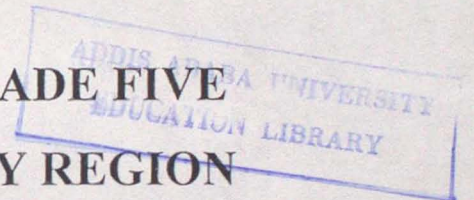


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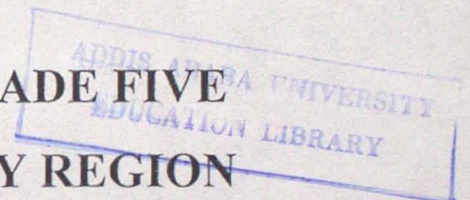


**BY
ESAYAS GEBREMEDHIN**

**July, 2007
Addis Ababa**

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**A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES
ADDIS ABABA UNIVERSITY**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF ARTS IN MULTICULTURAL AND
MULTILINGUAL EDUCATION**

BY
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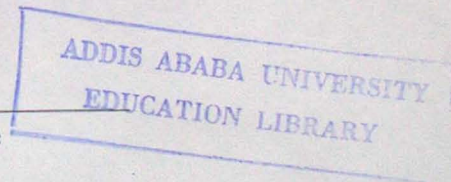
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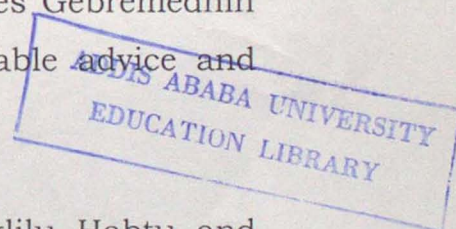
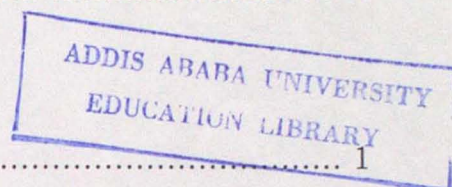


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Abstract

The study was designed to analyze the verbal and visual contents of grade five and six textbooks of Tigray Region with respect to the portrayal of gender. To conduct the research, content analysis was used. A stratified random sampling technique was employed to select the textbook analysis. In this technique, 40 percent (8 textbooks) from the total 20 textbooks were used for the analysis. On the basis of categories frequency counts were made and the frequency counts were changed into percentages. The chi-square (χ^2) statistical test was employed to analyze the data and to check whether or not significant difference existed between the two sexes.

The study revealed that there was a significant difference between the two sexes in the verbal and visual occupational representation of the two grades. In the verbal character traits, male and female sexes were depicted stereotypically, with a significant difference between male and female coverage. However, the visual character traits representation of the two sexes showed an insignificant difference. Balanced treatments were made for both sexes.

As the study result indicates, there is gender bias in textbooks and it is recommendable that textbook writers in particular and curriculum developers in general should give special attention to gender representation in the preparation of textbooks.

CHAPTER ONE

1. Introduction

1.1 Background

The very issue that this study focuses is to assess the gender representations of males and females in the textbooks of the Education Bureau of Tigray Region and to excavate the problems that facing the gender bias that came from cultural constructions of the community.

In recent decades, many countries of the world and especially the sub Saharan Africa countries have come to realize the importance of education for national development [Edda, 2000; 31]. In human development, education holds the key position to the overall progress. Therefore, education is regarded as the basis in all aspects of human development, at society and nation level. In this case, it appears to be highly discernable that there is high correlation between education and national development in general and human resource development in particular (Kumha, 1996:34).

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Today, many countries of the world have adopted policies to achieve greater sound socio-economic development through education. One aspect of the components of the development policies and strategies takes gender sensitive issues into consideration. The policies and strategies emphasize creating conducive environment and equal opportunity of access to girls in the national education system which in fact is dominated by boys. This sensitivity emanates from the fact that educational access to girls enhances economic productivity, proper family planning, and improvement in the health and nutritional status of the society (Mak, 1996:83). It also promotes proper management of environmental resources and closely linked with the reduction of poverty through women's absorption in the economy as employees and in self-employment (Edda, 2000:34).

In Ethiopia, several activities are taking place at different levels to mitigate and improve women's condition. Efforts are being exerted by governmental and non-governmental organizations to change stereotyped attitudes and increase women's participation in decision making processes of the nation (Mulualem, 1998; 3). However, the real condition of female in the country particularly in education shows low school enrollment, low participation and low performance at all levels (Ibid).

Therefore, the education of girls has particular significance to Ethiopia where economic and social development is limited by rapid population growth and inadequate development of the human resource base. One of the objectives of the policy of Ethiopia on women's affairs as quoted by Atsede is written as follows:

To eliminate legal and traditional obstacles, wrong attitudes, conviction and misconception so as to enable women's participation in decision making activities at all levels and to improve the over all condition of women, particularly those of rural women [Atsede,1995;46].

Regarding women's education, Mak (1996:83) states that policy statements alone are not enough. Policy makers and implementers at all levels must deal with complex socio-cultural realities that often impede female access to schooling. To him, it is not enough to endorse girls' and women's education in abstract terms, a priority must be given to it.

In addition to schools, media such as television, radio, newspapers and other mass media are very important instruments of shaping the attitudes and behaviors of children and their parents (Mulualem, 1998:3).Subscribing to this assertion, Kumah (1996:11-15), stated that media should expose the disadvantaged position of women and its negative impact on the economic and social development of the society.

The media can mobilize communities in the fight against traditionally established negative images of women, their subordination to the patriarchy system, and harmful traditional practices.

In spite of its century long age of modern educational system in Ethiopia, it did not change the essence of the traditionally assigned social division of labor along sexual lines [Anbesu, 1994; 7]. It had rather strengthened it through both its hidden and formal curriculum. Teaching materials are not exception since gender biased messages are reflected through textbooks and teachers (Almtsehay, 1985:52, cited in Mulualem, 1998:4).

The decisive aspect of sex bias in education is sex stereotyping, subtle but powerful messages about what constitutes appropriate behavior, roles and careers for women and men (Croll, 1991:50). Feminist thinkers and other researchers have argued that gender stereotypes lower girls' self-esteem and limit girls and boys to certain modes of behavior, course of study, and career choices; thereby preventing girls and boys from realizing their career achievement (Davis, 1984:27).

Of major concern with respect to sex role stereotyping is the extent to which sex stereotyping occurs in textbooks, which generally constitute the primary written materials used for instruction in schools. Textbooks that contain sex stereotyped content make contributions to the low performance of girls in education (Davies, 1992:24). On the same vein, Obura (1991:46) states that textbooks are symbolic of schools and modernity, and are significant phenomena in schools. In the portrayal of women and girls in a series of African textbooks, males and females are not equally represented (Kone, 1996:76).

In general, schools could be good potential instruments of eliminating gender biased messages, notions and activities; if curriculum experts, textbook writers, teachers and school directors are aware of gender issues; and by incorporating gender issues in the curriculum and avoiding gender biased messages in teaching-learning materials.

1.2 Statement of the Problem

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Human beings treat each other through the lines of race, ethnicity and sex as determinant factors of differences and relationships. As a means of inclusion and exclusion to accepted societal values and norms upon which individuals and social institutions are constructed, new siblings are socialized to behave according to established social norms. Along this demarcation, researches have shown that sex-based discrimination of representation of males and females in different social activities affects the behaviors and the life choice of both males and females within the family and the society at large (Workman & Johnson, 1994).

Arguments of inequality in gender are inconclusive. But studies of sexual stratification focus on understanding of the complexities of the social construct of gender as a means of inclusion and exclusion. One of such social construct is embedded in economic driven social motives. In economic terms, women and men are divided in such a way that they maximize production through gender specialization and the specific activities will be dependent on the economic structure of the society.

However, like most societies in different parts of the world, the Ethiopian society is stratified along different sex based gender roles, which determine and direct the behavior of males and females of all ages. In this regard, stereotypical sex-roles are reflected deeply rooted in more rigid manner in the socio-economic structure of the Ethiopian society.

Arguing for this, Tsehay (1991;14) concludes that in our society, men are expected to be aggressive, assertive, do the heavy work, fight the war, dominate all spatial ability jobs, provide food for the family, etc. On the other hand, women are supposed to be passive, care for babies, work in or near the home, do the family cooking and other home chores etc.

Constructed deep in such gender based social division of labor and differences the socio-economic setting of the Ethiopian society demonstrated gender inequalities in the socialization of male and female. Education is no exception as it is one and the most determinant part of socialization. In education peer influence and the contents and illustrations in general governs the socialization of boys and girls towards socially constructed sexual/gender behaviors and so is true in the promotion of equity and equality of opportunities (MOE; 1989; 4).

Studies done at national and regional level have shown that text books seriously reflect gender biased presentation. For example a study conducted by the Curriculum Evaluation and Educational Research Division of the Ministry of Education in 1989 on 53 primary school textbooks in the country showed that the textbooks apparently used seriously reflected male biased presentation.

Supporting this, Mulualem's (1998) research, conducted in text books of Amhara Regional State, showed that textbooks are highly male biased, which is not in line with the expectation of the national educational and training policy that makes it mandatory for both sexes to have equally presented in the text book preparation.

Though some attempt has been made at national and regional level, no research has been conducted in relation to gender bias analysis in the textbooks used by the Bureau of Education of Tigray Region. Thus, it is

difficult to conclude about the socialization of boys and girls in schools as no adequate research has unearthed the problem of gender bias in the textbooks.

Hence, it is a high time for us to look in depth at the existing gap in the textbooks, already being used in primary schools of Tigray region, this research therefore, tries to investigate whether the contents of contemporary textbooks of grade five and six of Tigray Region have gender biased (sex stereotyped) messages. Specifically, the study attempted to answer the following research questions:

1. How much fairness is there in the portrayal of males and females in different kinds of occupations?
2. Are males and females given similar personality/character trait, or are females given only "feminine" traits; and male's only "masculine" traits?
3. How much are males and females fairly covered in the illustrations?

1.2.1 General Objective

By way of answering the above research questions, the major objective of the study is to analyze the verbal and visual contents of the contemporary grade five and six textbooks of Tigray region with respect to the portrayal of female and male sexes.

1.2.2 Specific Objectives

The following specific objectives are employed.

1. to examine the level of occupational equality of representation of male and female in the verbal and visual contents of the text books
2. to identify the personality/character trait of males and females in the text books
3. to assess the roles of males and females in the illustrations of the textbooks

1.3 Significance of the Study

The study may be expected to make the following contributions:

1. The study may serve as feedback for curriculum experts, textbook writers, editors and educational policy makers.
2. The study will help curriculum developers to identify factors which affect quality of textbooks.
3. The study will give some information to educational experts, mass media experts and other concerned individuals about equal treatment of sexes.
4. The findings may give teachers some information related to gender issue, so that experts, editors and textbook writers of other regions will be aware of the issue.
5. The study may give teachers some information about gender treatment in textbooks, so that the teacher may be aware and practice equal treatment of sexes.
6. The study will serve as a source of data and information for future study.

1.4 Delimitation and limitation of the Study

The scope of this study is limited to the content analysis of gender bias to grade five and six textbooks of Tigray region. The data include eight textbooks (see Table 2). It does include neither other grade textbooks nor other regions' textbooks. In this study curriculum materials like syllabuses, teacher's guide and other related materials are not included. This is due to limited resource and time.

1.5 Operational Definition of Terms

- **Textbook** - refers to print materials used for Tigray Region second cycle primary school as source of information. This includes grade five and six textbooks of Tigrigna, Amharic, Social studies and Science.

- **Gender bias**-refer to unequal (unbalanced) treatment of the two sexes (male and female) on occupation, character traits, illustrations, and pictures.
 - Gender bias, sex bias, gender stereotypes and sex stereotypes are used interchangeably.

- **Verbal elements:** - coverage of males/females in textbooks in a form of nouns, pronouns and adjectives in verbal presentation.

- **Visual elements:** - refers to the coverage of males/females in the textbooks in a form of pictures, diagrams and illustrations.

- **Occupation/work role:** - refers to words in verbal and visual elements in textbooks for activities of farmer, merchant, doctor, nurse, teacher etc. With reference to gender.
- **Character traits:** - refers to personal attributes and behavioral quality in verbal and visual elements in textbooks with reference to gender. It is operationalized by terms like aggressive, passive, active, weak, strong, competent, etc.
- **Male:** - all activities, expressions, illustrations and textual presentations expressed in terms of boys or men.
- **Female:** - all activities, expressions, illustration and textual presentations referring to girls and women.
- **Neutral:** - all activities, verbal expressions, illustrations and textual presentations which do not clearly identify or indicate male or female sex.

CHAPTER TWO

2. Review of Related Literature

The purpose of this study is to investigate the overall representation of males and females in selected eight textbooks currently used by the Education Bureau of Tigray Region. To address this research the topics discussed by scholars below selected as theoretical grounds by which the gender bias in the selected textbooks is treated and the major impact it might have in marginalizing female learners.

2.1 Gender Stereotypes and Its Development

2.1.1 Gender and Gender Stereotypes

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The literature distinguishes the word "sex" from "gender". Sex is a biological characteristic determined at conception. It is attributed for a person's life. In addition, the same biological differences between men and women exist in all countries of the world and do not change over time (Anker; 1998:8).

On the other hand, the word "gender" refers to differences between men and women that are acquired. It is naturally occurring but determined by social and cultural values. This means that gender differences between men and women vary across countries and regions as well as over time within countries and consequently can be changed by education, government policy, media images and opinion leaders (Ibid ;9).

Similarly, Steinberg (1993:47) stated that gender is shaped after we are born into society. Girls are socialized from early age not to adopt masculine traits and are blamed if they show signs of masculinity. Moreover, girls who are not acting feminine enough and boys who do not

act masculine enough may be less accepted among their opposite or the same sex peers and the society at large. This trend appears to be the demarcation where sex stereotypes start.

Sex stereotype is reflected in the family, work place, schools (through teaching-learning material, directors, teachers and students) recreational place, mass media, etc. by men and boys or by women and girls found at different age levels. The two sex stereotypes can be expressed for male and female in terms of various tasks, activities, etc. that are assigned to them.

According to Wikipedia [2005] stereotypes are group concepts. They are often used in a negative or prejudicial sense and are frequently used to justify certain discriminatory behaviors as result of the discriminators; inequality and violence against. The other may emerge from established stereotypes. Therefore, gender stereotypes refer to socially constructed beliefs about men and women. They are constructed in the axiom, songs, proverbs, the media, culture, custom, education, drama, etc. of a society. Gender stereotypes play an important role in determining the perception of the society towards women and the way women perceive themselves. On this basis, they are expected to live and act according to these stereotypical roles (<http://www.en.wickepeda.org/wiki/stereotypes>).

This implies that deviation from the traditionally assigned sex roles cause punishment from the society. The punishments may be of inclusion and exclusion type. The conventional adherence to the established roles governs the effects of the stereotypes (Josiah: 2004).

In the Ethiopian condition gender stereotyping clearly discriminates males and females differently and there are many sayings, which completely reflect gender discrimination accepted by the society.

2.1.2 The Development of Gender Stereotyped Images

Gender stereotyping begins at a very early age with parents who reinforce different behaviors and attitudes for their children based primarily on whether they are a girl or a boy (Susan, 2001:9). This gender stereotyping continues with a child's early day care or school experience where it has been found that boys play more frequently in the block area and outdoors, while girls are more likely to sing, sew, swing and play dress up (Bloch, 1987). As a child moves through school, teachers, peers and school materials reinforce attitudes towards gender and gender stereotypes. The books children read have powerful influence on the values that children embrace and eventually live by (Susan, 2001).

According to Santrock (1994), families, peer relations, the media, and school all play a major role in the development of a child's stereotype image. Parents are the primary actors on socialization of children towards the traditionally assigned gender roles during the early years of life. Once children enter school they are exposed to a broad range of experiences and materials. Those learning experiences and materials as part of the child's school life, taken together, become an important component in the child's developing sense of self (Kaplan, 1991).

Children learn at a very early age what it means to be a boy or a girl in our society. Through a myriad of activities, opportunities, encouragements, discouragements, overt behaviors, covert suggestions, and various forms of guidance, children experience the process of gender role socialization. It is difficult for a child to grow to adulthood without experiencing some form of gender bias or stereotyping, whether it is the expectation that boys are better than girls are at math or the idea that only females can nurture children.

A child's burgeoning sense of self, or self-concept, is a result of the multitude of ideas, attitudes, behaviors, and beliefs that he or she is exposed to be. The information that surrounds the child and which the child internalizes comes to the child within the family arena through parent-child interactions, role modeling, reinforcement for desired behaviors, and parental reward or punishment (Santrock, 1994). As children move into the wider world of friends and the school, those around them reinforce many of their ideas and beliefs. A further reinforced by those around them, a further acceptable and appropriate behavior when children grow, these gender stereotypes become firmly entrenched beliefs and thus, are a part of the child's self-concept (Davis 1984:11).

A child's earliest exposure to what it means to be male or female comes from parents (Santrock, 1994; Kaplan, 1991). From the time when their children are babies, parents treat sons and daughters differently, in dressing gender specific colors, giving gender-differentiated toys, and expecting different behavior from boys and girls (Thoren, 1993). One study indicates that parents have differential expectations of sons and daughters as early as 24 hours after birth (Provenzano, and Luria, 1974).

Children internalize parental messages regarding gender at an early age, with awareness of adult sex role differences since two-year-age (Gracely, and Myers, 1984). One study showed that children at two and a half years of age use gender stereotypes in negotiating their world and are likely to generalize gender stereotypes to a variety of activity, objects, and occupations (Cowan and Hoffman, 1986). Children even deny the reality of what they are seeing when it doesn't conform to their gender expectations (i.e a child whose mother is a doctor stating that only men are doctors) (Sheldon, 1990).

Sons have a definite edge[?] as far as parental preference for their children is concerned. Most parents prefer male children to female children throughout the world (Basow, 1992:129). In addition, people who prefer sons are more likely to use technology for selecting the sex of their child (Gilory, 1990). The finding that parents are more likely to continue having children if they have only girls than if they have only boys (Hoffman, 1997). Further emphasizes this preference for male babies. This seems also true in the case of Ethiopia.

2.2 The Impact of Schools on Gender Role Socialization

Education as a social process is under the influence, largely, of the society where it operates. Therefore, any educational system can be understood by looking at the values and traditions of its surrounding social system. Changes and renovations in the values, organizations and the needs of a society will inevitably influence its education.

Images of sex, gender and sexuality take important places in all educational systems. Schools as a part of the social structure do not yield sex stereotyping against the inclination of wider society. Schools reflect the society in which they take place. Any attempt to confront the conventions of the society often finds a strong resistance to change. Students are heavily influenced by their homes and neighborhoods, and may disregard what teachers and textbooks say (Delamont, 1990).

Educational processes and relations within the school system contribute to, the formation of gender identity (Posner, 2003) and the maintenance of socially accepted gender roles. "Schools develop and reinforce sex segregations, stereotypes, and even discriminations which exaggerate the negative aspects of sex roles in the outside world when they could be trying to alleviate them" (Delamont, 1990:3).

As an influence on gender role learning, the school setting is one in which children develop friendships, model teacher behaviors, and learn from textbooks and other reading materials, which reinforce gender stereotypes and biases (Sadkes and Sadker, 1994: Best, 1993). History books, for example, divide the past into a period based on men's lives-wars, politics, government and generally ignore women's lives or accomplishments (Basow, 1992). Best (1983:89) suggested that with in the school setting there are three curricula of gender role learning; (i) academic curriculum with sexist materials and sex typing of academic skills (ii) behavioral curriculum with different roles and activities for girls and boys and (iii) sexual curriculum with children engaging in flirting and preliminary sex talk.

Whether overt or covert, these curricula are established and supported by the school and are part of the socialization process for children. Teachers provide messages about gendered role development through activities, modeling, reinforcement and other forms of communication (Basow, 1992:130). Even the organization of the school system itself reinforces the idea of men in positions of authority and women in subservient positions (Ibid). Although schools should be one of the most important social setting in which children can validate and refine their gender beliefs, they are frequently found to expose children to masculine and feminine images that are even more rigid than those in the wider society (Meece, 1987:57).

Gender differentiation is frequently the basis for organization, control, and management of the classroom (Croll and Moses, 1991). This differentiation is not always seen as negative, however. Croll and Moses (1991) suggest that although girls were treated differently than boys in elementary school, they are not disadvantaged because of this. It cannot be denied, though, that with in the school setting girls learn that they

occupy a different place in the educational system than boys. This learning includes an understanding of their role to make fewer demands and receive less attention and fewer resources (Lloyd and Duveen, 1992).

One group of researchers has identified six aspects of the social representation of gender in the school setting. These aspects serve as resources for the expression of social gender identities:

1. *Social categories*- using gender to categorize students (i.e., let's form a boys' line and a girls' line).
2. *Group composition*- using group composition to take sense of classroom interaction; forming groups by gender.
3. *Material culture*- cultural marking of objects as either masculine or feminine.
4. *Activities*- cultural marking of activities that identifies roles and routines as masculine or feminine.
5. *Space*- allocating different areas of the classroom or play ground to boys or girls.
6. *Behavioral style*-labeling particular patterns of behavior as either masculine or feminine (Lloyd and Duveen, 1992).

In a similar study, Crow and Taebel (1976) explained that when children start schooling, their stereotyped notions of roles are reinforced by school practices. These include differences like division of duties along sex identities, in the physical activities and facilities provided to girls and boys, by textbooks, and dominance of one sex in certain roles in the schools. For instance, role differences appear in the traditionally assigned gender roles, which attribute "women as teachers, men as principals".

Recently, there has been much attention given to the topics of gender bias and gender stereotyping within the school setting (Witt, 1997; Davies and Banks, 1992). Those who have studied the school setting have often found that teachers have certain gender-stereotyped expectations of boys and girls; for example, that girls have a helpless approach towards achievement and that boys use mastery-oriented behavior. When students behave in a manner opposite from the expectations, they are treated as being different or unusual. Because helpless behaviors are reinforced for girls, girls may be less likely to engage in assertive behaviors (Boggiano and Barrett, 1991)

Teachers play a role in the gender socialization of children. Teachers have a particular curriculum that they follow which encompasses basic learning skills reading, mathematics, language arts, social studies, and so on. Assimilation occurs when children incorporate new information into their existing knowledge (Piaget, 1974). The methods of instruction used by teachers have an impact on how the information is assimilated by the child. Teachers using gender biased methods of teaching, consciously and unconsciously, such as calling on boys more frequently than girls or praising boys for achievement and girls for appearance, are driving students to assimilate gender biases.

On the other hand, presence in school is a hidden curriculum, which includes those learning experiences that are not always overt. These include experiences such as the unwritten attitudes, and biases often found in the method of instruction, or in the texts of the books children read for school (Kaplan, 1991). Another term used regarding what to learn in school is evaded curriculum, referring to those matters, which are important to the lives of students but touched briefly or not at all in school instruction. For example, one evaded topic in schools is the issue

of gender and power; others are sexual harassment, loss of self-confidence and lowering of self-esteem in young girls and gender role stereotyping in the curriculum (Beal, 1994).

Studies have shown that teachers often give more attention to boys than girls (Thorne, 1993). This attention seems to contribute to the fact that males tend to dominate the classroom (Sadker and Sadker, 1994: Basow, 1992). A Meta analysis of 81 studies of classroom interaction showed that boys received 56% of the classroom interaction with the teacher and girls received 44% (Kelly, 1988). This same Meta analysis also found that although girls raise their hands more often, teachers call on boys with more frequency. In addition, boys receive more praise from the teachers even through they are viewed as more troublesome (Kelly, 1988).

To sum up, schools have a powerful limiting influence on the development of appropriate sex roles; define specific attitudes, modes of acting and opportunities, delimited for boys and girls. These school practices limit the opportunity of open choice for each sex to learn according to their capacity and interest. However, schools as agents of social change must strive to build the notion of equality of women and men. Sex stereotyped views and practices, developed out side schools need to be illuminated through the effort of schools.

2.3 Gender Representation and Bias in Textbooks

2.3.1. Gender Representation in Textbooks

Many researchers and authors argue that readers identify with characters of their own gender in books. Therefore, the relative lack of girl characters in texts can limit the opportunity for girls to identify with their gender and to validate their place in society (Manjaria, 1998:36).

The manner in which, gender is represented in textbooks impacts children's attitudes and perceptions of gender-appropriate behavior in society. Sexism in textbooks can be so insidious that it quietly conditions boys and girls to accept the way they see and read the world, thus reinforcing gender differences (Fox, 1993). This reinforcement predisposes children not to question existing social relationships. At the same time, however, books containing images that conflict with gender stereotypes provide children the opportunity to re-examine their gender beliefs and assumptions (Ernst, 1995:66). Thus, texts can provide children with alternative role models and inspire them to adopt more egalitarian gender attitudes (Gunderson, 1975:70).

Similarly, Taylor (1973) mentions that girls and boys should be helped to develop a healthy self-image at childhood. He explains that if textbooks are free from sex stereotypes, they are able to contribute to the building of self-confidence, identify, and a sense of self-worth in students. In addition, Kumah (196) says that concepts of equality and equity between the two genders should be included in the curriculum. Inclusion of these concepts would have a far-reaching contribution to illuminate gender stereotypes.

Gender stereotypical roles are constraining to both genders. Just as girls are trapped in passive and whiny roles, boys and men are rarely described as people demonstrating emotions of sadness and fear, having hobbies, occupations that are not stereotypically male and in roles where they are not competing or meeting high expectations (Susan, 2001:9). These stereotypes limit boys' and girls' freedom to express themselves (Fox, 1993; Rudman, 1995) and pressure them to behave in ways that are gender appropriate rather than ways best suited to their personality.

Three of the characteristics of a democratic classroom are the concepts of fairness, justice, and equal opportunity. One of the areas in which these concepts must be applied is in the use of classroom materials, particularly textbooks, which demonstrate gender equity. The idea of gender equity or providing a fair and just education with equal opportunity for both male and female students should be the standard for all schools (Black, 1994). Therefore, the use of gender equitable materials allows students to have more gender-balanced knowledge, to develop more flexible attitude towards gender roles, and to imitate role behaviors contained in the materials (Klein, 1985).

2.3.2. Gender Bias in Textbooks

Sex bias in education, in the broadest sense, refers to the reinforcement of sex-stereotypes and the overt or hidden discriminatory treatment of boys and girls in schools that disadvantage either sex. This issue came to forefront in pioneer feminist and other studies in the U.S. and other countries since the 1970s (AAUW, 1999). The studies showed that sex bias was deeply imbedded in schools, reflected in sex-segregated curricula, in textbooks and other instructional materials, and differences in the approach of teachers' treatment for girls and boys. They argued that sex bias undermines girls' self-esteem and steers them to traditional female courses, careers, and burdens, thereby preventing both girls and boys from achieving their full potential.

Textbooks are very important tools in the teaching-learning process. Jarvis (1996) stated that they are used constantly because they are designed to present different types of subject matters in a sequential manner throughout the grades. Similarly, Meece (1987) suggested that textbooks account for 75% to 90% of the school instruction. It is evident that the textbooks children use in school play an important role in their

learning. Many of these textbooks are filled with racial, ethnic, social class, gender stereotypes, and influence children in negative ways (White, 1986).

From the textbooks they read, children learn about sex-role identification and sex-role expectations. They learn about the outside world, about diverse cultural norms, about what other people think and feel. They learn what behaviors are acceptable and are not acceptable. Children's books and textbooks are critical in forming a child's identity and personality (Ashton, 1983:43). Therefore, understanding the importance of textbooks and books in the formation of children's values and self-concepts so that sex-bias is eliminated (Oliver, 1974). This indicates that textbooks are the main sources of information, and are powerful to influence students as significant phenomena in schools (Cahill, 1983:9).

It is also clear that in Ethiopia textbooks are the most useful learning materials. They are prepared by textbook writers in line with learning outcomes formulated by the ministry of education. According to MOE (1989), textbooks play very important role in the over all development of children. Well-prepared texts often provide important structural framework for much of what goes on in the classroom. They have a very great power to attract learners toward learning and teachers to teaching activities. The way the textual materials are written; their appearance, their content and the way they are arranged, and the illustrations all affect the quality of the books. Therefore, the contents and illustrations of textbooks are the crucial elements in reinforcing, reshaping and changing pupil's attitudes, concepts, norms and expectations concerning the position of male and female (MOE, 1989:4).

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One researcher has suggested that females are exposed to a curriculum of inferiority (Basow: 1992). It could be argued that curriculum of inferiority is partly taught through out-dated or non-representational textbooks. Because textbooks account for a large amount of school instruction, they represent an influential factor in the socialization of children, and thus, should be chosen with care by educators.

According to AAUW (1997), the key forms of sex bias in textbooks are (i) the exclusion, or invisibility of girls and women from textbooks (ii) sex-stereotyping (iii) the subordination of girls or women to boys and men in the text and (iv) lack of female figures in textbooks. Although researchers acknowledged that textbooks are not the only elements to influence gender consciousness in children, family, television and other media, and storybooks arguably are presented as just less important denominator. Many argued that textbooks were an important influence and that schools have the responsibility for challenging existing sex stereotypes (AAUW: 1992).

Studies have shown that gender biased materials can have adverse effects on the education process, can perpetrate gender related stereotypes, and can effect the emotional well being of students (Schall and Scott, 1984: sadker and klein, 1991). The effects can greatly be reduced and even eliminate with non-biased materials.

Schau and Scott (1984) define gender-biased materials as those in which:

- Females appear as main characters less than males:
- Females appear in illustration less than males:
- Females and males are portrayed in sex stereotypical roles:
- Females appear in more derogatory roles than males:
- Use of male generic languages

They defined sex fair materials as those, which include females and males in representative proportions and include traditional and non-traditional sex stereotyped roles. They also indicated that sex fair materials broaden pupils' attitudes about gender roles, and increase the motivation to learn (Scott and Schau, 1985).

Sadver (1979:89) identified and defined seven forms of gender bias that occur in educational materials:

1. *Invisibility* occurs when a gender, male or female, is not included in the work.
2. *Stereotyping* occurs when gender differences are assigned to their "traditional" roles in the text. For example, men are doctors' women are nurses.
3. *Imbalance/selectivity* is an imbalance in presentation of the materials, by selective interpretation of events being reported. This can lead to a distorted reality.
4. *Unreality* is similar in nature to imbalance. This is when the author chooses to avoid controversial issues, or reduce large complex issues to a simple, if inaccurate, explanation.
5. *Fragmentation /isolation* can occur in an attempt to include women or minorities in their works, authors, editors, and publishers.
6. *Linguistic* bias is the general use of masculine terms and pronouns to reflect a composite audience. This form of bias is sometimes very subtle, since it is a widely accepted writing style.
7. *Visual Bias* refers to the pictures and illustrations in a work, and the ratio of male to female representation. Aside from inequality, visual images can also contain stereotyping.

Boys and girls feel the effect of gender bias with in student's textbooks alike as they grow and develop in an environment filled with suggestions of inequality as natural order. In a subtle way, over the course of

childhood, partly through the books that they read, children are socialized to understand that boys are aggressive and girls are passive, boys have adventures and girls get to hear about the adventures, boys are encouraged to be independent while girls are expected to rely on boys to help them manage difficulties (Beal, 1994; Colley, 1986).

Very early on, children learn that there is a social meaning to become a boy or girl, and that generally boys conjures up more positive reactions and responses (Cahill, 1983:9). This early socialization continues once the child enters school, where elementary readers, history textbooks, and math and science books reinforce society's ideas about gender roles through written languages (Olson, 1980:30).

Most cultures use storytelling to transmit values and attitudes to children: this includes stories found in children's readers (Kortenhaus and Demarest, 1993). Because the books children read in school play such a potentially important defining role in their lives, it is natural to expect that the children who read them will accept the attitudes and values exhibited in them. As children grow older, they are praised and rewarded for meeting society's expectations of gender-stereotyped behaviors. It has been shown that children who are exposed to books with gender stereotypic behaviors are more likely to demonstrate stereotypic behaviors (Ashton, 1983:43). While there are and should be differences between the genders, a problem occurs when the attributes of one gender are deemed more valuable than the attributes of the other.

Of the various factors that shape gender-typed behaviors, role models and imitation are extremely influential (Beal, 1994; Basow, 1992). Children are exposed not only to parents but also to models in the outside world-peers, teachers, television and characters in the books they read (Kaplan, 1991). Many school materials communicate the message

that females are less important than males. Some elementary textbooks and children's readers do not portray women in positive roles, nor do they show women holding major positions or performing important tasks (Kaplan, 1991:86).

Similarly, Fox (1993; 84) stated that children's textbooks frequently portray girls as acted up on rather than active. Girls are represented as sweet, naive, conforming, and dependent, while boys are typically described as strong, adventurous, independent, and capable (Jett-simpso and Masland, 1993). Boys tend to have roles as fighters, adventurers and rescuers, while girls in their passive role tend to be caretakers, mothers, and princesses in need of rescuing, and characters that support the male figure (Temple, 1993). Often, girl characters achieve their goals because others help them, where as boys do so because they demonstrate ingenuity and/or perseverance. If females initially represented as active and assertive, they are often portrayed in a passive light toward the end of the story. Girl characters that retain their active qualities are clearly the exception (Rudman, 1995).

Michel [(1986) as cited in Almaz (1991; 17)] showed that discrimination towards women is manifested in two ways: they are mentioned less frequently in textbook illustrations, and fewer roles are assigned to them. Moreover, the study carried out on gender bias in primary textbooks. Anbessu (1991; 4) indicates that, the formal and the non-formal curriculum and traditional teaching confirm male supremacy. The textbooks have gender message expressed through language, pictures, proverbs, nouns and adjectives.

Sunderland (1994) mentions that Gender biased learning and teaching material may be able to produce wrong images of students and teachers. This condition also may affect the attitude of them in their latter life. It

may hinder girls from active participation in various jobs and social life. Therefore, biased messages should be avoided. Pollard (1996) suggests that schools need to address gender equity knowledge and issues about gender need to be integrated into the curriculum.

Genet (1991) states that textbooks contribute to the low performance of girls in education by transmitting sex stereotyped images. In many textbooks, women and girls are depicted as inferior and dependent, while men and boys are represented as superior, independent and courageous. This can bring a very damaging effect on the performance of female students. For instance, the use of the masculine pronoun in textbooks may make girls feel that education is not meant for them. The illustrations too are indelible from the memories of learners.

In general, the content and illustrations of textbooks emerge as one of the crucial elements in reflecting, reinforcing, reshaping, and changing society's concepts, outlooks, norms, expectations and aspirations concerning the position of girls and women, and boys and men. Those wrong attitudes can be eliminated through education. Therefore, care has to be taken in portraying images of males and females in the content and illustrations of textbooks. This issue is very important in Ethiopian schools in which the culture undermines the role and status of women and girls.

2.4 Research on Gender Bias in Textbooks

An in-depth systematic study have revealed many gender issues in the curricula and in the other educational materials and it is believed that these do directly or indirectly affect the learners. These materials are usually positive and encouraging for boys and man, where as they tend to be negative and discouraging for the girls and women. Some studies are here under.

There were many studies across countries in the literature that analyzed textbooks for gender discrimination. For example, content analysis of 41 Indian high schools, higher secondary and pre-university curriculum textbooks showed that "instead of fostering the basic equality between men and women, the messages given to school children in the Indian textbooks sanction the dominance of males (Kalia, 1982; 187).

Examining 47 US textbooks used in grades 1 through 8 between 1980 and 1988, Sleeter and Grant (1991) revealed an interesting finding that when compared to male, females were more likely to be depicted in non traditional roles in social studies, reading and language arts, science, and mathematics textbooks. For instance, chances for a woman being an adventurous astronaut was more than for a man being a nurse in those textbooks. Content analysis conducted by Nevada University on 13 top nationally ranked introductory geosciences textbooks in the US (PROMSE, 2001), showed that the messages about gender, race and Ethnicity were blended by messages about power. For example, while victims of natural disasters were people of color and non-Westerners, scientists were always white and male.

A study on 122 Pakistani secondary school level textbooks concluded that the educational content aimed only at males by maximizing their potentials and skills to take advantage of the opportunities around them. However, content did not represent the changing social status of Pakistani women from doing unpaid housework to production, service, and wage work (Zeenatannisa, 1989).

Another study done by Oliver (1974: 259) on selected five stories from the reading series to conduct a study for content analysis. The finding showed that the images of boys and men and girls and women presented to children are clear. Boys are featured in most of the stories, especially

in the exciting and interesting ones. Girls and women are shown in home, performing domestic functions and pursuing limited interests. Men are shown in a variety of occupations; women in almost none other than house wife. No mothers are pictured as heads of house holds. The illustrations of women and "Pristine and outdated". Girls and women are characterized by "Weakness, passivity, silliness, and bitchiness".

During preschool and early elementary school years, children are exposed to gender stereotypes through picture books. An analysis of 206 books for children aged 3-6 years found that males were seen as having predominately-instructional (traditionally masculine) characteristics or in instrumental activities 91% of the time and with expressive (traditionally feminine) characteristics or in expressive activities 9% of the time. Female were shown in expressive situations or exhibiting expressive traits 79% of the time and instrumental situations or exhibiting instrumental traits only 21% of the time (Peter, 1979).

Numerous studies analyzing children's literature find the majority of books dominated by male figures. For example, Ernst (1995) did an analysis of titles of children's books and found male names represented nearly twice as often as female names. She also found that even books with female or gender-neutral names in their titles in fact, frequently revolve around a male character. Many classics and popular stories where girls are portrayed usually reflect stereotypes of masculine and feminine roles.

In a key study published in 1972, Dick and Jane as Victims, the authors examined the content of primary school textbooks published in 1961 and 1962 by 14 different publishing companies. Focusing on child-centered stories, the authors classified the key themes into two main categories, (i) "Active Mastery", which included such positive themes an

ingenuity, cleverness, strength, bravery, heroism, and (ii) "Second Sex", which included arguably less positive themes as incompetence, passivity, goal constriction and rehearsal for domesticity. Boys outnumbered girls by 4:1 ratio in stories involving active Mastery themes, while girls displayed passive and dependent behavior much more frequently than boys by 6:1 ratio. The authors also found that (i) males appear twice as frequently as females; (ii) men are featured in a variety of occupations, while most women are housewives; (iii) females are represented as passive and dependent, while males are strong, assertive, and active, (iv) boys do not exhibit emotion, (v) household chores are depicted as female chores, and (vi) girls are not prized for intelligence as are boys.

Another comprehensive study (Schiller, 1975, cited in Kim, 1987) echoed the above results. Schiller's study examined stories in third and fourth grade language textbooks as to theme, behavior of the main characters, occupations of the characters, and representation of men and women generally. Males outnumbered females as main characters generally, and males outnumbered females as main characters generally, and males outnumbered females as adults, role models, as planners and doers, and as people with jobs. Females were depicted more frequently than men as children, as being centered on the home and likely to reject their own ideas in favor of others'.

According to the 1999 study conducted on sex bias in schools by the American Association of University Women ("AAUW"), US textbooks today are much less sexist than those of the 1970s and more balanced than those of the early 1990s. While there is room for improvement, in general, women are more visible. New history books reveal greater emphasis on women, and women are portrayed in more diverse roles and activities than previously.

An analysis of sixteen basal readers from six publishers found that male characters outnumbered female characters in all the 16 books, with some books having a more than two-to-one ratio of male to female characters (Witt, 1997). This same study also found that illustrations of male characters outnumbered those of female characters in all the books. Female characters in the books of five of the publishers were shown as having a balance of masculine and feminine traits (androgynous), but male characters in the books of all six publishers were strongly masculine (exhibiting traits such as decisiveness, leadership, independence), and rarely exhibited any traits that would be classified as traditionally feminine (gentleness, understanding, sensitivity) (Witt, 1997).

Similar studies yielding similar results were conducted with respect to other countries such as India (Kalia, 1980, as cited in Mulalem, 1998), in which they conducted content analysis of 41 Indian textbooks, 21 English and 20 Hindi language instructions. The majority of characters were male. In seventy percent of the lessons, men emerged as dominant figures. There were 47 biographies of men, only 7 biographies of women. Over 100 female characters were victimized as a result of their sex roles. In most lessons, men ventured out to seek fame, fortune, while women stayed home to wash dishes and clothes. Males in Indian textbooks occupied high prestige occupation.

Gonzalez-Suarez and Erstrom (1989) analyzed seven elementary school textbooks as part of an international study of sex stereotyping. Males were present 64% of the time in the text, and 61% of the illustrations. They also determined that males were more likely to be presented in occupational or historical roles, while women were depicted in ways that emphasized their personalities.

In the Ethiopian context, similar investigations have been under taken at different times. The first gender bias analysis was conducted by the curriculum evaluation and Research Division of the Ministry of Education. The study was carried out in 1989 on primary school (1-8) textbooks on the trial of general polytechnic education. The study examined pictorial and textual content, language, occupations, activities, gender biased expressions and characters in biographies and passages. It found that all were generally biased toward males. The study revealed that males are shown three times of often a female in pictures, and even when portrayed females are most often seen in traditional, household roles. The exception of these general findings was home economic, which is female biased.

Mulualem (1998) conducted similar study. The study was designed to examine the portrayal of female and male sexes in primary school textbooks of Amhara Region. The analysis was done on 42 textbooks for 13 subjects on topics, language, activities, biographies and characters, occupations and examples. The result of the study revealed that out of the total 42 textbooks for 13 subjects on topics, language, activities, biographies and characters, occupations and examples. The result of the study revealed that out of the total 42 textbooks analyzed 26 textbook were found gender biased. Among these, only one was female biased and the other 25 were male biased. The rest, 16 texts were found fairly gender balanced.

In further support of the above findings, recent study by Shitaye (2001) was done. The study was designed to analyze the verbal and visual content of Grade Nine Textbooks with respect to the portrayal of gender. The study revealed that in the verbal and visual coverage of all textbooks (Nouns, pronouns and adjectives) of the two sexes, male were covered more frequently than females.

CHAPTER THREE

3. Design and Method of the Study

3.1 Method of the Study

I have used Content Analysis Method to answer the research questions. The technical definitions of content analysis vary from writer to writer. Krippendorff (1980:7) indicated that "content analysis is one of the most important research tools in the social sciences. It seeks to understand data not as a collection of physical events but as symbolic phenomena and to approach their analysis unobtrusively."

Emphasizing its objectivity and systematic aspects, Holsti (1969:14) defined content analysis as "any technique for making inferences by objectively and systematically identifying specific characteristics of messages." Berelson's [[1952], as cited in Amare, [1998; 3]) definition of content analysis emphasizes the same aspects; he defined it as "a research technique for the objective, systematic, and quantitative description of the manifested content of communication."

Content analysis is a formal system for doing something that we all do informally rather frequently, drawing conclusions from observations of content [Stempel, 1981, as cited in Amare, 1998; 2]. As people, objects, vehicles and tress could be the sources of information in survey designs, words, phrases, sentences, paragraphs, or entire texts could be the source of data in content analysis research [Amare, 1998; 2].

3.2 Source of Data

To investigate the status and portrayal of females compared with males current grade five and six textbooks were the sources of the study. These textbooks were prepared under the Tigray Regional Education Bureau in line with the general objectives of the National educational policy. Table 1 shows the lists of grade five and six textbooks.

Table 1: List of Grade Five and Six Textbooks

No	Subject	Grades	No of textbooks
1	Tigrigna	5 and 6	2
2	Amharic	5 and 6	2
3	English	5 and 6	2
4	Math's	5 and 6	2
5	Science	5 and 6	2
6	Civics	5 and 6	2
7	Social studies	5 and 6	2
8	Art	5 and 6	2
9	Music	5 and 6	2
10	Physical education	5 and 6	2
Total			20

3.3 Sampling

Sampling in content analysis is not different from sampling in surveys. The essential consideration is to ascertain that each unit of the population has an equal probability of being represented in the sample. The quality of sampling doesn't depend more on size of sampling than representatives. In content analysis using randomization, textbooks could be sampled, chapters could be sampled, pages or even sentences could be sampled (Amare, 1998:6).

In this study, the size of the sample is eight textbooks from the total of twenty textbooks of grade five and six. Thus, the sample size accounts around 40 percent of the total textbooks. A stratified random sampling technique was employed to select textbooks from grade five and six. The subjects were divided into three filed of studies; in the language area [Tigrigna, Amharic and English], Social science [Civics and Social Studies]; and Natural Science [Math's and Science]. Sample were taken from each filed of study to maximize representations. In this stratification, the numbers of textbooks to be sampled in each field of study were selected with different proportions. Then, simple and random sampling was employed to select sample textbooks from each field of study. Table 2 shows the selected subjects.

Table 2: List of Sample Grade Five and Six Textbooks

No	Filed of studies	Subjects	Grades	No of textbooks
1	Languages	Tigrigna	5 and 6	2
		Amharic	5 and 6	2
2	Social science	Social studies	5 and 6	2
3	Natural science	Science	5 and 6	2
	Total			8

The reasons for examining the language, social studies, and science textbooks are as follows. Language tends to be the most important subjects in primary school, as they form the basis for all other subjects taught. Accordingly, it is fair to say that children have better exposure to language textbooks as compared to other textbooks. In line to this, the stories that appear in the texts impart insight into how a given society views gender and what values the government wants to inculcate. The social science texts were chosen to glean how governments present

women's place in society and their contribution to it. Finally, the science texts were selected for the study from concerns that girls are not as inclined to study and excel in science and technology as compared to boys.

3.4 Categories

The most important issues in content analysis are categories. Koul (1984:414) states that the researcher of content analysis should clearly indicate the categories and make provision for marking the category into units. Supporting this, Amare (1998:5) state that in the category formation it is very essential to give attention to three important points; categories must be pertinent to the objectives of the study, categories should be functional; and categories must be manageable.

Based on the ideas mentioned on the review of literature, the following two main categories were developed to analyze the verbal and visual representations of the sampled textbooks. These were; Occupational (work role) and Character traits categories.

Occupational (work role): This category provided information about the verbal and visual occupations assigned to males and females. In a modern society, males and females are given equal opportunities to pursue any vocation on an equal basis and are not limited to occupations which are traditionally "masculine" (doctor, lawyer, pilot, etc) or "feminine" (teacher, nurse, secretary etc.).

Under these categories, 21 sub-categories were prepared to identify male and female representations in various types of gender roles (See Appendix A).

Character traits: This category provided information about the verbal and visual traits ascribed to males and females. Research done on the images of males and females in school textbooks showed that females are usually portrayed with traditional feminine traits (passive, dependent, loving, emotive, etc.) while males are depicted with traditional masculine traits (active, aggressive, independent, courageous). A modern person should hold a wide range of traits, regardless of his/her sex. Under these categories there were 20 sub-categories were prepared to identify male and female character traits representations (See Appendix B).

These categories were developed from "images of females: content analysis of grade nine textbooks (Shitaye: 2001): sex role stereotyping in Arabic elementary reading textbooks in Egypt" (Elsayed, 1985): and "the extent of sex-role modernity conveyed by textbooks for elementary school children: the case of Lebanon" (Fouad: 1987).

3.5 Selection of Unit of Analysis

Amare (1998:4) states that in content analysis, words, sentences, phrases, statements, paragraphs, or entire articles or books can serve as unit of analysis. Therefore, the units of analysis in this study are words, phrases, sentences, diagrams, pictures and illustrations

3.6 Reliability of Coding

To assure objectivity of any research reliability of the results should be established. Hoisti [1969:135) stated that the nature of the data is usually beyond the investigator's control, opportunities for enhancing reliability are generally limited to improving coders, categories, or both. For this reason the researcher attempted to increase reliability of this study by selecting two coders from Adwa Teacher Education College to code the sampled textbooks.

For the coders, training was provided on how to make gender analysis of textbooks by using handouts prepared by Anbesu [1995] entitled "Mechanism for Gender Analysis" and other related materials. As a means to enable the trainee coders understand and implement the coding easily, on training exercise was given through close and proper mentoring of the researcher. Hence, the training was live and accompanied by discussions on the categories, sub categories and other related issues of the coding exercise for a day long period of time.

During the process of coding, coding sheets consisting of sub-category were produced [See Appendix A and B] and tallies were made and counted in each sub-categories on the coding sheets. Each textbook was treated twice. This means each coder collected a data from four textbooks of his own share and cross checked four textbooks of another coder. In the process of coding each chapter of the sampled textbooks was counted separately. This enabled coders to easily cross-check the reliability and accuracy of coded items. The difference of frequency counts between coders was resolved by counting and recounting the gender messages in the chapters by the coders and by reaching into common agreement. The process continued until a common frame of reference was successfully achieved.

3.7 Method of Data Analysis

Statistical techniques were employed for the content analysis of the study. Characters of the study were counted based on each category, sub category and items. Then percentages were computed in accordance with each category and with respect to male and female sexes. So as to check whether there is statistically significant difference between the male and female sexes or not, the researcher employed a chi-square (χ^2) statistical test.

CHAPTER FOUR

4. Findings of the Study

This chapter presents the data and its analysis. To examine the portrayal of male and female sexes, the study has focused on the content analysis of grade five and six textbooks which have been used by the Education Bureau of Tigray Region. From the total of twenty textbooks used in grade five and six grade levels, 40 percent (8 textbooks) were taken. In each textbook, the selected categories and sub-categories were counted, added and changed in to percentages.

To detect any significant differences between males and females in the content and illustration variables, chi-square (χ^2) statistical test was used for each sampled textbook. The following tables are presented to show frequencies and percentages of each category.

Table 3: Occupational representation of grade five Tigrigna textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	6	86	-	-	1	14	7	100
	Visual	4	100	-	-	-	-	4	100
Merchant	Verbal	3	60	-	-	2	40	5	100
	Visual	1	100	-	-	-	-	1	100
Carpenter	Verbal	2	100	-	-	-	-	2	100
	Visual	1	100	-	-	-	-	1	100
Doctor	Verbal	3	50	1	17	2	33	6	100
Scientist	Verbal	2	100	-	-	-	-	2	100
Solider	Visual	1	100	-	-	-	-	1	100
Domestic duty	Verbal	-	-	3	100	-	-	3	100
	Visual	-	-	2	100	-	-	2	100
Teacher	Verbal	5	31	2	13	9	56	16	100
	Visual	1	100	-	-	-	-	1	100
Secretary	Verbal	-	-	2	100	-	-	2	100
Student	Verbal	8	32	5	20	12	48	25	100
	Visual	3	50	3	50	-	-	6	100
Total	Verbal	29	43	13	19	26	38	68	100
	Visual	11	69	5	31	-	-	16	100

Table 3 shows the occupational representation of gender as revealed in the categories of male, female and gender neutral occupations. In nine of the ten occupations, men are dominantly portrayed in association to superior roles, while females and gender neutral occupations represent the minority category. A thorough observation of representation clarifies that males are able and strong while the females follow as weak and subordinate. The occupational differences and traditionally assigned division of labor along sexes magnify the gender relationship as social construct. Gender as social construct and the role assigned to male and female as an expression of the dichotomous relationship governed the identity and values of male and female in the framework of the societal expectations.

Hence, the text books currently used by the Regional Education Bureau, confirm the perennial societal expectation and reinforcement of roles as dictated by culture and tradition. For example, the verbal representation of work roles in the table shows that 86 percent of the characters representing the role of farmers are attributed to male and the remaining 14 percent to gender neutral roles. In this occupational role, female are not represented even in a subordinate position. In this figure, it is apparent that sexes are used as a means of inclusion and exclusion to the society. In the Tigrigna textbook of grade five as appeared in the analysis of this inclusion and exclusion pattern discriminately characterizes the gender relationship. Hence, women are not represented by the role which requires greater strength and economic control.

Women's status with minority role in production was observed in the business sector as well. As determinant factor, business by itself demonstrates the pattern of access and control of economic resources and redistribution. It highly determines the gender relationship and directs social behavior to the socially acceptable norms and behaviors.

Societal reinforcement towards such an important means of economic dominance seems to favor the male sexes than females. In this regard, men's advantage in business as merchants is observed as they constituted for 60 percent of the role of merchant and gender neutral roles distantly following by 40 percent. In this category there is no representation of women as merchants, thus undermining their entitlement to economic sources in their society.

In other occupations male's supremacy was revealed in activities of carpenter, scientists, and soldiers where their representation showed 100 percent. In a sharp contrast, females were ignored. To the contrary, the role of female dominantly (100 percent) confined to the domestic (household) realm and secretary duties. For example women's occupational role is restricted to domestic locality in way such that they perform laundry activity or nurturing children as it appears in page 69 and 93. Teaching profession was portrayed by 31 percent male, 13 percent female and 56 percent neutral; Doctor; 50 percent male, 17 percent female and 33 percent neutral; student 32 percent male, 20 percent female and 48 percent neural. From the total occupations in the textbooks, 43 percent represented male, while 19 percent female and 38 percent neutral. Looked in the light of this figure sex discrimination in the contents and illustrations of textbooks and other related materials affect girls, but it also affects boys and the society as a whole.

Visual representation of occupation as revealed in grade five *Tigrigna* textbook shows that 69 percent is represented with male and 31 percent with female, gender neutral pictures and illustrations were not found in the textbook.

Numerical comparison of verbal representation of occupations of male and female including gender neutral roles revealed the following results.

The chi-square value ($X^2=40.7$), is greater than the critical chi-square value ($X^2, 0.05= 26.30$). Therefore, there is statistically significant difference between males and females even using neutral characters. Similarly, there is statistically significant difference between males and females in the chi-square the computed chi-square value ($X^2=33.91$), is greater than the critical chi-square value ($X^2, 0.05=15.5$). On the other hand, in visual representation, the calculated chi-square value for male and female ($X^2=9.38$), is less than the critical chi-square value. ($X^2, 0.05 = 12.59$), there is no statistically significant difference between male and female sex representation.

Table 4: Occupational Representation of Grade Six Tigrigna Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	7	58	2	17	3	25	12	100
	Visual	2	67	1	33			3	100
Merchant	Verbal	3	100	-	-	-	-	3	100
	Visual			-	-	-	-		
Carpenter	Verbal	2	100	-	-	-	-	2	100
	Visual	-	-	-	-	-	-	-	
Administrator	Verbal	7	64	2	18	2	18	11	100
	visual	-	-	-	-	-	-	-	100
Lawyer	Visual	2	100	-	-	-	-	2	100
	Verbal	-	-	-	-	-	-		
Soldier	Verbal	4	100	-	-	-	-	4	100
	Visual	2	100	-	-	-	-	2	100
Domestic Duty	Verbal	-	-	5	100	-	-	5	100
	Visual	-	-	2	100	-	-	2	100
Teacher	Verbal	12	45	6	22	9	33	27	100
	Visual	-	-	-	-	-	-	-	
Secretary	Verbal			2	100			2	100
	Visual	-	-	-	-	-	-	-	
Student	Verbal	13	36	7	19	16	44	36	100
	Visual	2	50	2	50			4	100
Total	Verbal	50	48	24	23	30	39	104	100
	Visual	6	55	5	45	-	-	11	100

As shown in Table 4, there were ten types of occupations in grade six Tigrigna textbook. From the total of 104 verbal characters 48 percent of

the occupations were associated with male, 23 percent with female and 39 percent with gender neutral roles. Male characters are depicted largely in association to the occupation categories like merchant, carpenter, lawyer, and soldier. The role of women is completely invisible in this category. At the same time, male is not represented in the domestic and secretarial work roles. Neutral characters are represented in four types of occupations. As shown in the table, neutral representation accounts for 14 percent farmer, 33 percent doctor, 56 percent teacher and 48 percent student. In visual representation, 55 percent is given to male, 45 percent to female and there were not gender neutral images.

As revealed in the above description, women are identified with the traditionally assigned sex roles bearing inferior social status and respect. The contents and illustrations of the text book show women in association to domestic duty and reproductive roles. They are also expressed in aesthetic values which might be transacted (bargained) to the superior socio-economic status of the men counterparts. More precisely, they are described in their power relations, which subordinate them to the male world. For example, in page 140 of the textbook, women's domestic role is clearly depicted embedded in idiom that illustrates a lion as a symbol for a jungle and a domestic realm is nothing without the existence of a woman. In this content, women are expressed in relation the domestic realm.

In grade six Tigrigna textbook, according to the data in Table 4, the role of male sex is represented nearly in all categories than female sex representations. Similarly, the total result shows that since the calculated chi-square value ($X^2=42.29$) is more than the critical chi-square value ($X^2_{.05}=28.87$), there is statistically significant difference between female and male gender portrayal.

Similarly, the calculated chi-square value between male and female including the neutral characters ($X^2=31.38$), is greater than the critical chi-square value ($X^2, 0.05 =16.92$). There is statistically significant difference. As the calculated chi-square value between male and female ($X^2=1.83$) is less than the critical chi-square value ($X^2, 0.05=5.99$), there is no statistically significant difference between male and female in visual representation of occupations in grade six Tigrigna textbook.

Table 5: Occupational Representation of Grade Five Amharic Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	6	100	-	-	-	-	6	100
	Visual	4	67	2	33		25	6	100
Pilot	Verbal	2	100	-	-	-	-	2	100
Driver	Verbal	3	100	-	-	-	-	3	100
Athlete	Verbal	3	60	1	20	1	20	5	100
Nurse	Verbal	1	25	3	75			4	100
Political leader	Verbal	2	100	-	-			2	100
Traditional hand craft	Verbal	4	67	2	33			6	100
	Visual	3	75	1	25			4	100
Teacher	Verbal	8	47	6	35	3	18	17	100
	Visual	1	100	-			-	1	100
Cashier	Verbal	-	-	4	100		-	4	100
Solider	Visual	4	50	2	25	2	25	8	100
Student	Verbal	14	33	12	29	16	38	42	100
	Visual	2	29	5	71		-	7	100
Total	Verbal	47	48	30	30	22	22	99	100
	Visual	10	55.5	8	44.5		10	18	100

As Table 5 depicts in verbal occupational representations such as the role of farmers, pilot, drivers, and political leaders are entirely associated with male sex (100 percent). This indicates male dominance. In athletics the table revealed 60 percent male, 20 percent female, and 20 percent gender neutral representations. Traditional handcraft category showed marginal role of female sex. In this regard, male sex is represented in 67 percent occupations while female in 33 percent. In the work of teaching, 47 percent male, 35 percent female and 18 percent neutral

representations were identified. Characters represented as soldiers appeared to be 50 percent with male, 25 percent female and the remaining 25 percent neutral. Likewise, 33 percent male, 29 percent female and 38 percent neutral characters represented student role. In low prestige activities like domestic activity and cashier, female represented 100 percent. In general, from the total of 99 occupational categories in verbal presentation, the data shows 48 percent male, 30 percent female, and 22 percent neutral.

Occupational sex role distinctions are evident with males more likely to be involved in works requiring strength and technical skills, while women are more frequently engaged in tasks requiring skills in child rearing, home making, and interpersonal relations (Rao, 1988:99). So is true in the subject of study where women are presented in works traditionally believed requiring little strength and technical skills. Their roles dominantly revealed their incompetent position in tasks that offer social reward with significant return of honor. Hence, they are depicted as health workers, cashiers, students or athletes where women, often, perform the activities at habitual basis. In page 16 *Sinke* is described as a secretary of *Ato Kebede*. This limits the gender equality as *Ato kebede's* and *Sinke's* depiction demonstrates. This also shows the social expectation of gender specialization as male and female placing women in the lower social status. It tells how to become male and female by emphasizing the traditionally assumed roles and reinforcing their expectations along the lines of the socially constructed occupations for boys and girls.

In visual representation of occupations of grade five Amharic textbook 55.5 percent is associated with male, 44.5 percent with female and 10 percent of the pictures or illustrations remained unclear.

The total result in the verbal representation of occupations of male and female including the neutral characters in selected occupations showed that, the calculated chi-square value ($X^2=39.16$), is greater than the critical chi-square value ($X^2, 0.05=33.92$). There is significant difference among male, female and neutral characters. This is also true as male character is compared to female excluding neutral characters. Since the calculated chi-square value ($x^2=27.46$), is greater than the critical chi-square value ($X^2, 0.05 = 19.68$). This indicates that there is statistically significant difference between male and female representation in the gender based sex role of occupations.

In the visual representation of occupations, there is insignificant difference between male and female as the calculated chi-square value ($x^2=3.75$) is less than the critical chi-square value ($x^2, 0.05 = 7.81$).

Table 6: Occupational Representation of Grade Six Amharic Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	7	78	1	11	1	11	9	100
Merchant	Verbal	4	80	-	-	2	20	6	100
Carpenter	Verbal	4	-	-	-	-	-	4	100
Scientist	Verbal	3	75	-	-	1	25	4	100
Author	Verbal	4	67	-	-	2	33	6	100
Administer	Verbal	4	57	1	14	2	29	7	100
Teacher	Verbal	13	50	8	31	5	19	26	100
Nurse	Verbal	-	-	4	100	-	-	4	100
Housewife	Verbal	-	-	6	100	-	-	6	100
Secretary	verbal	-	-	3	100	-	-	3	100
Student	Verbal	14	35	17	42.5	9	22.5	40	100
Total	Verbal	53	46	39	34	23	20	115	100

The data for grade six Amharic textbook shows that in all the categories where gender related expressions are reflected portray the role of male more than female. The representation of the role of male sex as farmer appeared more frequently than females; statistically males hold 78 percent while females appeared only 11 percent and neutral 11 percent.

In addition to this, the occupation of merchant, carpenter, author and scientists are represented by male and neutral and females are not represented. For other types of occupations such as administrator, males outnumbered females. In quantitative expression, males spearheaded by 57 percent to 14 percent for females and 29 percent for gender neutral roles, while teaching is portrayed by 50 percent for male, 31 percent for female and 19 percent neutral; student representation accounted for 35 percent male, 42.5 percent female and 22.5 percent neutral. In this category, female outnumbered men. Moreover, women appeared more frequently as nurse, in association to household roles and secretarial activities.

The total number of males in different categories of employment was larger than the number of females (53 percent males to 39 percent females). Therefore, it is possible to conclude from the result of the above table that the professional occupations for females are teachers, nurses, and secretaries. In supporting to the above result, Anbesu (1988) stated that textbooks frequently portray females in what are considered as "traditional" female roles, such as in the kitchen, looking after children, where as males are shown working in professional occupations. In line to Anbesu's observation, the contents in the textbook attribute the role of women around the domestic realm and activities which require little professional representation.

At one spot, women are represented in decision making positions where they are described as administrators. However, their role in administrative representation is at its lower stage. In the contrary, their representation as housewife, nurses, secretarial and teaching and learning activities demonstrates the non-professional representation of women. For example, a certain w/ro Awetash is described to have brewed the traditional Ethiopian Beer (*tella*), in page 73 of the textbook. Where

as the representation's of men revealed the high level professionalism. In this regard, mention of one example from the textbook may elaborate the dominance of men in professional activities that bear greater. On page 11 and 73 of the textbook authorship is entitled to men, which need higher level educational background. Male, female and neutral characters were not represented in any type of occupation of visual representation.

The general result shows that the computed chi-square value ($X^2=41.88$) is greater than the critical chi-square value ($X^2, 0.05 = 18.3$). Accordingly, there is significant difference between male and female excluding the neutral.

Similarly, the total calculated chi-square value including natural representations between male and female ($x^2=46.83$) is greater than the critical chi-square value ($x^2, 0.05 =31.41$). Therefore, there is significant difference between male and female as the neutral character representation is included in the chi-square test.

Table 7: Occupational Representation of Grade Five Social Studies Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	7	78	-	-	2	22	9	100
	Visual	3	60	1	20	1	20	5	100
Scientists	Verbal	4	100	-	-	-	-	4	100
Author	Verbal	4	67	-	-	2	33	6	100
	Visual	4	100	-	-	-	-	4	100
Political leader	Verbal	6	100	-	-	-	-	6	100
	Visual	6	100	-	-	-	-	6	100
Traditional handcraft	Verbal	3	60	-	-	2	40	5	100
	Visual	3	100	-	-	-	-	3	100
Teacher	Verbal	2	28.5	3	43	2	28.5	7	100
Domestic duty	Verbal	-	-	5	100	-	-	5	100
Total	Verbal	26	62	8	19	8	19	42	100
	Visual	16	89	1	5.5	1	5.5	18	100

Table 7 depicts occupational representation of male, female and neutral categories in verbal and visual representation of roles in grade five social studies textbook. From the total of 42 verbal characters 62 percent represented with male and 19 percent with female and another 19 percent with gender neutral. In each category, male representation was dominant over female. Male represented 100 percent as Scientist and political leaders. Meanwhile, Male representation appears to be 78 percent in farming, 67 percent as author, 60 percent as craftsmen and 28.5 percent as teachers. In contrast, female representation is almost absent in all occupations except in teaching (43 percent) and household duties (100 percent). Neutral characters are represented in four types of occupations that is, farmer 22 percent, author 33 percent, traditional hand craft 40 percent and teacher 28.5 percent. In general, the data indicate big gap between male and female representation.

For the visual representation, as can be seen from Table 7, male pictures account 89 percent, female and gender neutral pictures represented 5.5 percent each. In this regard male's representation in visual appearance was more than 16 times than female representations. This shows male domination over female. Regarding this, Michel (1986:27) stated that discrimination towards women is manifested in two ways: they are mentioned less frequently in textbook illustrations, and fewer roles are assigned to them.

Social stratification is the major concern of social studies. In other words, it emphasizes social interdependence. Social integration and interdependence. Social transformation and embedded cultural practices come into visibility is highlighted by social studies. The contents and illustrations in grade five social studies, often focus on some occupational professions on agricultural works, scientific task, authors, leadership, craft technology, teaching and domestic duty.

The distribution of the representations of male and female in many of the occupations showed wider gaps. The role of women in public activities and areas which require greater executive level or advanced level of education is totally absent. They are restricted to domestic realm where they qualify only to nurturing tasks.

By virtue of this argument, socialization of boys and girls at grade five classes will found themselves to comply the traditionally assigned gender roles. Hence, the contents and illustrations of the grade five textbooks are characterized by male bias undermining the role of women in out door activities.

The result on representation of the two sexes including neutral characters verbally indicates that, the calculated chi-square value ($\chi^2=42.19$), is greater than the critical chi-square value ($\chi^2, 0.05= 21.03$). There is significant difference. While the calculated chi-square value between male and female ($\chi^2=33.38$), is greater than the critical value ($\chi^2, 0.05= 12.59$). Hence, there is statistically significant difference between male and female representation in grade five social studies textbook. On the other hand, in visual character, the calculated chi-square value for male and female ($\chi^2= 6.06$), is less than the critical chi-square value ($\chi^2, 6.0.05 =12.59$). Thus, there is no statistically significant difference between male and female representations in the text.

Table 8: Occupational Representation of Grade Six Social Studies Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	4	50	2	25	2	25	8	100
Scientists	Verbal	7	100	-	-	-	-	7	100
Political leader	Verbal	8	100	-	-	-	-	8	100
Philosopher	Verbal	4	67			2	33	6	100
Total	Verbal	23	79	2	7	4	14	29	100

The social studies data in Table 8 shows that male representation was dominant over female. Males are represented by 100 percent in the characters of scientist and political leaders; 50 percent stood for farmer, and 67 percent for philosopher. In contrast, female representation is not traced in all occupations except farming where their appearance is 25 percent. Neutral characters were represented in two types of occupations that is, in farming 25 percent and philosopher 33 percent. These all indicate big gaps between male and female representation.

Male, female and neutral characters are not represented in any type of occupation of visual representation.

As shown in Table 8, the role of women is depicted only on farming activities, where they are performing auxiliary role. The remaining occupational roles, which entitle higher social respect and decision making power, are there to represent men. Women, however, are absent from all forms of competency which might entitle them societal respect. This shows inclination of the contents and illustrations of the textbooks to magnify the role of men as key factor in the transformation of the society and problem solving power to all forms of social problems.

The general result shows that since the calculated chi-square value ($\chi^2=8.14$) is higher than the critical chi-square value ($\chi^2, 0.05=7.82$), there is statistically significant difference between male and female role representation in grade six social studies textbook. At the same time, the calculated chi-square value for male and female including neutral ($\chi^2=13.05$) total result is more than the critical value ($\chi^2, 0.05, =12.59$). This indicates that there is statistically significant difference.

Table 9: Occupational Representation of Grade Five Sciences Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	6	86	-	-	1	14	7	100
	visual	5	62.5	2	25	1	12.5	8	100
Carpenter	Verbal	5	100	-	-	-	-	5	100
	visual	2	67	-	-	1	33	3	100
Scientist	Verbal	7	78	-	-	2	22	9	100
Doctor	Verbal	3	67	-	-	1	33	4	100
Domestic Duties	Verbal	-	-	4	100	-	-	4	100
	Visual	-	-	3	100	-	-	3	100
Total	Verbal	21	72	4	14	4	14	29	100
	visual	7	54	5	38.5	1	7.5	13	100

Table 9 indicates the result of occupational representation of male, female and neutral. In this data the total verbal percent of male representation was high (72percent) and that of female and neutral 14 percent each.

As the frequency for particular occupation is concerned, in farming males are portrayed by 75 percent, and neutral 25 percent. Females are not represented in association to this type of occupation. In the other categories, such as carpenter males dominated the occupation (100 percent). Characterizing the role of a scientist, male appeared by 78 percent and female by 22 percent; Doctor, 67 percent male and 33 percent neutral. In this case, the categories are more male referenced and less neutral referenced. Females are completely not present in this work role. The visual representation, from the total of 13 characters 54 percent was given to male, 38.5 percent to female and 7.5 percent to neutral.

From the above figures, it is discernable that the visibility of the role of women in the textbook is almost absent. The occupational roles that are represented in the textbook can broadly be categorized in to economic,

professional and domestic duties. The economic and professional work roles require either higher physical and/or executive competency.

Where as, the domestic work roles require little professional skill or knowledge. This clearly indicates that textbooks are not equal represent male and female in the occupational roles. It rather undermines the role of women in relation to men. The impact of such under representation is equally important to the biased socialization of boys and girls who read and uses the textbook. It would strengthen compliance to minority competency of girls while accepting the dominance of male counterparts, thereby handing over their opportunities to male.

The general result indicates that since the calculated chi-square value ($X^2=33.73$), is more than the critical chi-square value [$X^2, 0.05-9.49$] there is statistically significant difference between male and female representation of science textbook. Similarly, there is significant difference between male and female including the neutral character. Because the calculated chi-square value ($x^2=36.59$), is greater than the critical chi-square value ($x^2, 0.05 =15.51$).

As the calculated result indicates, there is significant difference between male and female in visual coverage of the textbook, since the calculated chi-square value ($X^2=121$], is greater than the critical chi-square value ($X^2_{0.05}=9.49$).

Table 10: Occupational Representation of Grade Six Sciences Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	3	37.5	2	25	3	37.5	8	100
Scientist	Verbal	4	80	1	10	1	10	6	100
Doctor	Verbal	3	100	-	-	-	-	3	100
Teacher	Verbal	3	33	2	22	4	45	9	100
Student	Verbal	6	33	4	22	8	45	18	100
Total	Verbal	19	44	9	19	16	37	44	100

Table 10 indicates the result of occupational gender referenced and neutral representation of grade six sciences textbook. There are 5 types of occupations in the text. Out of these 5 types of occupations males were portrayed in all work roles, 4 female and 4 gender neutral activities are participated.

The table shows that farmer representation of male and neutral is 37.5 percent for each 25 percent for female from the 8 verbal characters. Other occupations like scientist, males out numbered females; the males percentage are 80 percent to 10 percent for females. Doctor 100 percent dominated by male. Females were not represented with this type of occupation. For other types of occupations like teacher, 33 percent with male, 22 percent with female and 45 percent with neutral: student was represented 33 percent with male, 22 percent with female and 45 percent with neutral. Male, female and neutral images were completely absent in grade six science textbook.

Unlike the grade five textbook, women in grade six textbook are better placed in socially accepted work roles. They are proportionally represented in activities such as farming, teaching and student activities. In fact, scientist women in the textbook representation contents of the textbook accounts for only ten percent unlike the eighty percent male. In spite of this reality, however, gender bias gap is narrow for some women have been represented as role models, competent and productive in activities different from domestic realm.

Even though the women are represented in this grade level positively than the remaining others, the gender gap is still in place and the role of women is a minority in comparison to men and gender neutral work roles. This indicates that reluctance of curriculum developers and authors to balance gender gap in content and illustration representations as they immensely contribute to healthy socialization.

The total category result of grade six science text representation indicates that the computed chi-square value ($X^2=6.44$) is less than the critical chi-square value ($X^2, 0.05=0.49$). Hence, this shows that there is no statistically significant difference between male and female gender based role representation in the text. There is also insignificant difference between male and female with the consideration of neutral characters as the calculated chi-square value ($X^2=8.44$), is less than the critical chi-square value ($X^2, 0.05=15.51$).

Table 11: Character Traits of Grade Five Tigrigna Textbook

Categories		M		F		N		T	
		No	%	No	%	No	%	No	%
Active	Verbal	17	45	9	23.5	12	31.5	38	100
Passive	Verbal	5	21	11	46	8	33	24	100
Dependent	Verbal	4	27	9	60	2	13	15	100
Independent	Verbal	8	57	2	14	4	29	14	100
Competitive	Verbal	12	46	4	15	10	39	26	100
Uncompetitive	Verbal	3	23	6	46	4	31	13	100
Emotional	Verbal	7	33	4	19	10	48	21	100
Unemotional	Verbal	2	22	5	56	2	22	9	100
Strong	Verbal	6	55	1	9	4	36	11	100
Weak	Verbal	3	25	5	42	4	33	12	100
Beautiful	Verbal	-	-	5	71	2	29	7	100
Total	Verbal	68	36	58	30.5	64	33.5	190	100

Table 11 shows verbal representation of character traits of male and female roles as represented in grade five Tigrigna textbook. It indicates better proportion of representation between male and female in contrast to the representations of male and female in character trait analysis. From the total representation of 190 verbal characters, 36 percent were male, 30.5 percent female and 33.5 percent gender neutral characters. This shows that male and female vary though some characters were dominantly given to male. Male sex represented active 45 percent, independent 57 percent, competent 46 percent, emotional 33 percent, and strong 46 percent. Some female dominant characters showed their

representation as passive 46 percent, dependent 60 percent, incompetent 46 percent, unemotional 56 percent, weak 42 percent and beautiful 71 percent. This data indicates that female sex was represented more in negative character than positive character traits. Regarding this, Oliver (1974:257) stated that positive and desirable character traits should be attributed to female characters as well as male. Cleverness, creativity, kindness, persistence, achievement, self-respect and self-reliance should be found in women and girls as well as in men and boys.

Male and female are attributed to different character traits by the society. On the basis of the figure in grade five Tigrigna textbook women are represented in terms of aesthetic values and minority position in competency. The men, however, identified with greater strength and competency. Thus, the men-women dichotomy excludes women from all forms of positive representations in terms of character representations except in terms of aesthetic value. For example: in page 26 a male student is described as first ranking due to his outstanding position in his schooling. On the contrary, on page 94 a female student is described as incapable of success inspite of her hardworking in schooling.

The dichotomous representations reflect negligence to women social inclusion as able, strong, competent and active. As the result of this biased rating gender, men are represented as superior quality in solving problems while women appeared as creators of all negative images.

In this regard, the character representation of men and women in the textbook shows unequal representation images of both sexes. In this textbook male, female and unclear character were not expressed.

The total result indicates that the calculated chi-square value between male and female including neutral characters ($x^2=36.21$), is greater than

the critical chi-square value, (χ^2 , 0.05=31.41). There is significant difference between male and female even when combined with the gender neutral characters. There is also significant difference between male and female representation since the computed chi-square value ($\chi^2=30.11$) for male and female is greater than the critical chi-square value (χ^2 , 0.05=18.31).

Table 12: Character Traits of Grade Six Tigrigna Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Active	Verbal	12	70.5	3	17.6	2	12	17	100
Passive	Verbal	2	25	6	75	-	-	8	100
Powerful	Verbal	7	70	2	20	1	10	10	100
Power less	Verbal	-	-	3	100	-	-	3	100
Competent	Verbal	9	60	2	13	4	27	15	100
incompetent	Verbal	2	29	4	57	1	14	7	100
Emotional	Verbal	7	47	3	20	5	33	15	100
Unemotional	Verbal	5	56	2	22	2	22	9	100
Weak	Verbal	-	-	4	100	-	-	4	100
Confident	Verbal	4	80	1	20	-	-	5	100
Loving	Verbal	-	-	2	100	-	-	2	100
Total	Verbal	48	51	32	33.5	15	15.5	95	100

One of the categories used in the study was character traits of male, female and gender neutral categories. Table 12 shows the following results. From the total of 95 verbal characters, 51 percent were male, 33.5 percent female, and 15.5 percent neutral. Males were dominantly represented in positive characters. They appeared active 70.5 percent, powerful 70 percent, competent 60 percent and confident 80 percent. This shows that more positive characters were given to male than female and female were represented in negative characters more frequently. That they are represented in passive character 75 percent, powerless and weak 100 percent indicates that negative images are associated dominantly with female. On this basis we see a dichotomous association of female sex with negative attribute. Needless to mention, the textbook

is still operating in a strong sex bias disregarding the significance of woman in the prestigious social roles.

Women's status in relation to their character traits is dependent on the discourse that women are institutionally subordinated to men. Their role of behavioral image, henceforth, is associated with the roles of nurturing, compassion, and aesthetic value. In general terms, they are depicted as worthy of nothing for self reliance, independence, strength and self direction. For example, in page 140 describes that a woman beaten by her husband also be smashed by the building. This indicates the gap in representation of gender behaviors. In this regard it, certainly, affects the discourse of gender equity not only at societal level but also at school level where students shape their gender relationship as social demonstration at early age.

Pictures, diagrams and illustrations portraying male and female character traits were not found in the textbook.

The statistically computed result shows that the calculated chi-square value ($\chi^2=30.75$) is more than the critical chi-square value ($\chi^2, 0.05=18.31$), there is statistically significant difference between male and female sex representation. There is also significant difference between male and female including neutral character, since the calculated chi-square value ($\chi^2=39.9$) is greater than the critical chi-square value ($\chi^2, 0.05=31.41$).

Table 13: Character Traits of Grade Five Amharic Textbook

Categories		M		F		N		T	
		No	%	No	%	No	%	No	%
Active	Verbal	11	65	2	12	4	23	17	100
	Visual	6	67	3	33			9	100
Passive	Verbal	2	20	6	40	2	20	10	100
Powerful	Verbal	7	87.5	1	12.5	-	-	8	100
Powerless	Verbal	2	33	4	67	-	-	6	100
Strong	Verbal	9	53	3	18	5	29	17	100
	Visual	7	67	4	36	-	-	11	100
Weak	Verbal	4	67	2	33	-	-	6	100
Responsible	Verbal	6	86	-	-	1	14	7	100
Competent	Verbal	8	53	2	13	5	34	15	100
In competent	Verbal	1	25	3	75	-	-	4	100
Clean	Verbal	-	-	3	100	-	-	3	100
Total	Verbal	50	54	26	28	17	18	93	100
	Visual	13	68	7	32	-	-	20	100

Table 13 shows that male were portrayed displaying the majority of traits in the two sexes and the neutral categories. Neutral roles account for 18 percent, male sex referenced were 54 percent from the total 93 characters, and 28 percent was for female. Even without considering the positive or negative type of characters, male was represented with greater percentages. It was almost two times more than female representations. As the type of character is concerned, (positive and negative) female were absent mostly in positive characters. For example in the responsibility category female characters were not represented.

This shows that more positive characters were assigned to male than female and female were represented more in negative characters. Another comparison can be made between characters given for both sexes and their frequency. In active character male were represented by 65 percent, and female by 12 percent; for powerful character male spearheaded the representation by 87.5 percent, while female followed distantly by 12.5 percent; for strong character the sex representation still magnified male

53 percent, and reduced female strength 18 percent; further more, for competent character male's competency is higher 53 percent, whereas female's competency is limited to 13 percent. This indicates that all positive characters were assigned to male more frequently than the female counterparts.

As was the case in grade five Tigrigna textbook, women's character trait is not proportionally represented. It, rather place them far from socially valued aspects of behaviors. They are not depicted as responsible citizens where the male category and gender neutral behaviors share the category overwhelmingly. This magnifies the incompetence of women due to weaker emotional and power strength that they have in the society. For example, in page 45 a female student is described as unsuccessful in her school results despite her clever status in her class. In contrast, a male student is depicted as a clever student doubting little about his success. Hence, the gender image in reference to their behavioral trait demonstrates biased over representation of male sex while neglecting the female sex.

In visual representation of character traits of Amharic textbook as revealed in the table, from the total 12 pictures 68 percent represented with the role of male and 32 percent with female. In this case, male visual representation was more than twice than that of female representations. Unclear pictures or illustrations were not found in the textbook.

From the above data, one can conclude that illustrations in textbooks have also placed women in passive observer roles while men are pictured as active.

Representation of male and female varies in verbal characters. This variation was confirmed by chi-square test. The calculated chi-square value for male and female ($\chi^2=34.39$), is greater than the critical chi-square value ($\chi^2, 0.05= 16.92$). Hence, there is statistically significant difference between male and female representation in Amharic textbook.

This is also true as male character is compared to female including the neutral characters. Since the calculated chi-square value ($\chi^2=44.37$), is more than critical chi-square value ($\chi^2, 0.05= 28.87$). Therefore, there is statistically significant difference between male and female including the neutral representation. On the other hand, in visual converge, the calculated chi-square value for male and female ($\chi^2=0.45$), is less than the critical chi-square value ($\chi^2, 0.05=3.34$). Thus, there is no statistically significant difference between male and female representation in Amharic text.

Table 14: Character Traits of Grade Six Amharic Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Active	Verbal	15	68	3	14	4	18	22	100
Passive	Verbal	7	23	14	45	10	32	31	100
Emotional	Verbal	5	56	2	22	2	22	9	100
Unemotional	Verbal	3	75	1	25	-	-	4	100
Strong	Verbal	12	57	4	19	5	24	21	100
Weak	Verbal	9	41	6	27	7	32	22	100
Competent	Verbal	15	65	3	13	5	22	23	100
Incompetent	Verbal	3	30	2	20	5	50	10	100
Confident	Verbal	5	71	-	-	2	29	7	100
Power less	Verbal	3	37.5	5	62.5	-	-	8	100
Beautiful	Verbal	-	-	3	100	-	-	3	100
Total	Verbal	77	48	43	27	40	25	160	100

Table 14 depicts gender referenced and neutral representation of grade six Amharic textbook in characteristics. From the total representation of 160 characters 48 percent was male, 27 percent female and 25 percent gender neutral. This shows that male character representation was

dominant over that of female. From the total of 11 categories, male was represented with 10 categories except in the beautiful category. Similarly, female were excluded from one item i.e. confident. On the other hand, male and female sexes were represented in both negative and positive characteristics.

As was the case in the preceding behavior characters, women's image in grade six character trait is underrepresented. Unlike the male sex, which is represented as emotional, strong, competent and active, the female sex is depicted in opposite dichotomous images magnifying the negative aspect of their image. This denotes that the authors and curriculum developers in the region lack sympathy to promote the issue of equality and equity by balancing the male-female representation in the teaching materials. For example, in page 6 a male student is described in a success due to hard working in exams. In contrary to this, in page 45 a female student is described as a weak student.

In Amharic textbook male, female and unclear characters were not expressed in visual representation.

The general result shows that the calculated chi-square value of verbal representation between male and female including neutral in the chi-square test ($\chi^2=41.06$), is greater than the critical chi-square value ($\chi^2,0.05=31.41$). Therefore, there is significant difference between male and female even when combined with neutral characters. More specifically, the calculated chi-square value between male and female ($\chi^2=33.16$) is greater than the critical chi-square value ($\chi^2, 0.05= 19.31$). Hence, there is a significant difference between male and female sexes.

Table 15: Character Traits of Grade Five Social Studies Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Active	Verbal	12	86	-	-	2	14	14	100
Strong	Verbal	7	100	-	-	-	-	7	100
Weak	Verbal	1	17	4	67	1	17	6	100
Competent	Verbal	8	66	2	17	2	17	12	100
Responsible	Verbal	3	50	-	-	3	50	6	100
Total	Verbal	31	69	6	13	8	18	45	100

One of the elements in developing appropriate textbook is equal representation of both sexes either in positive or negative human characters. However, Table 15 indicates unfair representation of male and female as revealed in grade five social studies textbook. The data shows that in these categories from the total 45 characters (69 percent) is represented with male, 13 percent with female and 18 percent with neutral. Differences exist between the two sexes: that is, male representation in character traits was more than five times than female representation.

The data suggests that males are depicted as more active (86 percent), strong (100 percent), competent (66 percent), and responsible (50 percent) better than females. Females are depicted as less competent (17 percent) and weak (67 percent). Neutral representation of character traits is, active (14 percent), weak (17 percent), competent (17 percent), responsible (50 percent). Visual representation in any type of character traits is not found in the book.

The behavior traits pinpointed from the fifth grade level shows the negative behavior of women. Men represented as active, strong, competent and responsible. This shows that women are not still included and trusted for societal values and competency.

The total result indicates that since the computed chi-square value ($\chi^2=20.94$) is more than the critical chi-square value ($\chi^2, 0.05=9.49$), there is statistically significant difference between male and female sex representation in social studies textbook. Similarly, the calculated chi-square value for male, and female together with neutral characters in the chi-square value ($\chi^2=27.59$), is greater than the critical chi-square value ($\chi^2_{0.05}=15.51$). Thus, there is statistically significant difference among male, female and neutral representation in this text.

Table 16: Character Traits of Grade Six Social Studies Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Active	Verbal	8	53	3	20	4	27	15	100
Strong	Verbal	9	64	2	14	3	22	14	100
Independent	Verbal	4	67	-	-	2	33	6	100
Weak	Verbal	1	17	4	66	1	17	6	100
Honest	Verbal	2	25	1	12.5	5	62.5	8	100
Beautiful	Verbal	-	-	4	100	-	-	4	100
Total	Verbal	24	46	14	26	15	28	53	100

Table 16 presents the percentages of frequencies of traits of male, female, and characters with gender neutral traits. The majority of males were in active characters (53 percent), strong characters (64 percent) and independent characters (67 percent). The majority of females were in weak characters (66 percent) and beautiful characters (100 percent) and the majority characters with neutral gender were in honest character (62.5 percent). For the over all 53 characters, 24 characters (46 percent) were represented with male, 14 characters (26 percent) represented with female and 15 characters (28 percent) represented with neutral characters. Characters with neutral traits seconded the male traits in these three categories and female sex in third.

In grade six, contents of character traits six categories are presented in the contents throughout. In general women are represented by weak strength and positive aesthetic character being represented as beautiful. This makes their importance for the well being of the male sex than them. Their independence is sacrificed for the maintenance of men's solidarity and active involvement. Their destiny is also determined by the honesty and strength of men. From this perspective, it appears to be plain truth that women's representation in positive behavioral attributes is absent but in minority position and aesthetic supremacy. In this part they even lack their representation in the roles they are traditionally endowed such as compassionate, loving, caring, honest, and so on. In this regard, it is convincing that male bias is overemphasized in the textbook.

The general result indicates that since the computed chi-square value ($\chi^2 = 13.69$), is more than the critical chi-square value ($\chi^2, 0.05 = 11.67$), there is statistically significant difference between male and female sex representation in grade six social studies textbook. In addition, the calculated chi-square value for male, female and neutral characters in the chi-square value ($\chi^2 = 19.68$), is more than the critical chi-square value ($\chi^2, 0.05 = 18.31$). Then, there is statistically significant difference among the three traits.

Table 17: Character Traits of Grade Five Science Textbooks

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Active	Verbal	12	70.5	3	17.5	2	12	17	100
	Visual	5	62.5	3	37.5	-	-	8	100
Strong	Verbal	6	67	-	-	3	33	9	100
	Visual	4	45	3	33	2	22	9	100
Competent	Verbal	13	76	3	18	1	6	17	100
	Visual	2	40	2	40	1	20	5	100
Dependent	Verbal	1	17	4	67	1	17	6	100
	Visual	-	-	-	-	-	-	-	100
Independent	Verbal	5	56	2	22	2	22	9	100
	Visual	-	-	-	-	-	-	-	100
Clean	Verbal	1	20	4	80	-	-	5	100
	Visual	1	25	3	75	-	-	4	100
Total	Verbal	38	60	16	25	9	14	63	100
	Visual	12	46	11	43	3	11	26	100

Table 17 shows that there were clearly discernible difference in the number of males, females, and characters with gender neutral. Out of 63 characters, the total number of males was 38 (60 percent) as opposed to 16 females (25 percent). There were 9 characters with neutral gender (14 percent).

When all characters are examined together, males emerge as the majority in almost all categories (active, 70.5 percent; strong, 67 percent: competent, 76 percent, and independent, 56 percent). Characters with female sex were mainly in the dependent category, 67 percent, and clean, 80 percent, but there are no observable gender neutral characters.

The figures in Table 17 show the usual representation of women as shown in the remaining textbooks reviewed in this textbook. However, the representation of the character traits deviates from the conventional objectives of social studies. Instead of drawing positive images, disadvantaged and minority social groups. Contrary to this fact, however,

it undermines the good picture of the behavioral traits. It also magnifies their subordinate positions to men, upon which men attracts to their support on the basis of their cleanliness and purity. In this regard, the textbooks looked at from the light of equity and equality lacks balanced behavioral representation of male and female.

The total result shows that since the calculated chi square ($\chi^2 = 18.45$) is more than the critical chi-square value ($\chi^2, 0.05 = 11.07$), there is statistically significant difference between male and female gender representation. In addition, the calculated chi-square value for male, and female considering neutral characters in the chi-square test ($\chi^2 = 23.15$), is greater than the critical chi-square value ($\chi^2, 0.05 = 18.31$). Hence, there is statistically significant difference among male, female and neutral representation in grade five sciences textbook.

The general result represented in visual character indicates that no statistically significant difference between male and female in the computed chi-square value ($\chi^2 = 2.12$), is greater than the critical chi-square value ($\chi^2, 0.05 = 7.82$).

Table 18: Character Trait of Grade Six Sciences Textbook

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Active	Verbal	12	75	2	12.5	2	12.5	16	100
Strong	Verbal	8	80	2	20	-	-	10	100
Weak	Verbal	5	62.5	3	37.5	-	-	8	100
Competent	Verbal	9	56	3	19	4	25	16	100
Responsible	Verbal	5	71	-	-	2	29	7	100
Un emotional	Verbal	7	100	-	-	-	-	7	100
Loving	Verbal	-	-	4	10	-	-	4	100
Total	Verbal	46	67.5	14	20.5	8	12	68	100

Table 18 presents the differences revealed among male, female, and characters with neutral gender as portrayed in character traits. Again, males occupied the widest variety of traits and were the majority in almost all the traits except for loving character trait. The majority of males were portrayed in the active category. The male's percentages were 75 to 12.5 for females and 12.5 percent for gender neutral. In the strong category, the data indicated the dominance of males (80 percent depicted over females (20 percent).

In the weak category the data suggested that males are in greater frequency than the female: 62.5 percent male to 37.5 percent female. In the competent category the data shows similar trend as in the other categories, that males outnumbered females. The male's percentage was 56 percent to 19 for female and 25 percent for neutral. The same is true in responsible and unemotional categories. The only category female appear more frequently is in the category of love (100 percent). Over all, there were 68 character traits for male (67.5percent), female (20.5 percent), and neutral (12 percent). This clearly indicates that textbooks lack equal representation of different character traits or personal attributes. Visual representation in any type of character traits is not found in the textbook.

Women in the society can be identified as a core part of the society the malfunctioning of which might affect the maintenance of the whole parts of the body. Hence, the holistic nature of social relationship is, no doubt, expected to be the core objective of science education, particularly at school level. Hence, the contents of behavioral relationship between different sexes are determinant factor in student's textbooks. However, in the textbook of science at sixth grade level lacks this fact.

The positive character traits in the contents of the science textbook of six grade level are depicted by male behaviors. The absence of women from all forms of positive character traits, henceforth, shows the short coming of the textbooks to represent all gender behaviors equally.

The male and female character traits representation seems unfairly balanced. However, the general results indicate that the computed chi-square value ($\chi^2=10.19$) is less than the critical chi-square value (χ^2 , at $df=12$, $0.05=12.59$). Hence, there is no statistically significant difference between male and female sex representation. Similarly, there is statistically insignificant difference among male, female and neutral characters in the chi-square test as the calculated chi-square value ($\chi^2=18.16$), is less than the critical chi-square value (χ^2 , at $df=12$, $0.05=21.03$).

Table 19: Occupational Representation of All Sample Textbooks

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Farmer	Verbal	46	70	7	10.5	13	19.5	66	100
	Visual	18	69	6	23	2	8	26	100
Merchant	Verbal	10	71	-	-	4	29	14	100
	Visual	1	100	-	-	-	-	1	100
Carpenter	Verbal	13	100	-	-	-	-	13	100
	Visual	3	75	-	-	1	25	4	100
Doctor	Verbal	9	29	1	8	3	23	13	100
Scientist	Verbal	27	84	1	3	4	13	32	100
Soldier	Verbal	8	67	2	16.5	2	16.5	12	100
	Visual	3	100	-	-	-	-	3	100
Administrator	Verbal	11	61	3	17	4	22	18	100
Lawyer	Verbal	2	100	-	-	-	-	2	100
Teacher	Verbal	43	42	27	27	32	31	102	100
	Visual	2	100	-	-	-	-	2	100
Pilot	Verbal	2	100	-	-	-	-	2	100
Driver	Verbal	3	100	-	-	-	-	3	100
Athlete	Verbal	3	60	1	20	1	20	5	100
Nurse	Verbal	1	12.5	7	87.5	-	-	8	100
Domestic duty	Verbal	-	-	23	100	-	-	23	100
	Visual	-	-	7	100	-	-	7	100
Secretary	Verbal	-	-	7	100	-	-	7	100
Student	Verbal	55	34	45	28	61	38	161	100
	Visual	7	41	10	59	-	-	17	100
Author	Verbal	8	67	43	33	-	-	12	100
	Visual	4	100	-	-	-	-	4	100
Political leader	Verbal	14	100	-	-	-	-	14	100
	Visual	6	100	-	-	-	-	6	100
Traditional crafts man	Verbal	7	64	2	18	2	18	11	100
	Visual	6	86	1	14	-	-	7	100
Cashier	Verbal	-	-	4	100	-	-	4	100
Philosopher	Verbal	4	67	-	-	2	33	6	100
Total	Verbal	268	51	133	25	128	24	529	100
	Visual	50	66	24	31	2	3	76	100

Data in Table 19 indicate the occupational patterns of employment depicted for both sexes and gender neutral throughout the sampled textbooks either in verbal or visual categories. Out of the 21 occupations, 18 occupations were mentioned for the male sex, while 14 were

mentioned for females and 11 were mentioned for gender neutral. The type of occupation given to male and female also shows difference. Occupations like, merchant, carpenter, lawyer, pilot, automobile driver, political leader and philosopher are male dominated and female were not completely presented. At the same time, females were depicted as, housewife, secretary and cashier role. From the total 229 characters 51 percent was associated with male, 25 percent with female and 24 percent with gender-neutral roles. This indicates the percent of male is twice than female in occupational representations.

The data clearly signify the bias toward female since they appeared in unskilled labor occupations or household occupations. When they seldom appeared in professional occupations, they were depicted as teachers, secretary, cashier and nurses. The absence of male in the household roles demonstrates the bias toward them. In visual representations, from the total 76 characters 66 percent was given to male, 31 percent to female and 3 percent to gender-neutral roles. There is a gap between male and female visual occupational representations.

The calculated chi-square value indicated that the amount of male and female verbal representation in sample occupations ($\chi^2=184.26$) is greater than the critical chi-square value ($\chi^2, 0.05 =31.41$) and this shows a significant difference between the two sexes. Similarly, the calculated chi-square value in verbal representations for male, female and neutral gender ($\chi^2=223.36$), is greater than the critical chi-square value ($\chi^2, 0.05=55.76$). There is statistically significant difference among male, female and gender neutral representations.

In visual representations there is no significant difference between male and female even when female viewed together with the gender-neutral role, since the calculated chi-square value ($\chi^2=21.84$), is less than the critical chi-square ($\chi^2, 0.05=26.30$). However, the calculated chi-square

value in the visual category for male and female ($\chi^2=16.77$), is greater than the critical chi-square value ($\chi^2, 0.05=15.51$). Therefore, there is statistically significant difference between male and female.

Table 20: Character Traits Representation of All Sample Textbooks

Sub-Categories		Male		Female		Neutral		Total	
		No	%	No	%	No	%	No	%
Active	Verbal	99	60	25	15	42	25	166	100
	Visual	14	64	7	32	1	5	22	100
Passive	Verbal	16	22	37	51	20	27	73	100
Dependent	Verbal	5	24	13	62	3	14	21	100
Independent	Verbal	17	59	4	14	8	28	29	100
Competitive	Verbal	78	63	19	15	27	22	124	100
	Visual	2	40	2	40	1	20	5	100
Uncompetitive	Verbal	9	27	15	44	10	29	34	100
Emotional	Verbal	19	42	9	20	17	38	45	100
Unemotional	Verbal	17	59	8	28	4	13	29	100
Strong	Verbal	57	64	12	13	20	23	89	100
	Visual	11	55	7	35	2	10	20	100
Weak	Verbal	23	36	28	44	13	20	64	100
Powerful	Verbal	14	78	3	17	1	6	18	100
Powerless	Verbal	5	29	12	71	-	-	17	100
Responsible	Verbal	14	70	-	-	6	30	20	100
Dependent	Verbal	1	17	4	67	1	17	6	100
Independent	Verbal	9	60	2	13	4	27	15	100
Beautiful	Verbal	-	-	12	86	2	14	14	100
Confident	Verbal	9	75	1	8	2	17	12	100
Loving	Verbal	-	-	4	100	-	-	4	100
Clean	Verbal	1	12.5	7	87.5	-	-	8	100
	Visual	1	25	3	75	--	-	4	100
Honest	Verbal	2	25	1	12.5	5	62.5	8	100
Total	Verbal	395	50	216	27	185	23	796	100
	Visual	28	55	19	37	4	8	51	100

Table 20 shows both sexes and the gender-neutral representation of character traits in verbal and visual content of textbooks included in the study. From the total of 766 verbal character traits, 50 percent were represented with male sex, 27 percent with female and 23 percent with neutral. Male character traits representation is greater than that of female sex. Considering the positive and negative character traits revealed in the study, the male sex is more dominant in positive characters than the female sex. In contrast, the female sex is more dominant in the negative character traits than the male sex.

The comparison of male and female and between male and the joint figure of female and gender neutral representations in different character traits of verbal representation reveal the following results. The calculated chi-square value among male, female and neutral ($\chi^2=210.95$), is greater than the critical chi-square value ($\chi^2, 0.05=55.76$). Hence, there is statically significant difference between male and female and between male and the joint figure of female with gender-neutral character representation of verbal category in the sampled textbooks. In addition, the calculated chi-square value between male and female ($\chi^2=186.22$) is greater than the critical chi-square value ($\chi^2, 0.05=30.14$). Hence, there is statistically significant difference between both sexes.

In visual representation of character traits, there is insignificant difference between male and female as the calculated chi-square value ($\chi^2=2.84$) is less than the critical chi-square value ($\chi^2, 0.05=7.82$). Similarly, there is insignificant difference between male and female including the neutral characters. Because the calculated chi-square value ($\chi^2=4.54$), is less than the critical chi-square value ($\chi^2, 0.05=12.59$).

CHAPTER FIVE

5. Summary, Conclusions and Recommendations

5.1 Summary of findings

The study was intended to investigate the verbal and visual representations of males and females currently used in grade five and six textbooks particularly in Tigray region. To analyze these textbooks content analysis was employed. Four textbooks from each grade level were the subject of the study, on the basis of the analysis made on the data, findings of each analyzed textbooks are summarized as follows.

Findings of each textbook:

1. Grade five Tigrigna- in Tigrigna textbook, the general result of all categories of occupations indicated that male sex was represented by 43 percent, female 19 percent and neutral 38 percent from the total of 68 occupations. Male sex was dominantly portrayed than female sex. Hence, there is a significant difference between male and female representation of occupations.

In the visual representations of different occupations of Tigrigna textbooks male sex was portrayed by 69 percent, and female 31 percent. There was no neutral occupational portrayal throughout the textbook. The cumulative result of all occupations of visual representations shows insignificant difference between male and female sexes.

The total result of all verbal categories of character traits/attributes shows significant difference between male and female, since the male character representation was 36 percent, female 30.5 percent and

neutral 33.5 percent from the total 190 characters. There was no any type of visual expression in character trait of grade five Tigrigna textbook.

- 2. Grade six Tigrigna:** Verbal and visual occupation of grade six Tigrigna textbook shows the following results. In verbal occupation of the textbook, male sex was portrayed by 48 percent, female 23 percent and neutral 39 percent from the total of 104 occupations. In this regard, male sex representation was twice higher than female sex. This indicates that there was a significant difference between male and female representations of occupations. In contrast, there was no significant different between male and female in visual occupation of this textbook, since male sex portrayal was 55 percent and female 45 percent.

The verbal character traits represented in grade six Tigrigna textbook shows significant difference between male and female as male were portrayed by 51 percent and female 33.5 percent, and the rest 15.5 percent was neutral. There was no other type of visual character trait representations in the textbooks.

- 3. Grade five Amharic:** Among the total verbal occupations represented in grade five Amharic textbook male portrayed in 48 percent, female in 30 percent and neutral 22 percent. This shows a significant difference between male and female in occupational representations. But, there was no significant difference between male and female in visual representations, since male were portrayed 55.5 percent and female 44.5 percent.

The total result of all character traits of Amharic textbook shows that male sex was reflected by 54 percent, female 28 percent and neutral 18 percent. Male sex was dominantly portrayed in higher number as compared to female. This indicates that there is a significant difference between male and female representations of character traits.

4. **Grade six Amharic:** In Amharic textbook from the total 115 verbal occupational representation, 46 percent was represented with male, 34 percent with female and 20 percent with neutral. There is significant difference between male and female representation of occupations.

The character traits representation of gender in verbal expression of grade six Amharic shows that 48 percent with male characters, 24 percent with female and 25 percent neutral from the total of 160 verbal character traits representations. Therefore, there was significant difference between male and female sexes.

5. **Grade five social studies:** In the occupation of grade five social studies textbook from the total 42 occupations 62 percent portrayed male occupations, 19 percent female and 19 percent neutral. This indicates, male sex was dominantly portrayed in large number as compared to female sex, and there was a significant difference between male and female sexes. Similarly, there was also significant difference between male and female in visual representations, since male were dominantly portrayed by 89 percent, female only 5.5 percent and also neutral 5.5 percent.

The general result of character traits of grade five social studies textbooks shows significant difference between male and female sexes, since the male character trait representation was 69 percent, female 13 percent and neutral 18 percent. Male sex was dominantly portrayed in large number as compared to female sex.

- 6. Grade six social studies:** Among the total verbal occupations represented in grade six social studies textbook male, portrayed in 79 percent, female only in 7 percent and neutral 14 percent. This indicates a significant difference between male and female in occupational representations. Similarly, there is also significant difference between male and female in verbal character trait representations, since male were portrayed by 69 percent, female 13 percent, and neutral 18 percent.

In social studies textbooks there was no any type of visual representation in the two categories used in the study.

- 7. Grade five science:** Verbal and visual occupational representations of grade five science textbook shows the following results. In verbal occupational representation of the textbook male sex was portrayed by 72 percent, female 14 percent and neutral 14 percent. The two sexes representation of verbal occupation representation accounts for 72 percent and 14 percent male and female respectively. This indicates that there is a significant difference between male and female representations of occupations. There is also a significant difference between male and female visual occupational representation of this textbook. Since male sex portrayal was 54 percent, female 38.5 percent and the rest 7.5 percent was neutral gender.

From the total 63 verbal character traits, male sex was portrayed by 60 percent, female 25 percent, and neutral 14 percent. The general result of verbal character traits representations indicates significant difference between male and female sexes.

The visual character traits as represented in grade five science textbook show no significant difference between male and female as males were portrayed by 46 percent and female 43 percent, the rest 11 percent was neutral expressions. There was balanced visual treatment between the two sexes in this textbook.

8. Grade six science: From the various occupations of verbal representation found in grade six science textbook, male portrayed 44 percent, female 19 percent and neutral 37 percent. The cumulative result of all occupational representations shows significant difference between male and female sexes. However, there was significant difference between male and female in the verbal character traits representations, since male were portrayed by 67.5 percent, female 20.5 percent and neutral 12 percent from the total of 68 verbal character traits.

5.2 Conclusions

From the findings of the study it can be concluded that, in most aspects, the textbooks do not provide balanced treatment between the two sexes. The general findings can be concluded as follows.

The verbal occupational representation in the textbooks shows more male characters than that of female. This implies that there was no balanced treatment between the two sexes in the occupational representations. For example, males appeared more often than females

as professional and skilled laborers. This infers that females were depicted as less professional and unskilled more often.

Females were categorized into the dichotomous division of traditionally assigned occupations such as housewife, teacher, secretary, and nurse, while males appeared outside the house, in professional work, in skilled labor, and managerial occupations. Moreover, no single male was depicted in the house husband role.

In relation to the variety of occupational roles, male's sex outnumbered females. There was a great variety of occupations for males. They were depicted, for example, as doctors, pilot, lawyer, scientists, philosopher, while females were represented as housewives, teachers, secretaries, nurses and cashier's. Most of the female occupations were characterized by stereotypes, traditional, and limited strength. In general, there is a significant difference between male and female, in different occupational representations.

Visual occupational representations in all sample textbooks show a significant difference between male and female sexes. The number of illustrations depicting for males was greater than those portraying females.

There were 796 total verbal character traits in all selected textbooks for grade five and six. Of these, males were represented by 395, female 216 and neutral 185 characters. In this case male sex representation exceeds the female sex representations. Males were the majority in positive character traits like, active, strong, responsible, competent, powerful and independent. Females were the majority in negative character traits like passive, weak, irresponsible, incompetent, powerless and dependent. This reflects the traditionally aligned sex based gender discrimination to which boys and girls are socialized to act accordingly. In general there

was statistically significant difference between male and female in verbal character trait representations.

The total visual character trait representations of all sample textbooks were 51. Out of this male sex was portrayed by 55 percent, female 37 percent and neutral 8 percent. Male and female were treated nearly with equal number. Therefore, there was no significant difference between male and female in all sample textbooks in visual character traits representations.

5.3. Recommendations

On the basis of the findings and conclusions with regard to the gender bias analysis of textbooks, the following recommendations are forwarded;

1. The curricula and textbooks need to be revised especially where the role of female is portrayed only as good house wives. There is a need to include achievements and heroic instances of the female gender in equity to the men.
2. Textbooks should go through a gender committee comprising of academics, feminists, historians etc. before issuing them to students to make sure that the textbooks have a gender focus.
3. The production of textbooks should not be treated as any ordinary activity that can be left to private players or even state governments without any supervision or regulation. Educational materials must be produced within the framework of the constitution and according to processes transparent to public.
4. We all accept that textbooks play a significant role in transmitting a society's culture to children and gender roles as an important

aspect of the culture. How gender is portrayed in textbooks, thus, contributes to the image children develop of their own role and that of their gender in society. Therefore it must be taken into consideration with full accountability while producing textbooks for the future citizens of globe.

5. Authors of textbooks should make an attempt to break stereotypes for both men and women. No occupation should be regarded as a male occupation or female-occupation. Therefore, women as well as men should be depicted as engineers, doctors, and directors where men as well as women should be shown as nurses, typists, and secretary and school teachers. All kinds of occupations should be treated is honorable and worthy of respect. This will afford both men and women more choices and options than were available to them when work stereotyped by sex.
6. Members of both sexes should be represented as whole human beings with human strengths and weaknesses, not masculine or feminine ones. Women and girls should be shown as having the same abilities, interests, and ambitions as men and boys.
7. Like men and boys, women and girls should be portrayed as independent, active, strong, courageous, competent, decisive, persistent serious minded, and successful. They should appear as logical thinker, problem solvers, and decision makers. They should be shown as interested in their work.
8. Administrators at all levels of education need retraining programs for themselves and for their staffs to develop awareness and raise consciousness to sex bias in textbooks and instructional materials.

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Appendix C

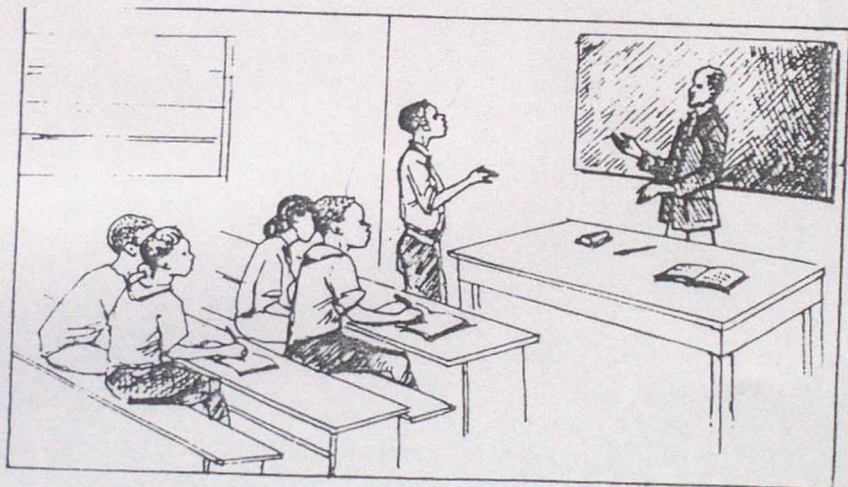
No	Activities that shows females inferiority (female gender stereotypes)	Subject and grade level	Pages
1	አስቲር ቆልዓ ስለ ዝሐመማ ክትጭነት ሓዲራ።	Tigrigna grade five	69
2	እቲ ህፃን ስለ ዝደቀሰ ቀስ ኣቢላ ኣልዔላቶ።	"	69
3	ሊድያ ምስ ፍኖት ኸይና ክዳውንቲ ሓሳባ።	"	93
4	ለምለም ኣበርቲዓ ያ እተዕንዕ ክይነ ግና ኣበ ዝሐሰራ ፈተና ፀቡቅ ውፀኢት ኣይረኸበትን።	"	94
5	ወ/ሮ ለትሂት ወዳ ስለ ዝሐመማ ተሻቂላ ኣላ።	Tigrigna grade six	34
6	ሰበይቲ ሰብኣይ ይዘበጣሞ ድርኩሲት ይደግማ።	"	140
7	ሰበይቲ ዘይበሉ ኣይገዛን፣ ኣንበሳ ዘይብሉ ኣይበረኻን።	"	140
8	ኣልማዝና ድስቲ	Amharic grade five	65
9	ሳባ የጎዳና ተዳዳሪ ነች።	Amharic grade six	6
10	ስንቁ የአቶ ክበሮ ፀሃፊ ነች።	"	16
11	ራሄል ጎበዝ ተማሪ ብትሆንም በፈተና ወድቃለች።	"	45
12	ኣልማዝ ሰነፍ ተማሪ ነች፣ ኣልማዝ ረባሽ ነች።	"	45
13	ወ/ሮ ኣወጣሽ ጥሩ ጠላ ጠመቁ።	"	73

No	Activities that show male supremacy	Subject in grade level	pages
1	ኣበ ክፍሊ ቀዳማይ ስለ ዘወፀ ተሸለሙ።	Tigrigna grade five	26
2	ክዕንዕ ስለ ዝሐደር ደቂሱ።	"	26
3	በርሀ ስፖርተኛ ዩ።	"	22
4	እቲ ንፋዕ ተምሃራ ብዝረኸሞ ሸልማት ኣዝዩ ተሐንሱ።	"	69
5	በርቲዕ ስለ ዕንዕ ሓሊፉ።	"	115
6	ዓሊ ተሸለሙ	Tigrigna grade six	19
7	ተመስገን በትምህርቲ ቀዳማይ ወሞሉ	"	32
8	በርሂ ትምህርቲን በማጥናቲ ፈተናውን በአጥጋቢ ውጤት ኣለፈ	Amharic grade six	6
9	ይበይን መዕሐፍ ደረሰ	"	11
10	ታምራት በትምህርቲ ጎበዝ ነው። ታምራት ፈተናውን ያልፋል።	"	45
11	ወንድሜ ጥሩ መዕሐፍ ደረሰ።	"	73
12	ቢንያም ጎበዝ ልጅ ነው።	"	85
13	መምህሩ የሙዚቃ ግጥም ተጠመ።	"	73
14	መካኒኩ የፈታውን ቱኘ መልሶ ገጠመ።	"	73
15	አበራ ስዕሉን በደንብ ሳለ።	"	73

Appendix D-1 picture that shows gender stereotype

ብርሃኑ:- መምህር! አርባዕቲኡ መደባት ሒሳብ ማለት ምድማር፣ ምጉዳል፣ ምርባሕን ምምቃልን ከምኡ'ውን ምፅሓፍን ምንባብን ክኢሊ እየ፣ ካብዙይ ንላዕሊ ምፍላጥ እንታይ ይግብስ?

መምህር:- እየ ብርሃኑ! ከምዚ ንሰኻ እትብሎ ዘሎኻ ኩሉ ሰብ ምንባብን ምፅሓፍን ከምኡ'ውን አርባዕቲኡ መደባት ሒሳብ ጥራሕ ተማሂሩ እንተገዲፉዎ ሃገር ክንድቲ ዝድለ አይትለምዕን ብቐዳት መራሕቲ ሃገር፣ ሓኻይም፣ መሃንዲሳት፣ መምህራን፣ ዓበይትን ዘመናዊያንን ነጋዶ፣ ናይ ሕጊ ሰባት/ዳኛ፣ ጠበቓ/ወዘተ. አይህልዉን። እዚ እቶም ኩሎም እኮ ፍረ ቤት ትምህርቲ እዮም። ስለዚ ቤት ትምህርቲ ምፍራይ ዘይተቋርፅ፣ ዘይተዳሉ ሕያወይቲ አደ ምኃና አይትረስዕ።



ትምህርቲ ካብ ኩሉ ዝበለፀ ሃብቲ'ዩ።

ብርሃኑ:- መምህር! እሞ አነ ሕዚ ትምህርቲ እንተድኣ ቀጺለ ከምዘም ዝጠቐስኩምዎም ክኸውን እኸእል እየ ማለት ድዩ?

መምህር:- እወ! ዘይትኸነሉ ምኸንያት የለን። እዚ ንክኸውን ግና ከተፅንዕ አለካ። ምንባብን ምፅሓፍን ብምኸእልካ ትዕቢት

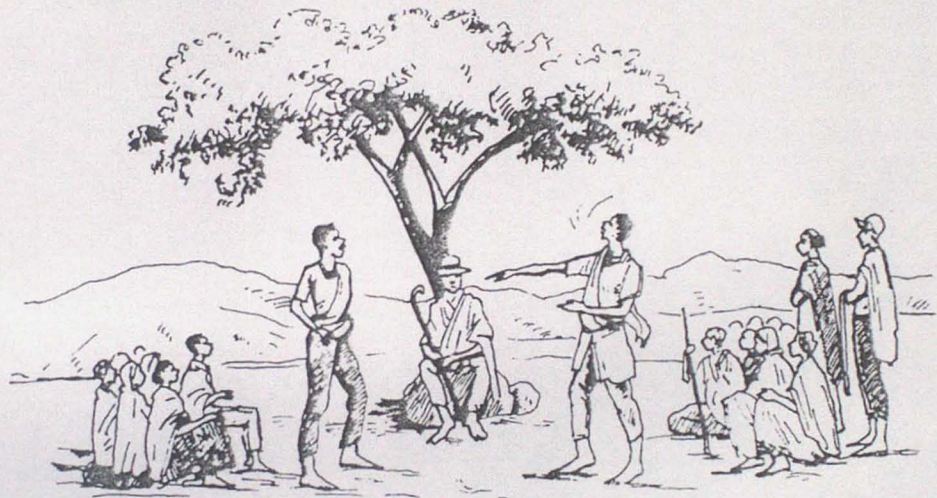
Grade 8/2 Tieneta

Appendix D 2

Pictures that show gender stereotypes

እቲ ክትዕ ቅድሚ ምጅማፍ ዳኛ ናይቲ ክትዕ ፍረ-ሓሳብ ክገልፅ ኣለዎ። ተኻታዕቲ እንመን ከምዝኾኑ ከላሊ፣ ተኻታዕቲ እገባብ ሓሊዮም ክካትዑ ከምዘለዎምን መድመፅቲ፣ ብህድላት ነቲ ክትዕ ክከታተሉ ከምዝግበኦምን ሓበሬታ ክህብ ኣለዎ።

ኣብ ከይዲ ክትዕ ክትግበሩ ዘለዎም ኣገደሰቲ ቁም-ነገራት'ውን ኣለው። ንላቶም ድማ ብቐፅ መረዳእታ ሓዝካ ብምቕራብ ተዓዘብቲ (መዳመፅቲ) ክስሕብ ዝኸእል ዘረባ ምቕራብ እቲ ቀንድን ኣድላይን ነገር'ዩ። ከምኡ'ውን ንዝካተዐካን ንመድመፅትን ግቡእ ግምትን ክብርን ምሃብ ክርላዕ ዘይብሉ ቁም-ነገር እዩ። ክትዕ ብፀርፍን ብምብስባስን ንተቻዋሚኻ ምርታዕ ከምዘይኮነ ምርዳእ ኣድላይ እዩ።



ብክትዕ ሰፊሕ ክእለትን ፍልጠትን ይምፅብል

እዳብ ኮይንካ ክትቐርብ ብእተቐርቦም ሓሳባት ንተዓዘብትን ንተኻታዕትን እተገምኑሉ ከይዲ እዩ። ኣብ እዋን ክትዕ ሓሳብ ብተኸክል ዝገልፁ ቃላትን ኣበሃህላታትን ምምራፅ የድሊ። ንተቻዋሚኻ ብኸእለት

Grade five Temina