageable).The main textbook categories in this study are textbook layout, relation of objective and

contents, readability, learning exercise, illustrations and gender features. These categories were preferred because many educators emphasize the importance of these as the measures of quality of textbooks (Ornestein 1996, Deighton 1971 Mcneil 1999 Aggarwal 1982, Marsh 1992) and deemed to be functional as a result of the study. Different items were designated to these categories. In other words they were categorized into different peculiar features against which coding was conducted.

For these main categories are sub categories designated to show their characteristics depending on the research question. The researcher developed most of these categories; while some were developed by scholars (Hartley 1977,Ornestein 1996, Lewy 1977) .

The smallest segment of content counted and scored in content analysis is the coding unit. The most common coding units are word, a theme or assertion, a paragraph, an item, a character group, object or institution; (Budd et al 1967:33). As this reveals the nature of the study determines which coding unit to use. Accordingly, for category textbook layout, font size, line spacing and margin size, for the category objective-content relation counting of objectives and topics, of sampled chapters, for category readability counting of sentences and syllables per hundred words from the passages (from the beginning middle and end part), for illustrations counting of pictures, tables and maps, to for learning assignments different question types (items), and for gender balance counting of part of grammar, activities

and pictorial presentations from the sampled chapters were determined to be coded against the sub categories(characters) designated to each of these categories.

Instruments of data collection

The next step was to develop data collection tools. To this effect, categories were defined and coding sheets were being developed, (See Appendix -D). These instruments were distributed to knowledgeable scholars including advisor of the research (Amare Asgedom) for comments, a thorough discussion was made, especially with the advisor. As a result the categories that were eight were reduced to six and merged. In connection to this, a close test sheet was prepared from five subjects. This instrument could not be prepared for mathematics because the textbook does not have passages with or more than 250 words. For some information from the Regional Curriculum Department, a discussion questions were also prepared. (Appendix-I).

Coding procedure

In order to make the actual coding reliable, trial runs were made on one textbook by the researcher and one other coder, except the readability category that was done by two other language coders. Before starting the work, discussions were made on the definitions and rules governing the procedure.

After making some amendments and agreements on the rule (procedures) a reliability index of 95 percent agreement was arrived at between the coders. This was because most education and social study researchers agree up on percent of (.05) level of significance (Borg and Gall 1979, Furguson 1985). As a result some items in illustration category (picture and diagram) were merged since they were found not exclusive. There was more than 95 percent agreement on the other coding procedures, (See Appendix G).

Actual coding was the second phase of coding procedure. The researcher and another coder for readability who have participated on the trial run performed this. During the process spot checks were done with previous coder and checked against the agreed upon standard.

Having notes on the cases that happened to be not clear and have discussions facilitated this. This has helped to maintain the required level of coding reliability. With the assumption that both coders have commensurate knowledge on the categories and items, the coding value is expected to be proportional. Using significant level at 0.05 an acceptance region was decided to be if:

T < 2.77 the item is accepted as reliable

T >2.77 the item is accepted as not reliable

Analysis strategy

The findings from each sample chapter is summarized for each textbook and coded. Layout formats are analyzed against the standards set by Educational Material Production and Distribution Agency (EMPDA) and textbook

components set by scholars. Readability is analyzed against Fry's (1968) readability formula and Tylor's (1953) Close test procedure. There are different formulae for estimating readability of textbooks. However, most of them are inadequate to be instrumental for primary school texts. It was Fry (1968) who in his later findings of readability estimate extended the formula at lower grade levels. This formula demands the selection of 3 one hundred words passage from a book and plotting the average number of syllables and sentences per hundred words of these passages on the graph prepared for this purpose to determine the grade level of the material, (See appendix -F).

Inferential data analysis is used. Central tendency measures and t-test was used to see if there is a significant difference between the means of the variables. This statistical tool is preferred because it determines whether two means, proportions or correlation coefficients differ significantly from each other (Borg 1979) and one of the research questions was based on comparison. As the final analysis, the implication of the result is discussed.

CHAPTER IV

DATA PRESENTATION ANALYSIS AND DISCUSTION

As stated earlier, Content analysis is the method used for this study. The close test and information from the Regional Curriculum Department were used as augmenting procedures. Eventually, the major data were gathered from the textbooks with the help of coding sheets prepared for this purpose. The close test for students in the sampled schools for readability estimate was administered. Pertinent data about textbook authors and preparation and evaluation of textbooks were obtained from the Region's Curriculum Development Department.. The data have helped to provide answers for the research questions. These data are presented analyzed, and discussed here under.

Profile of Textbook Authors

The first attempt was information about the authors of the textbooks. Regarding this, data were obtained from the authors' personal files and acquaintances. Accordingly the following table shows the profile of these authors.

Table II: Profile of Textbook Authors

Textbook	No. of authors	Qualification						Experience in Teaching						Experience in Preparing Textbooks	
		MA/Msc.		BA/Bsc		Diploma		Primary School		TTIs		Sec. Sch.			
		F	%	F	%	F	%	F	%	F	%	F	%	F	%
Env. Sc.	11	-	-	8	73	3	27	1	9	6	55	11	100	-	-
Maths	4	-	-	4	100	-	-	1	25	-	-	4	100	-	-
English	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Social St.	6	1	17	5	83	-		2	33.3	-	-	6	100	1	17
Afan Oromo	3	-	-	3	100	-		1	33.3	-	-	3	100	-	-
Biology	3	-	-	3	100	-	-	-	-	1	33.3	3	100	-	-
Total	**27**	**1**	**4**	**23**	**85**	**3**	**11**	**5**	**19**	**7**	**26**	**27**	**100**	**1**	**4**

* Considered before the preparation of the textbooks.

Eighty five percent of the authors are qualified in first degree of their respective subject. For preparing primary school textbook prior experience or training becomes imperative. One (4%) of the authors has prior experience of preparing textbooks, which this is insignificant. Regarding experience in teaching in primary school and Teacher Training Institutes the table shows 19 percent and 26 percent respectively. According to some informants and some of these authors, some had a short orientation, usually one to two days, while some, even didn't get such opportunity before preparing textbooks. In connection to this, the regional curriculum department head

confirmed that there is no textbook policy either at national or regional level. According to the head, there is no clear guideline for textbook preparation and evaluation.

Layout of the Textbooks

As to facilitate an effective communication a textbook need to have an appropriate layout. Since textbooks are prepared for various maturity level of children, the layout need to consider all the traits that are attributed to their corresponding age level and underlying textbook layout principles.

In the first hand, textbooks have to have divisions into suitable chapters /units and sections (Aggarwal 1996:133). The following table shows parts of the textbooks and their availability.

Table III: Organization of the textbooks into parts

Textbook	No. of chapters /units	Pages	Availability of basic information parts						
			Title page	Introduction	Heading	Content page	Summary	Glossary	Reference
Grade 3 Environmental Sc.	4	219	1	0	1	1	0	0	0
Grade 4 Maths	4	193	1	0	1	1	1	1	0
Grade 5 English	25	128	1	0	1	0	0	0	0
Grade 6 Social studies	7	169	1	1	1	1	0	1	0
Grade 6 Afan Oromo	24	114	1	1	1	1	0	0	0
Grade 7 Biology	10	169	1	0	1	1	0	1	0
Percentage			1=100	1=17 0=83	1=100	1=83 0=17	1=17 0=83	1=50 0=50	0=100

1= Available, O= Not available

As can be observed from Table III, the textbooks are organized into chapters /units with a minimum of 114 and maximum of 219 pages. It also depicts

that those textbooks with maximum pages have less number of chapters and vise versa. This indicates that large contents are aggregated under a limited chapter, which makes comprehension difficult and grasp the gist of the chapter.

Related to this are the organizational parts that provide important information about the textbook. These are such as title page, introduction, headings content page, summaries, glossary and reference parts.

An investigation was made whether the textbooks contain these provisions or not. Accordingly, all the textbooks have title pages and headings. As Aggarwal (1996:134) stated title pages are an important part of textbook which should give the necessary information, that is, suitable title, author's name, publisher's name, place of publication and year of publication etc. Content page is also important for that it provides a list of content and other parts of the textbook with corresponding page they are found at. It is a fast cat to reach at the title required to be read immediately. Five (83%) of the textbooks have content pages while 1 (17%) is lacking this part.

Introduction part provides a clear picture of the textbook. This part is expected to introduce the purpose of the textbook, the way it is organized and what is expected from the learner as well as how the learner can use it. Eighty three percent of the textbooks do no have introduction part. The textbooks directly inter into the texts main body without giving information about the content. This shows that there is no device made to introduce the

material and to arouse the interest of the learner towards learning from the text.

Summaries are condensed parts of a chapter, topic or lesson, which makes the essence of the part to be pointed out. Since it excludes the illustrative part and other narrations, there is no congestion of words. Eight three percent of textbooks do not have summaries. As indicated above, summaries are good means of providing the essence of the part under discussion and can be placed either at the beginning or at the end of the part, and serve different purposes. Hartley (1978:59) confirmed that summaries provided at the beginning or end of chapters can help the learner organize his learning. Summaries at the start can prepare the learner for what is to come; summaries at the end can restate the learner for what is to come; summaries at the end can restate the main points made.

It is difficult to say that all terms in textbooks are familiar to all students and teachers. Though the extent may vary, there can be technical terms, which are introduced in the textbooks. With this assumption, textbooks are expected to provide the meaning of these terms, either in elaborating through the language used as a medium of instruction or providing its meaning in common language that both teachers and students can communicate. This is one feature of quality textbook. With regard to this, 50 percent of the textbooks have provided such facility. Among those textbooks without glossary is found grade 3 Environmental science. This subject is an

integration of different areas of disciplines with full of natural and social science terminology.

References are also important in the textbooks. It is not uncommon that there is no provision of this part in textbooks. Eventually all textbooks under this study do not have references. Above all this part helps the teachers search for further explanations of different theories, principles, and facts-etc.

The other aspect of textbook layout is its typographic set up which includes type size, and spacing. Table IV presents typographic set up of the textbooks.

Table IV: Typographic layout of the textbooks on A_4 paper size

Textbook	Font size			Spacing			Border			
Environmental	Topic	Subtopic	Content	Between topic & Content	Between paragraphs	Interline	Top	Bottom	Left	Right
Grade 3 Environmental Sc.	24,18	12	12	1.5	1.5	1.5	1.9	1.5	2.5	1.9
Grade 4 Maths	24	18,12	12	1.5	1.5	1.5	1.9	1.2	2.5	1.9
Grades 5 English	24	18	12	1.5	3.00	1.5	2.0	2.5	2.0	2.5
Grades 6 Social studies	24,12	12	12	1.5	1.5	1.5	1.2	1.5	1.5	1.9
Grades 6 Afaan Oromoo	24,18	12	12	1.5	1.5	1.5	1.2	2.0	1.5	1.5
Grades 7 Biology	24,18	14	12	1.5	1.5	1.5	1.9	1.2	2.5	1.9
Books with standard in %	N.S	N.S	100	N.S	N.S	N.S	17	17	33	0

N.S = Not Stated Standard

According to table IV, the font size for topics and to some extent sub topics doesn't show consistency within a textbook. In some parts, the point size extends up to 24, while there are topics with 12-point size. This

inconsistency makes reading difficult. Point size for contents is consistent through out (12 points) which is concomitant with point size recommended by Educational Materials Production and Distribution Agency (EMPDA). It is also depicted in the table that the space between topic and content, between paragraph and interline are uniform throughout, which may create optical bridging to the lines. Concerning this relation Hartley (1978:21), stated the following

> "... Line space is minimal when it is the same dimension as the type size. In the minimal state, the interlinear space may appear to be less than the space between the words and paragraphs. The opening out of lines to create a clear difference between the interlinear gap and the word spacing is common practice when ease of reading is required. In this way the danger of optical bridging between lines is reduced".

In regard to size of borders, the table shows no consistency among the textbooks. The standard for this by EMPDA is top 2.00, bottom 2.5 left 1.5 and right 2.00 (See appendix-B). According to table IV it is only 1(17%), which can satisfy the standard for top and bottom margins, 33 percent for left margin which none of the textbooks accord the standard for right margin.

This reflects that there is no practical use of the standard set and this indicates deficiency in this regard.

Objective-Content Relation

Behavioral objectives are tools for guiding the instructional process, without these objectives the instructional process is non-directional. The contents in the textbooks are the means through which the objectives are materialized.

As many educators agree on the indispensability of behavioral objectives in the instruction process, their relation with the whole components of instruction is also equally important. Among these components is found contents /topics in the textbooks.

To assess the harmony between the objectives in the syllabus and the topics in the textbooks, relational record was made. Accordingly the feature of the textbooks in this regard is presented in table V.

Table V: Degree of relation of Objectives and Contents

Textbook	Number of topics /contents	Degree of relation						Paired difference
		Fully related		Partially related		Not related		
		F	%	F	%	F	%	1) NTOP Vs NREL t-value= -3.41 df=5 P ≤. 019
Environmental science grade 3	21	21	100	-	-	-	-	
Grade 4 Mathematics	41	37	90	4	10	-	-	
Grade 5 English	43	11	26	3	7	29	67	2) NTOP VS PREL t-value= 6.036 P≤. 001 df = 5
Grade 6 Social studies	21	21	100	-	-	-	-	
Grade 6 Afan Oromo	52	2	4	2	4	48	92	
Grade 7 Biology	55	50	91	5	9	-	-	
Total	233	142	61	14	6	77	33	
$\bar{X}$	38.833	23.666	61	2.066	5	12.833	33.1	

NREL = Not related topics
NTOP = Number of topics
PREL= Partially related topics

Table V depicts that 61 Percent of the topics in the textbooks are fully related to the corresponding topics,6 percent partially related and 33 are not related to the corresponding objectives. What should be noted here is not the less proportion of partially or not related topics, when compared to the other related ones, but these proportions of activities are misguided in the process. Four textbooks have full relation of objectives and contents, while the two language subjects, English and Afan Oromo, have a critical problem in this regard. For instance 67 percent of the lessons in English textbook do not correspond to the objectives. The following case makes this issue clear. In unit 21 of grade 5 English syllabuses the objectives are stated as:

"...talk about journeys"

"...read passages about journeys and understand the main details"

"...use the words to talk about journeys"

"...use prepositions in sentence correctly" while

In the corresponding unit, the lessons are:-

"...talk about water (speak and write) " "Conversation about thirsty and drinking water", "making sentences about water "

" uses of water "

" spellings"

" read and Do" (about water). Comprehension question from the passage were observed.

Similarly the objective in Unit 17 of grade 6 Afan Oromo syllabus is stated as: "use logic in discussion, debate and speech" while the corresponding lesson deals with comparison of similarities and differences between dogs and cats and writing letters of different purposes. This indicates that there is no harmony between objectives and contents.

The result of the true difference between the total topics and not related topics to the objectives shows significance (t-value= -3. 41, at df= 5 and p<. 019). Similarly the difference between the total topic and partially related topics to the objectives is significant (t-value= 6.036. at df= 5 and P<. 001.

It is clear from these information that the teachers do not have a guiding mechanism through which the required knowledge, attitude and skill is to be imparted. This has also a drawback in evaluating the system and which elements of learning to be focused in the process. Knirk and Kent (1986:95) stipulated the importance of objectives in this regard.

> "Behavioral objectives are invaluable tools for evaluating the effectiveness of the teaching method or system. Do students learn what the objectives suggest they are to learn? If, after instruction, students cannot meet the objectives under the specified conditions to the required degree, it generally means the program or materials did

not work. Behavioral objectives provide the basis for a technological approach to assessing and designing instruction".

Chew Tow (1977:67) stressed this relation to be maintained by curriculum developers, when he said, curriculum developers are well aware that the selection of course content for school pupil is not based on the notion that content is a watered-down version of the subject matter. Rather, the criteria of selection are that the content is related to, and effective in the achievement of the instructional objectives.

Readability of Textbooks

Students may face two general problems when they try to read the assigned textbook in their respective grades. First, the reading difficulty of the materials may be too high. Sentences may be long and complex. Second, the vocabulary used may contain many unfamiliar or difficult terms. Savage (1987:22-3) explains this difficulty, as there is no doubt that textbook need to be prepared in line with the cognitive and physical maturity of the students. Complex sentences and unfamiliar terms tend to limit comprehension, which jeopardize effective communication, and eventually learning. With this in mind, textbooks' readability estimate parameter, sentence length and number of syllables in association with close test were employed to estimate

the readability level of textbooks and the findings are presented here under in table VI.

Table VI: Number of sentences and syllables and close test result

Textbook	Syllable per hundred words	Sentences per hundred words	Syllable per sentence	Mean of close test result in percent
Environmental Sc.	237	9	26	18
Maths	282	9	31	Not Applicable
English	138	14	10	26.375
Social studies	262	8	33	30.208
Afan Oromo	233	8	29	39.125
Biology	244	8	31	29.041
Mean	233	9.3	25	28.569

According to the graph for estimating readability (Appendix-F) the length of sentences and syllables per hundred words for grade 3 is 8.3 and 116-120 respectively. According to table VI, this is 9 and 237 respectively. Similarly length of sentence and syllable for grade 4 is 6.3-7.1 and 116-124 respectively. Table VI shows 9 and 282 for this grade respectively. The graph determined a maximum of 6.3 sentence and 136 syllables for grades 6 and 7. The textbooks show this to be 8 sentences and 233 and 262 syllables each. According to the readability estimate graph, 12.5 sentences should contain a maximum of 140 syllables for grades 1-8.

According to the table VI above there is no textbook that correlates with the corresponding grade level readability level estimate, except 1(17%), which showed below the expected level.

Reading achievement is a means through which reading level of the learner is determined. The close test result shows that the mean of the achievement from 18-39%. As researches show if a pupil scores, 58 percent or higher he is said to be operating at the independent level, 44-57 percent operating at instructional level and 43 percent or lower performing at frustration level, (Savage, 1987).

Accordingly to the result of close test, in table VI, the readability of the textbooks is at frustration level.

When seen subject wise 92 percent (Environmental science) 83 percent (English), 75 percent (Biology) 7 percent (social studies), and 67 percent (Afan Oromo) of the students achieved frustration level of score (Appendix-E).

Quality of Illustrations:

Illustrations should have a purpose. Other wise they should not take up space.

Illustrations provide some information more clearly than words can do. They can show the exact appearance of a species of plant or animal; exact appearance of the symptoms or effects of a disease show population distribution or the exact way in which piece of machinery should be adjusted. Leonard H. (1986:290) states this purpose, as a rule when authors

and publishers go to the trouble and expense of putting pictures, cartoons, diagrams in their textbooks, they do so to make the book more usable. They hope the illustrations will illustrate what they want to say-not just to make the book prettier.

In order to accomplish this purpose, illustrations in the textbooks should fulfill some academic features, such as relation with the topic described with the help of captions, labeled and identified with the help of figures or letters.

In order to assess the condition of the illustrations in the textbooks in line with the above qualities an investigation was made and the finding is presented in table VII.

Table VII: Character of Illustrations in the Textbooks

Text	Number of Illustrations																
	Total	Not related to the topics		Related to the topics		With captions		Without caption		With id. No/ letter		Without Id. No /letter		Labeled		Not labeled	
	F	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Env. Sc.	128	0	0	128	100	90	70	38	30	125	98	3	2	42	33	86	67
Maths	103	0	0	103	100	0	0	103	100	0	0	103	100	30	29	73	71
English	84	0	0	84	100	0	0	84	100	0	0	84	100	14	17	70	83
Social studies	59	0	0	59	100	59	100	0	0	59	100	0	0	44	75	15	25
Afan Oromo	4	0	0	4	100	1	25	3	75	0	0	4	100	3	75	1	25
Biology	67	1	1	66	99	66	99	1	1	66	99	1	1	59	88	8	12
Total	445	1	2	444	99.8	216	49	229	51	250	56	195	44	192	43	253	57

According to table VII, 99.8 percent of the illustrations are related to the topic in which they are placed. It also depicts that 51 percent are not

provided with captions. Illustrations without captions do not have the power to easily explain themselves and the purpose they are expected to accomplish.

The other aspect of the clarity of illustrations is labeling. If parts are not appropriately labeled the whole-part or part- whole learning gets stacked. This leads to easily forget what is learned or miss the purpose of the topic in general and that of the illustration in particular. According to table VII above, only 43 percent are labeled. As Hartley (1978:44) said, illustrations of things appear to be remembered more readily than their names, but presenting captions with pictures helps the subsequent recall of the caption. The labeling of illustrations aids classification and helps long-term recall.

An illustration may be used through out the discussion in the chapter or the topic. Therefore, they are referred back and forth in the discussion or explanation. To facilitate communication between the reader and the illustration under discussion each illustration need to have an identification mechanism, either in sequenced number or letter. But in table VII, it is found that 44 percent of illustrations do not have either identification number or letter.

According to TableVII, significant proportion of illustrations show difficulty in caption, labeling and provision of identification mechanism, indicating in appropriateness in this regard.

Learning exercises

The other part of textbook quality is availability and distribution of variety of learning exercises in the textbook. Learning exercise are parts of learning activity through which the textbook evaluates the progress of the learner. At this point, it also serves the learner as a self-evaluation mechanism. Textbooks are expected to provide such mechanisms that encourage knowledge, attitude and skill development. To accomplish such mission, evaluation mechanisms have to be varied and encourage student solve problem independently or with some level of assistance. Table VIII shows type and distribution of learning exercises in the textbooks.

Table VIII: Type and Distribution of Learning Exercises

Textbook	Total (F)	Type and number of items													
		Objective types										Essays			
		True-False		Multiple choice		Match		Completion		Short Answers.		Description		Projects	
		F	%	F	%	F	%	F	%	F	%	F	%	F	%
Grade3 Environmental Science.	98	16	16	11	11	26	27	-	-	25	26	4	4	16	16
Grade 4 Mathematics	165	7	4	2	1	-	-	21	13	33	20	102	62	-	-
Grade 5 English	484	18	4	4	0.8	10	2	54	11	114	24	280	58	4	0.8
Grade 6 social studies	109	15	14	10	9	15	14	12	11	1	0.9	65	51	-	-
Grade 6 Afan Oromo	357	27	8	21	6	19	5	50	14	113	32	123	34	4	1
Grade 7 Biology	83	8	9	13	16	13	16	16	19	18	22	13	16	2	2
Total	***1296***	***91***	***7***	***61***	***5***	***83***	***6***	***153***	***12***	***304***	***23***	***578***	***45***	***26***	***23***
Category Total	*F= 692, %= 53*											*F= 604, %= 47*			

According to Table VIII, 53 percent of the items are distributed through objective types. Among this the largest proportion (30%) are those items which require simple recall or even no need of recalling in the case of true-false and multiple choice items in which there is a possibility of 50 percent, or 25 percent (depending on the number of alternatives) Possible answers are provided respectively.

As can be observed from the table, most of the subjects are dominated by items that require more of memorization. Aggarwal (1982:174) explains the limitation of such type of items. The pupil does not have an opportunity to show his ability to organize his thought. He has nothing to do except check over the truth and falsity of statements or fill in the missing words. Pupils miss the valuable experience of making comparison-giving explanations. These are not diagnostic in that they do not tell where the pupil's reasoning process goes wrong or where he stops reasoning and starts guessing.

In the table above essay category is shown to be 47 percent. The items included in this category are such type of exercises as construction of sentences in the language subjects and work outs in Mathematics, as the nature of these subjects demands this course.

The assignments under projects were named as such simply because they were assigned out of classroom. Other wise these are not those activities which require students to follow an inquiry method as outlined by Jarollmek (1967:376) (1) The kinds of questions asked and the types of hypotheses

tested, (2) The data each considers relevant, (3) Source of data, (4) Methods of data collecting, (5) Data analysis and conclusion & (6) Prediction

The procedure could be practiced at any level of complexity in teaching-learning process. As Jarolimek, above, asserted Inductive procedure have been recommended for elementary school teaching for at least two generations under the title problem solving; however, the extent to which such devices have been applied in textbooks has been disappointing.

In general learning exercises in the textbooks contained variety of items, while larger proportion is for simple memorization.

Gender Balance

Education of citizens is influenced by culture values and a society's view of gender tales. This view is transmitted to the youngsters either formally or informally. Formally its major channel is the textbook, which is a regular companion of pupils. Textbooks are suspected of gender stereotype of reflection, either through grammar usage pictorial or activity assignment.

Students learn from the textbooks direct contents and indirect experiences (what they observe in the textbooks. In her study, "women in primary and secondary Education", "Gennet (1991:97) noted the divulgence of Bisaria (1985) on the role of textbooks as the textbooks through which students gain indirect experience about the world, make their contributions to the low performance of girls in education by transmitting sex stereotype images. The impacts of illustrations are indelible from the memories of learners. As to

check the balance of gender images in grammar parts, pictures and activities related to this were assessed. Table IX shows the images of these in the textbooks.

Table IX: Images of Gender in the Textbooks.

Characters	f	Gender						Tests	
		M		F		Common		T-value	P-value
		f	%	f	%	f	%		
Gender referenced topics	28	21	75	3	11	4	14	1.34	.801
Proper Nouns	199	129	65	70	35	-	-	1.80	.147
Pronouns	40	21	53	19	47	-	-	-.32	.046
Common nouns	46	30	65	16	35	-	-	-1.75	.003
Adjectives	19	12	63	7	35	-	-	-1.00	.007
Total	**332**	**213**	**64**	**115**	**35**	**4**	**1**		

According to the Table IX, 64 percent of topics and grammar parts reflect male features. Twenty-one (75%) of the topics reflect male characters and 4 (14%) are balanced. Parts of grammar in favor of male are 65 percent, 53 percent, 65 percent, and 63 percent in proper noun, pronouns, common nouns and adjectives respectively. The result shows significant difference between male and female in pronouns ($t=-.32$, at $df=5$, $p<.046$), common nouns ($t=-1.75$, at $df = 5$, $p<.003$) and adjectives ($t= -1.00$, at $df = 5p<.007$) while there is no significant difference between male and female topics ($t= 1.34$, at $df=5$, $p<.801$) and proper nouns ($t= 1.80$, at $df = 5$, $p<.147$).

On the other hand pictures also communicate with different gender image. In this regard the finding shows that from the total pictures, 36 percent,

reflect only male, 13 percent only female and 51% reflect both male and female presentations. From this 51 percent, 25 percent are male dominated while 17 percent are female dominated pictures, the rest being balanced (See Appendix-H).

This result shows significant differences between male and female pictorial presentations in the textbooks and this favored male.

CHAPTER V

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

Summary of the Findings

The data presented and discussed were directly related to answer the leading research questions presented at the outset of this study. Accordingly, the finding for the question 'is the layout format appropriate to the level of the learners?' showed the following result.

With regard to organizing parts 83 percent of the textbooks have content pages, 67 percent don't have introduction, 83 percent do not have summaries, 50 percent do not have glossary part and 100 percent (all) do not have provision of references.

In order to answer the question, typographic layout was another aspect of layout. Accordingly point sizes are found to be 12 points, which is in harmony with the standard for the grade level. But 83 percent of the textbooks didn't keep the standard for top and bottom margins. All textbooks showed inconsistency in keeping spacing. Therefore in general, the result of layout of the textbooks showed in appropriateness.

The question "Are topics in the textbooks in harmony with the objectives in the respective syllabus?" showed the following result. Regarding this the

degree of relation was categorized in three (fully related, partially related and not related).

Accordingly 61 percent of the topics were related, 6 percent were partially related and 33 percent were not related to the objectives in the corresponding syllabus. This number of partially or not related topics has shown significant number. This has brought to the answer that some contents in the textbooks are not related and not in harmony with the objectives in the syllabus.

The question of readability is analyzed by length of sentences and number of syllable per hundred words with association of close test. Accordingly, 83 percent of the textbooks are above the readability level of the respective grades, one or 17 percent is below the grade level. The average syllable and sentence per hundred words shows 233 and 9.3 respectively and reflect above the normal level of readability estimate.

The question, "are illustrations clear and related to the topics? Shows that 99.8 percent of the illustrations are related to the topics. The clarity of the illustrations is investigated by categorizing them in to illustrations with and without caption, with and without identification number /letter, labeled and not labeled. In this regard 51 percent of the illustrations are without caption, 57 percent not labeled, 44 percent without identification

mechanism. This result revealed that the illustrations are related to the topics, but were not made clear with the help of describing features.

The other question, "Do the learning exercises encourage problem solving?" are assessed and the finding is as follows. There were seven types of items under the main categories, objective and essay. The objective types comprised 53 percent of the distribution and the essays 47 percent. Within each category there were variety of items. But the result shows that the distribution is dominated by simple memorization items (objectives). Even the essay parts were found not using inquiry (Problem solving) procedures.

Gender balance in the textbooks was analyzed in terms of gender related topics, usage of grammar parts, pictorial presentations and activities. Accordingly 64 percent of grammar parts/ topics favored male. On the other hand 36 percent of pictures reflect male, 13 percent female and 51 percent both male and female. From this 51 percent, 25 percent are male dominated and 17 percent female dominated, while the rest are balanced. In all aspects where male and female features are considered, the result favored male features.

Conclusions

Textbooks provide a level of content expertise in an organized and logical arrangement that teachers may not possess. Textbooks can be considered as curriculum in school and classroom. As Aggarwal (1996) stipulated, textbooks are companions of students and complement existing skills by providing more able teachers with resource that increase their effectiveness.

Hitherto in instructional process textbooks couldn't be replaced by other technologies. As Douglas Pearce (1982) disclosed for the immediate future the textbook is likely to retain its primary among the instructional materials.

For this indispensable instructional material, maintaining its quality becomes imperative.

Harmony of the text with the objectives of the subject, up to datedness, adaptability to the abilities and interest, portraying gender balance, reinforcing problem solving, appropriateness of learning exercises, physical qualities sufficient and appropriate illustrations are some of the qualities of textbooks.

Though quality of textbooks is not an absolute concept, adapting it to the users is the responsibility of those in the continuum.

In this study it was not possible to go through all textbook qualities except evaluating layout, objective content relation, readability, appropriateness of

Illustrations, learning exercises and portrayal of gender features of the textbooks.

With this in mind, the qualities of primary school textbooks are evaluated against sub categories developed by the researcher and some standards developed by other scholars.

Accordingly, on the basis of the findings and discussions made, it can be concluded that:

a) The authors have no relevant experience and training in preparing textbooks.

b) The point sizes of the content of textbooks are found to be appropriate to the grade level they are prepared for, while other typographic layouts such as margins and spacing were inappropriate. In connection to this the textbooks didn't contain an important organizing parts such as introduction, summaries, glossary and references and are inappropriate in this regard.

c) Significant number of topics in the textbooks are not in harmony with the instructional objectives in the syllabus

d) Readability level of the textbooks is not appropriate to the corresponding grade level.

e) Illustrations in the textbook are related to the respective topics they are prepared for, but they are not clear.

f) Learning exercises were distributed through variety of items, but do not encourage problem solving.

g) The textbooks portrayed gender bias, and this favored male.

Recommendations

Improvement in the quality of education depends to a greater extent on whether relevant and books of high quality and other learning materials can be made available to teachers and students. This quality has important implication in educational policies, in the implementation of education objectives, in the practical application of textbooks in the classroom and in the way textbooks are designed and evaluated.

With this understanding, some qualities of primary school textbooks are evaluated and conclusions were drawn from the findings. Based on the findings and conclusions, the following recommendations are forwarded.

a) The answer for the question of who should prepare textbooks doesn't refer to an individual person of a single qualification. There seems that the common practice of having only curriculum developers as full time authors has not proved satisfactory. Therefore, it is more important to set up a team in which subject matter specialists, practicing teachers, learning specialists and graphic designers and others (as required) are assigned, and work together.

b) Though it seems untimely to suggest that textbook authors should take formal course regular training, their experience in line with the level of the text they are preparing and prior adequate training becomes an indispensable. It is found that this is not satisfactorily done. Therefore, in selecting group of authors for primary school textbook preparation,

their background in teaching in the teacher training institutes and primary schools need to be emphasized and adequate training provided.

c) In order to maintain the quality of textbooks, the criteria for preparing and evaluating textbooks should be known to all in the continuum. Therefore these criteria mentioned in this study and in other literatures need to be clearly prepared by textbook publishers, Oromia Education Bureau in particular (OEB), and be made known to the stakeholders.

d) Attention has to be given by the Regional Education Bureau to correct and improve these textbooks in line with the findings of this study and others, as required.

e) The Regional Education Bureau has to revise the textbooks in line with the findings of this study; and conduct a thorough and comprehensive study on the other aspects of textbook quality.

f) As experience shows it is the responsibility of the Regional Education Bureax to prepare and evaluate primary school textbooks in the region and to some extent Institute for Curriculum Development and Research (ICDR). Practically it seems difficult to one to evaluate and improve ones own work. Textbook preparation and evaluation strategy would be much better if an independent commissioned bodies are invited and perform the mission. At least the question that who should evaluate textbook requires a serious attention. This and other issues pertinent to textbook preparation and evaluation can be clear if there exists textbook policy. Hence, it becomes imperative to have textbook policy at national as well as at regional level, which will determine the strategies for textbook preparation and evaluation.

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Appendix-A.

Primary School textbooks of Oromia Region

Textbook	Year of publishing	Textbook	Year publishing
Afan Oromo Grade 1	1995	Social studies Grade 5	1995
Afan Oromo Grade 2	1996	Social studies Grade 6	1996
Afan Oromo Grade 3	1997	Social studies Grade 7	1997
Afan Oromo Grade 4	1998	Social studies Grade 8	1998
Afan Oromo Grade 5	1995		
Afan Oromo Grade 6	1996		
Afan Oromo Grade 7	1997		
Afan Oromo Grade 8	1998		
Amharic Grade 5	1998		
Amharic Grade 6	1997		
Amharic Grade 7	1996		
Amharic Grade 8	1995		
English Grade 1	1995		
English Grade 2	1996		
English Grade 3	1997		
English Grade 4	1998		
English Grade 5	1995		
English Grade 6	1996		
English Grade 7	1997		
English Grade 8	1998		
Mathematics Grade 1	1995		
Mathematics Grade 2	1996		
Mathematics Grade 3	1997		
Mathematics Grade 4	1998		
Mathematics Grade 5	1995		
Mathematics Grade 6	1996		
Mathematics Grade 7	1997		
Mathematics Grade 8	1998		
Environmental science Grade 1	1998		
Environmental science Grade 2	1999		
Environmental science Grade 3	1997		
Environmental science Grade 4	1998		
Natural Science Grade 5	1995		
Natural Science Grade 6	1996		
Chemistry Grade 7	1997		
Chemistry Grade 8	1998		
Physics 7	1997		
Physics 8	1998		
Biology Grade 7	1997		
Biology Grade 8	1998		

Appendix -B

EMPDA STANDARD TEXTBOOKS SIZES

Size A4

21 x 29.7 cm

Borders:

Top----- 2.00 cm

Bottom- 2.50 cm

Left ---- 1.50 cm

Right --- 2.00 cm

= Text area

Size A5

14.8 x 21 cm

Borders:

Top------ 1.50 cm

Bottom-- 2.00 cm

Left ----- 1.30 cm

Right --- 1.50 cm

= Text area

12 x 17.5

Size B5

17 x 24 x 24 cm

Borders:

Top------ 1.50 cm

Bottom-- 2.00 cm

Left ----- 2.00 cm

Right --- 2.50 cm

= Text area

12.5 x 20

Recommended Body Text Point sizes

For different Ages of children

Grade	Age	Types Point Sizes With leading	
		Amharic	Latin
Kindergarten	3-6	22-24-30 Plus 4 point leading	20-24-36 Plus 4 point leading
1-2	7-8	14-16-18 Plus 2 point leading	14-16 Plus 2 point leading
3-4	9-10	14-16 plus 2 point leading	12-13-14 plus 2 point leading
5-8	11-14	12-13 plus 2 point leading	12 plus 2 point leading
9-12	15-18	12 plus 2 point leading	12 plus 2 point leading

Source: EMPDA

Educational Materials Production and Distribution Agency

Appendix-C

Objectives and Contents of Selected subjects and Chapters

1.Environmental Science Grade 3

Chapter objectives	**Chapter topics**
Chapter One-Man and his life After these topics the students should be able to: - - Understand what nutrition is, feeding, food system, and importance of food to human body - Understand the way food is protected. - Know basic methods of living and exercise self-management.	1.1 Food and nutrition 1.1.1 Classifying food by their use 1.1.2 Balanced diet 1.1.3 Keeping food clean 1.1.4 Eating discipline 1.2 Living conditions 1.2.1 Planning forces of work 1.2.2 Time
Chapter three-Our Natural Environment - Know types, parts of seeds, disruption of seeds, germination of seeds, and methods of preserving seeds. - Study conditions necessary for plants and pressure specimen - Produce vegetables by using grader - Classify domestic animals - Identify animals around them, collect small animals (insects), study and reproduce them - Understand matter, classify and tell their use - Understand natural phenomena, their characteristics and change.	3.1 Plants 3.1.1 Seed 3.1.2 Things necessary for plant growth 3.2 Animals - Domestic animals - Wild animals 3.3 Matter 3.3.1 What is matter 3.3.2 Elements 3.3.3 Compounds 3.3.4 Natural phenomena - Sound and its formation - Instruments of music - Friction and weight

Objectives	Contents
- Unit One -Whole Numbers 1.The whole number up to 1,000,000 - Read and write large whole numbers up to 10,000 - Distinguish among cipher, numeral and number - Distinguish between a digit table and a digit value and tell the place value of a digit within a numeral - Represent a given whole numbers in worlds, using a numeral and as a sum of multiples of powers of ten - Compare and order large whole numbers up to 10,000	Whole number up to 1,000,000 Table of digits • Comparing numbers • Cipher and numeral; digit table and digit value • Forming numbers as sums of multiples of ten into 10,000 • Comparing ordering these numbers.
2. Powers of tens and their multiples - Find the powers of 10 (up to 10^6) by successively multiplying the gained power of 10 by 10 - Find the tenth parts of the powers of 10 by successively dividing the gained power of 10 by 10.	- Powers of tens and their multiples 10^2, 10^3, 10^4, 10^5, 10^6
3. The whole numbers up to 1,000 Form whole numbers up to 1,00,000 from multiples of powers of 10 - Read and write whole numbers up to 1 million.	. Calculating with multiples of powers often, and up to 10^6 . Solving practical problem
4. The whole numbers up to 1,000,000 . Form whole numbers up to 1,00,000 from multiples of powers of 10 - Read and write whole numbers up to 1 million.	- The whole numbers up to 1,000,000 - Reading and writing whole numbers up to 1,000,000
5. Comparing and Ordering Whole Numbers up to 1,000,000 - Compare whole numbers which are greater than 10,000 - Order whole numbers up to 1,000,000	- Comparing and ordering whole number up to 1,000,000
6. Calculating With Whole Numbers up to 1,000,000 - Calculate with whole numbers up to 1,000,000	- Calculating with whole numbers up to 1,000,000
7. Units of Length - Know the stricture of length units known from lower grader, m, dm, cm, mm, and km. - Objective	- Units of length - structure of the system of the units of length Contents

- Know the stricture of length units known from lower grader, m, dm, cm, mm, and km. - Know the conversion methods of length measurement - Compare given length measurement, using <, = or > - Compute with length measurements	- Units of length - structure of the system of the units of length - conversion of length of measurement - comparing length measurements - calculating with length measurements.
8. Decimal Writing of Length Measurements - Write length measurements expressed in units using decimal form with one - Unit and vice versa - Convert length measurements.	- Decimal writing of length measurements, - Length measurement expressed in 2 unit - Converting length measurements
9. Word problems Containing Length Measurements - Solve word problems involving length leasing the operate algorithm.	- Word problems containing length measurements . Solving problems of application using certain general steps of solution (algorithm) . the importance of a sketch or a table for facilitating the solution process
10. Equations and Inequalities - Distinguish between open and closed linear equation and inequalities in our variables - Solve open linear equations and inequities in one variable - Determine which closed sentences are true and which one is false.	- Equations and inequalities . closed and open equations and inequalities . closed equations or inequalities whose true values are true or false
11.The whole numbers greater than 1,000,000 - Read-write compare, and order whole numbers greater than 1,000,000 - Calculate with whole numbers greater than 1,000,000 Objective	- The whole numbers greater than 1,000,000 . gaining whole numbers which are greater than 1,000,000 . comparing and ordering such numbers . calculating with numbers greater than Content
	1,000,000 - . gaining further powers often, decimal

	system.
12.Units of Mass - **Know the structure of the units of mass g, kg,, and become familiar with mg.** - Know the conversion methods of measurement of mass. - Compare measurements of mass using the relation signs <, =, or >	- Units of Mass . introducing mg. Their structure . converting and comparing measurements of mass . calculating with measurement of mass . solving related problems
13.Succession of the whole numbers - Determine the predecessors and successors of whole numbers	- Succession of the whole numbers . Natural succession using the "less than" relation.
14. Comparison of Several Numbers - Compare two or more numbers or quantities using the less than relation and understand the transity of the less than relation	- Compression of several numbers . Comparison two and there numbers . Working with inequalities
15. Units of Time - Know the structure of time units - Convert measurements of time from one unit to another - Compare time measurements - Distinguish between 'period and movement of time and determine each properly	Units of time . Units of time and their structure . comparing and converting measurement of time . Calculation of periods or movements . Problems of motion
16. Equations involving Products - Know the condition for which the product of two numbers will be come zero - Determine the solutions of equations of the kind X x 15 = 0, 14 x y = 0 - Solve equations involving one or two variables of following kind 1) a. x = b, (2) x. y= a.	- Equations involving products . Solving equations involving products . Equations which contain a factor zero or whose product is zero . Equations with one or two variables
Objective	Content
- **17. Estimating and Measuring** - Know the importance of estimating in daily life Know the symbol for approximation ≈ and use if in writing	Estimating and Measuring the importance of estimating magnitude in daily life

appropriate values of measurement	. linear measuring and its exactness . approximate values as results
18. Rounding Whole Numbers - Know the rules of rounding "down" or "up" or off and use the in rounding whole numbers and magnitude to the required multiple of power of 10.	- Rounding whole numbers . rules for rounding to tens . methods of rounding to hundreds, thousands etc. . rounding magnitudes
19. Rough Calculations of Products - Know the methods of rough calculation and use if for determining the rough calculations of products.	- Rough calculations of products
20. Rough Calculation of quotients - Know the method of rounding the dividend and that of devisor and use their knowledge for performing the rough calculation of quotients.	- Rough calculation of quotients- Calculating with favorable approximate values Perception for performing rough calculation of quotients
21. Representing Whole Numbers on a Number Ray - Know the notions of a "number ray "and "unit" of scale Represent whole numbers by points on number ray and determine the whole numbers represented by points on a number ray.	- Representing whole numbers on a number ray. . notions of a "number ray" and "unit" . different units depending on the numbers , which are to be represented.
22. Segment diagrams - Know what a segment diagram is like - Read and interpret a given segment diagrams - Draw segment diagrams of given data Objective	- Segment diagrams . method for drawing single segment diagram . Introducing segment diagrams consisting of too rays perpendicular to each other . drawing and reading segment diagrams of Content
23. Marking Points in a coordinate Plane - Know the notions of "ordered pair " and coordinate system" - Represent points on a coordinate system by ordered pairs of numbers and vise versa.	- Marking points in a coordinated plane . the notion " ordered pair" . notion of a "coordinate system" . methods of representing points

Unit 3. Geometry	Unit 3. Geometry
1. Positional relations between points and straight lines - Know the relationship between points and straight lines, know the concepts line on "passes through" and apply them in solving related problem - Join two points by a straight line and be able to label points and straight lines.	- Fundamental Geometrical conceptions . positional relations between points and straight lines . points and straight lines . Joining points, "lies on", and "parses through . labeling points and straight lines
2. Positional relations between two straight lines "intersecting" and "intersection point" of "straight lines" - Understand the concepts "intersection point" parallel" and "perpendicular" lines and their symbols and apply them in solving related problems.	- " intersecting" and "intersection point" of straight lines - positional relations between two straight lines
3. Rays - Understand the notions "ray" and "end-point of a ray " and can label rays.	- Rays . from a point on a straight line . Notions "rays" and "End point of a rays"
- **4. Line segments, extending line segments** - Understand the notion line "segment" and distinguish line segments from rays and limes - Extend a given line segment indifferent deviation Objective	. the "between" relation for points on a straight line . different possibilities of extending line segments. Content
5. Copying line segments - Copy a line segment on a ray or on a straight line	- Copy a line segment on a ray or on a straight line - Construction and its description - Copying a line segment by extending a

	line segment by another one,
6. Comparing line segment - Compare any two line segments (by visual estimation, by measuring or by copying) and use the comparison to classify triangles.	. Comparing line segments by measuring or copying . Symbols <, =, or > . Isosceles and equilateral triangles
7. Planes - understand the notion "Plane" and the positional relations between points, straight lines and plows and use them in solving appropriate problems.	- planes and drawing planes - Positional relation between straight lines and plans - Mutual position of three straight lines in a plane
8. Direct lines - Know the notions "directed line-segment", "directed straight lines".	- Introducing "direct line segment", "direct straight lines"
Translations **9. Mechanical translations-moving objects mechanically** - Recognize the translation of items as a kind of movement and explain them with appropriate examples - Distinguish this special movements from others	- Translations . mechanical translations . features of translating an object
10. Original and image points of a translation - Recognize that in geometrical translations pairs of points of the plane are formed - Represent and denote a translation and use the notions of "original" and image "correctly"	- Ideas regarding the content about a translation as a geometrical mapping Notions: "Original" and "image", transformations arrow.
11. Translation and translation arrows - Know how to denote and write translations using ordered pairs formed by original and the corresponding image of the translation and its representation by a directed segment. Objective	- Introducing length of a "translation" - Features of arrow of the same translation - Denoting translations by an arrow Content
12. Constructing images for translations - know the contraction steps for, constructing the image points for a translation - construct the image points for given points and a given translation and to describe the construction	- Constracting image points when the original points and the translation are given - Description of the constriction

13. Properties of translations - recognize the properties of a translation - formulate the properties of a translation using own words.	- Positional relations of two straight line with translation (parallels, perpendiculars) - Constructions of images of two straight lines.
14. Further properties of translation - have a further might into the properties of translation and apply them for solving appropriate problems	- positional relations of two straight lines with translation (parallels, perpendiculars) - constructions of images of two straight lines.
15. Images of figures by translations - Construct the images of triangles and quadrilaterals for translations by constructing the images of their vertices.	- Properties of originals and images of triangles and quadrilaterals by translations Construction of images of triangles and quadrilaterals by translation

Unit 3 - compare people, animals and objects using adjectives - read the short passage and remember the main details - read and spell the new works correctly	**What we do every day** 1) what people in a family do every day Cooking, fetching water, sweep, feed hens--- 2) Spelling words (read, wash----)
Unit 5 - ask and talk, about the amount of materials - developing reading skills of reading for understanding - identify countable and uncountable nouns	. Telling The Time 1) Time of waking up, working different activities--- 2) Writing/sentences in correct order of the passage 3) Spelling words
Unit 7 - Describe what they or other people: /Where they do their work etc. - develop reading skills of guessing words from content and reading the main details - read the words correctly - describe people's works - make and write sentences of their own in response to the questions given.	- **Talking about yesterday** 1) What did your partner do yesterday (talking in turns) - read and do [the boy who shouted, "Lion"] 2) Finding words ending with '-ed' in the passage 3) Making sentences about what a family did yesterday
Unit 9 - ask and say where things and people are - read the passage and guess words from context - understand the massage of the passage - match words and pictures - make correct sentences by using the prepositions.	Comparing people 1) comparing height, width, emotion, strength---- . Read and Do [The laziest boy] 2) Answering questions from the passage (comprehension) 3) Completing sentences with correct words in the passage
Unit 11 - ask and say what people can and can't do - read the passage or table and transfer the information - use the words in sentences - make and write sentences about themselves using the structures discussed.	**= Where places Are** 1) names of buildings (house, hotel, shop, clinic, church--- -] and 2) making sentences with names of buildings = A blind man's walk (Read & Do) 3) Finding sentences n the passage for objects. 4) Questions from the passage 5) Writing sentences about where you sit 6) Making 3 sentences about places in your town

Unit 13 - Ask and say what people do regularly - use the words in sentences - Write sentences of their own	**= Buying things** 1) Talking about amount of things using "much" 2) tailing the price of things 3) Writing a sentence about things = Read and Do [candies please!) 4) Answering questions from the passage 5) Writing sentences in the correct order in the passage 6) Finding prices of things 7) Making 3 sentences of their own.
Unit 15 - Tell what people must and must not do - develop skills of guessing meaning from a context and reading for information - use the words in sentences - write sentences of obligation by using "must"	**= Talking about objects** 1) guessing the objects and their function 2) telling from what objects are made 3) making sentences about a table, a bench, a stool, a tin, a coin---- 4) naming objects = Read and Do [Ethiopian Jeweler] 5) identifying plurals nouns in the passage 6) Making 3 sentences about mothers jewelry
Unit 17 - ask and say why people did things - develop reading skills of guessing words from a context and reading for information - guess meaning of new words from a context - give reasons why they did things using _ ve - write three sentences about themselves	**= Talking about work (speak and write)** 1) telling place of work with friends 2) telling about what people do by looking to the picture. = Read and do 3) identifying words from passage
Unit 19 - ask for information - read for information - use the words in sentences - ask information about animals, people and objects - write correct question forms to ask for information	**= talking about animals (speak and write)** 1) matching animal names with their picture 2) writing a sentence about animals Read and d (Lions) . questions from the sentence (true/false) 3) completing a sentence with "usually" or "sometimes"

Unit 21 - take about journeys - read passages about journeys and understand the main details - use the words to talk about journeys - use preposition in sentences correctly	**= Talk about water (speak and write)** 1) conversation about thirsty and drinking water 2) making a sentence about water content of different kind of food 3) uses of water 4) spelling words Read and do (Water) . Questions from the passage . making sentences about water
4.Grade 6 social Studies Objectives in the syllabus ⇨ Chapter one. The Universe 1. understand what universe and its parts · understand shape, size, motion and phenomena as well as natural situations · understand the availability's distribution and conservation of the major natural resources of the world. · Understand the relationship between the development of natural resources and population	Contents of the text 1.The Universe · what is Universe · Universe bodies · The Earth · Globe, map and calculation of time · How earth is formed · World population
⇨ **Chapter 3- Great thoughts of the world** · understand the major thoughts of the world . show effort to develop new ideas of themselves . tell the role of religion in the society . list name of the great thinkers of the world	3. Great thoughts of the world · religion · (discovery · Studying the universe · Arts and crafts · Literature · Music · Philosophy
Chapter 5. Historical heritages - Know the major spiritual and material heritages - Understand what historical heritage is, know the importance of culture and historical heritage.	5. Historical Heritages (relics) - Heritages - Contribution of writings and arts - Utilize and conservation of heritages

Chapter 7 Interrelation of nations and international organizations . Understand the relationship between world nations and major world organizations . Describe the starting and development of major economic organizations. - describe the importance of economic organizations to the unified world - describe the difference and similarities between different economic organizations of the world. Tell the reasons for new world social systems	7. Interrelation of courtier and international organizations . Economic development . Relation of nations . Major orgies of the United Waters Organization . Socio-economic systems of the modern world.
5.Afan Oromo Grade 6 **Unit 1** At the end of the lesson the students will be able to - rewrite a given text	1) meaning and sound of words 2) Opposites contextual meaning of words long and short sound, synonyms, fill in with correct words
Unit 3 Use punctuations where ever appropriate	1) meaning comprehension from passage (m. choice) 2) meaning comprehension from passage (true-false 3) Oral and written exercise 4) matching synonym phrases 5) completing sentence by with right words from listed (given) words 6) Constructing sentence from a given words 7) identifying adjectives 8) " adverbs (g)
Unit 5 - identify literal meaning of words	1) comprehension questions from the passage 2) Providing meaning of words 3) sentence construction 4) Adding suffixes to words 5) reproducing words +(6)
Unit 7 - identify and tell synonyms and opposite words	1) comprehension questions from the passage

	2) Contextual questions from the passage 3) Complete sentences from the passage 4) elongating short sentences 5) identifying adjectives, adverbs 6) providing meaning of words in context. 7) reproduction of words
Unit 9 - identify and tell varied meaning of words due to short and long sounds.	1) comprehension question from the passage 2) Matching words and make compound words +(3) 3) contextual meaning and sentence contraction 4) understanding statistical table 5) making statistical table from a given statement data. 6) making statistical table from a given statement data 7) questions from statistical data.
Unit 11 - Read short and long words	1) comprehension questions from the passage 2) contextual meaning of sentences from the passage 3) constructing sentences with the words in the passage 4) getting data from graphs
Unit 13	1) comprehension questions from the passage 2) Providing meaning of words as used in the passage 3) forming a paragraph from a given disordered sentences. +(4)
Unit 15 - identify contextual meaning of words and phrases. - Show change of meanings in words and letter when ordered in different ways.	1) identifying the major /essence of the passage 2) comprehension questions (true-false) 3) complete sentences with the right statement given in multiple choice 4) questions from the passage

	5) comprehension questions from the passage
Unit 17 - use logic in discussion, debate and speech	1) comprehension question from the passage (comparison of similarity and difference of dog and cat) + 2 + 3 exercises 4) writing a letter of different purpose
Unit 19 - Read in better way	1) Ordering phrases and sentences according to activities in the passage 2) Write the activity in the passage in order of their occurrence in the passage 3) Writing describing activities interns of time 4) preparing a passage from a given phrases.
Unit 21 - Gather data from different sources	1) debating 1) Writing points of difference between two debaters 2) making a debate on a given ideas 3) writing a shorter idea in an extended from 4) identifying phrases which are not related to the others 5) Providing more than one meanings from phrases.
Unit 23 - Differentiate columns in a text.	1) Answer questions form the passage 2) Matching similarities 3) Telling experiences to the class 4) Understanding the meaning of words contextually 5) Understanding the meaning of words contextually
6.Biology Grade 7- Chapter 1 At the end of the lesson the students will be able to . tell what single-celled organisms are . identify single celled organisms by using microscope . know the role of single celled organizing in their daily	**Text content** 1. Single celled Organisms . what is Biology . micro-organisms and discovery of microscopes

life	. single celled plants . single celled animals . bacteria
Chapter 3. Habitats - Know the areas of natural community habitats - Study the leaving conditions of organisms in their natural habitats - Exercise the methods of collecting and preserving organisms - Know the concept of pyramidal counting of the relationship of natural community	**3.Habitats** - Different types of habitats - Studding a habitat - Community and succession - Food relationship
Chapter 5. Insects - Understand the character, life history and structure of some insects - Identify the role of spreading diseases and harm of some insects - Identify the feeding system of some insects - Know methods of controlling harmful insects	**5. Insects** - External structure of insects and their functions - Metamorphosis in insects - Life history of some insects - Social insects
Chapter 9. Circulatory system - Explain how air and water and other food are transported in to our body cells - Understand the structure of blood circulatory system and the role of lymphatic system to the circulation - Explain how HIV Aids is transmitted and ways of prevention	**9.Blood Circulatory System & Lymphatic system** - Importance of blood circulation - blood tubes - the heart - blood circulation - blood and its contents - types of blood - lymphatic system - blood circulation and health

APPENDIX -D

Coding Sheets

1.Coding sheet for objective - content relationships

I- General

1. **Textbook:**
2. **sample unit of analysis:**
3. **Unit of analysis:**
4. **Coder A /Name: b/qualification c/ Subject :**

Major: Minor

6. coding date a/ started b/ ended c/total days

II- Instruction:- critically observe the objectives and contents under the specified chapters and decide whether the contents are **related , partially related** or **not related** to the objectives by marking 'X' under each variable .Number of contents is determined by counting the sub topics or lessons in the respective chapter /unit.

Identification Nº of chapter/ Unit	Number of contents/sub-topics	Degree of relation			
		Fully related	Partially related	Not related	Remark

2.Coding sheet for textbook layout-

I. General Information:

A. Textbook layout:

1. Textbook: _____

2.Sample Unit of analysis: *The Textbook*

3.Unit of analysis: textbook Organizing Parts

4.Coder a/Name: /b/ subject, major Minor

5.Coding date a/ started -b/end c/Total day

II. Instruction: Enter " X " if the part is provided and "N" if not provided the organizing parts.

N^{O}	Organizing Parts	Available
1	Headings/topic	
2	Title Page	
3	Contents page (table of contents)	
4	Introduction	
5	Typographic cuing	
6	Summary	
7	Glossary	
8	References	

B. Page layout 1 sample unit of analysis: Chapter

Chapter	Headings		Contents		Captions	
	Font size	Line spacing	Font size	Line spacing	Font size	Line spacing

3.Coding sheet for Learning Assignments in the textbook

I- General Information

1. **Textbook:_____**
2. **Sample Unit of analysis: *Chapters***
3. **Unit of analysis: Items_____**
4. **Coder : a/ Name _____b/ qualification _____C/ subject, major_____ Minor_____**
5. **Coding date a/ started _____b/end _____c/Total day_____**

II, Instruction. Provide the number and Type of items and provide the total number and the serial number of items which are not related to the respective chapter/topic.

Chapter/ Unit	Total number of items	Type and Number of Items						
		Objective type					Essay	
		True-False	Multiple choice	Matching	Completion	Short answer	Description	Project

4.Coding sheet for textbook readability

General Information

1.Textbook_____

2.Sample Unit of analysis:

3.Unit of analysis:

4.Page(s) of the selected paragraph in the text: _____

5.Passage member: _____

6.Coding date: a/started _____b/end_____C.Total day_____

7.Coder: a/ qualification _____b/subject: Major_____: Minor_____

II. Instruction:-

1. There are three passages selected from one textbook and attached to this count out exactly 100 word each, commencing with the beginning of a sentence
2. Count also proper nouns, initializations, and numerals as words.
3. Count the total number of syllables in the hundred word, passage
4. Count the number of sentences in the hundred words, estimating the length of the fraction of the last sentence to the nearest one - tenth.

A word is a group of symbols with a space on either side, thus Joe, IRA,1945,and & are each one word
*A syllable a phonetic syllable. Three are as many syllables as vowels sounds, for example, stopped is one syllable, and wanted is two syllables. 1945 is four syllables, IRA is three syllables, and & is one syl*lable.

*5.*Enter the number of syllables and sentence of each passage per 100 words in the table below.

Passage No.	Number of sentences per hundred words	Number of Syllables per hundred words

5.Coding sheet for Illustrations in textbook

I. General Information

a. **Textbook:_____**
b. **Sample Unit of analysis:**
c. **Unit of analysis:**
d. **Coder a/ Name: _____b/Qualification c/ Major _____Minor_____**
e. **Coding date a/ started: _____-b/end_ _____c/Total day_____**

II. Instruction:- 1 observe the indivi8dual illustration in the textbook and see its relation with the lesson it is meant for and determine whether it is related or not to the lesson

2. **Enter the identification mechanism/ number, letter topic/...) against the variables in the table**

Item/variables	Chapter/unit	Pictures	Diagrams	Table	Graphs	Maps	Total
Total Number of illustrations							
Number of illustrations ***not related*** to the topic/lesson							
Number of illustrations related ***to*** the topic							
number of illustrations ***with caption*** /description							
number of illustrations ***without caption***/ description							

number of illustrations ***not clear*** to understand							
number of illustrations ***with identification number***/letter							
number of illustrations with labeling							
number of illustrations without labeling							

6.Coding sheet for gender balance in the textbook

I. General Information

1.Textbook:_____

2.Sample Unit of analysis:_ chapter /Unit

3.Unit of analysis

4.Coder. a/ Name :_____b/ qualification _____C/ subject, major_____

Minor_____

5Coding date a/ started :_____b/end _____c/Total day_____

II . Enter the required information depending on specific items/variables) of the category

1.Write down number of topics in the selected chapter under the following variables give serial number for the topics. In the chapters of the textbooks.

Chapter	a/ topics with gender reference	b/Topics with Male reference	c/topics with female reference	d/Topics with common gender reference

2.Grammar:Tally and indicate the number of the following grammar parts(Proper nouns; eg.Chaltu,Abebe, Kumsa…etc: Pronouns; he (Isa) she (Ishe) ,they(isaan): Adjectives;beautiful ,hadsome ,weak(miidhagduu,bareedduu miidhagaa, bareedaa dadhabaa, dadhabduu…),… etc therespective chapter and page depicting gender character

Chapter	Proper nouns		2.2.Pronouns		2.3.Adjectives		2.4. Common				Common nouns (e.g. Farmer, teacher, Doctor…	
							Proper nouns		Pronouns			
	F	M	M	F	M	F	M	F	M	F	M	F

3.Write down the title and type of a activity observed and enter with " X " under the respective gender category. Eg. type cleaning, agriculture military the medical . . . .) 06-6

Title of the activity	Type	Male	Female

5. List the type of occupations in the text and indicate by entering 'X' under the respective gender (E.g. teacher, farmer, technician etc) 06-7

Chapter	Occupation	Male	Female

5. Pictorial contents and presentations. Identify the number of pictures in the selected chapters and indicate their number and pages they are found in under their respective gender.

Chapter	Item	Total	Pages they are found
	Total number of pictures in the chapters		
	Total number of pictures with gender reference		
	Total number of pictures with male reference		
	Total number of pictures with female reference		
	Total number of pictures with both sexes		
	• Male dominated		
	• Female dominated		
	• Balanced presentation of both sexes		

6.6. List down activities in the picture by sex- . E.g. House hold, agriculture, military, student life ... etc

Activity	Male	Female	Unidentified	Page

Appendix -E Close Test Result

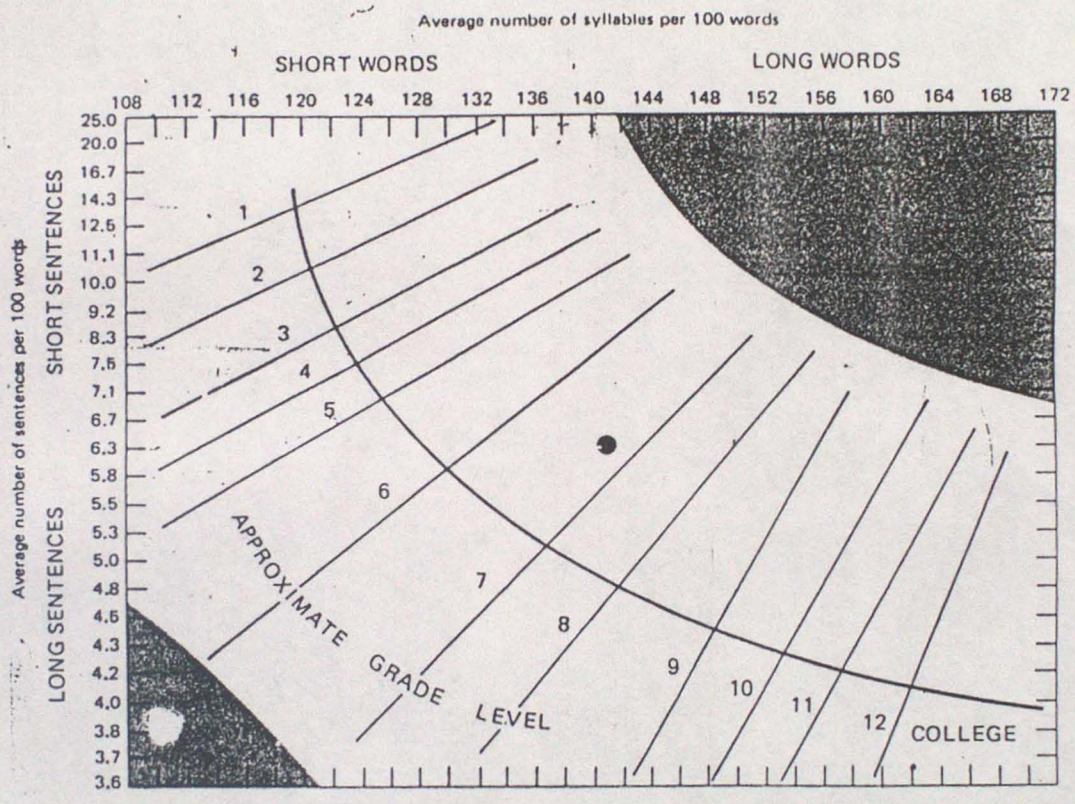
No.	Environmental Science	English	Social Studies	Afaan Oromo	Biology
1	58	57	65	64	53
2	52	49	56	60	53
3	42	46	53	57	52
4	31	45	51	57	50
5	28	43	47	57	45
6	26	41	47	52	44
7	21	38	45	50	43
8	18	34	36	48	35
9	17	33	33	42	35
10	17	32	32	42	32
11	15	32	31	40	32
12	13	29	30	39	30
13	13	28	29	38	28
14	11	28	27	37	25
15	9	27	27	34	24
16	9	27	22	34	23
17	9	26	20	32	23
18	9	26	20	30	20
19	7	19	18	30	18
20	6	15	15	26	15
21	6	14	11	20	13
22	6	14	4	18	2
23	4	14	4	18	2
24	0	13	2	14	0
Tota	427	730	725	939	697
Mean	17.791667	30.416667	30.208333	39.125	29.041667
Max.	58	57	65	64	53
Min.	0	13	2	14	0
SD.	15.007184	12.186652	17.285277	14.341525	16.093421

Appendix -F

Fry's readability Graph

GRAPH FOR ESTIMATING READABILITY

by Edward Fry, Rutgers University Reading Center, New Brunswick, New Jersey



DIRECTIONS: Randomly select 3 one hundred word passages from a book or an article. Plot average number of syllables and average number of sentences per 100 words on graph to determine the grade level of the material. Choose more passes per book if great variability is observed and conclude that the book has uneven readability. Few books will fall in gray area but when they do grade level scores are invalid. When counting words include proper nouns but do not include numerals.

EXAMPLE:

	SYLLABLES	SENTENCES
1st Hundred Words	124	6.6
2nd Hundred Words	141	5.5
3rd Hundred Words	158	6.8
AVERAGE	141	6.3

READABILITY 7th GRADE (see dot plotted on graph)

For further information and validity data see the April, 1968 Journal of Reading and the March, 1969 Reading Teacher.

Appendix-G
Statistical t-test Result of Trial Run

Category	C_1	C_2	T-test
1. Objective content relation			
a) Number of topics	55	55	df=4,t= .00,
b) Fully related topics	55	43	df= 4 t=-0.32 , p= 0.76
C) Partially relate topics	10	12	df=4,t=-0.32, p=.76
d) not related topics	0	0	* *
2. Distribution of Learning assignments			
a) Total items	83	83	df =4*,t=000 ,p= .000
b) True-false	8	8	df =4*,t=000 ,p=. 000
c) Multiple Choice	13	13	,df =4*,t=000 ,p=. 000
d) Matching	16	16	df =4*,t=000 ,p= .000
e) Short Answer	13	13	df =4*,t=000 ,p=. 000
f) Description	18	18	df =4*,t=000 ,p= .000
g) Project	2	2	df =4*,t=000 ,p= .000
3. Number of Syllables and Sentences per hundred words			
a) Sentences	8	8	df=1, t= 1, p=.000
b) Syllables	241	237	df=1,t=1, p=0.5
4. Quality of illustrations			
a) Total number of illusrtations	67	67	,p=.000
b) Illustrations not related to the topic	0	1	t=1 , p=.37
c) illustrations related to the topic	67	66	t=1,p=.001
d) Illustrations captioned	67	66	t=1,p=.001
e) Illustrations not captioned	0	2	t=1 , p<.37
f) Illustrations not clear to understand	0	0	* *
g)Illustrations with identification number	67	66	t=1,p<.001
h) Illusrations with identification number	0	1	t=-1,p<.37
I) Illustrations with lable	65	63	t=1,p<.004
j) Illustrations with out lable	6	8	t=.000, p<.006
5.Gender related topics			
a) Total topics	56	56	t= .000 ,p=.ooo
b)topics with male reference	0	0	* *
c)topics with female reference	0	0	* *
d)topics with common gender	0	0	* *
6.Gender related grammar parts			
a)Proper nouns			
M	2	2	t=.000,p=.000
F	0	0	
b)Pronouns			
M	15	16	T=.27 ,p=.79
F	11	11	t= .000 ,p=1.oo
c) Adjectives			
M	5	6	t= 0.53, p=0.62

F	4	6	t= -1.00, P= .37
d) Common pronouns	58	58	t=----, P= .00
e) Common nouns	0	0	**
7) Pictorial contents and presentations of gender related activities			
a) total number of pictures	57	57	t=.000, P=.000
b) pictures with gender reference	2	2	t= .000, P=.000
c) pictures with male reference	1	1	t=.000,p=.000
d) pictures with female reference	0	0	**
e) pictures with both gender	1	1	t= .000, P= .00

Appendix-H

Pictorial presentations of gender issues

Character of pictures	Character of pictures in the textbooks						Total	Percent
	Environmental Science	Mathematics	English	Social Studies	Afan Oromo	Biology		
1.No. of Pictures	127	13	78	40	1	57	316	-
2.Pictures with gender reference	37	3	49	12	0	2	103	33
3.Pictures with male reference only	16	0	9	11	0	1	37	36
4.Pictures with female reference only	4	1	7	1	0	0	13	13
5Pictures with both gender	17	2	33	0	0	1	53	51
5.1.Male dominated	6	1	5	0	0	1	13	25
5.2.Female dominated	2	1	6	0	0	0	9	17
5.3.Balanced	9	0	22	0	0	0	31	58

Appendix -I

Discussion Questions for the Regional Curriculum Head

1. Is there textbook policy either at National or Regional level?
2. Is there a clear guideline for textbook preparation and evaluation?
3. How do you select textbook authors?
4. Do you think that textbook authors and editors who have participated in the preparation have appropriate experience in textbook preparation? If not what mechanisms do you use?
5. Who are the participants in textbook evaluation? And how do you select them?

Appendix-J

Number of Syllables Words and Sentences in the Selected Passages

Textbook		Passages			Average
		1	2	3	
Grade 3 Environmental Science	Syllables	689	565	752	668
	Sentences	28	25	28	27
	Words	***281***	***224***	***308***	***271***
Grade 4 Mathmatics	Syllables	416	529	726	557
	Sentences	8	19	29	18.6
	Words	***166***	***249***	***190***	***201***
Grade 5 English	Syllables	172	195	170	179
	Sentences	18	17	17	17.3
	Words	***121***	***144***	***125***	***130***
Grade 6 Social Studies	Syllables	918	999	1034	984
	Sentences	29	32	32	31
	Words	***349***	***388***	***390***	***375***
Grade 6 Afan Oromo	Syllables	729	530	503	587
	Sentences	39	24	17	26.6
	Words	***312***	***190***	***216***	***239***
Grade 7 Biology	Syllables	546	519	592	552
	Sentences	22	18	20	20
	Words	***203***	***212***	***253***	***223***