Linguistic Sexism In Qatari Primary Mathematics Textbooks

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Abstract

Linguistic sexism and gender stereotyping are barriers to gender equality. If they are inculcated at an early age, they could be institutionalized and become part of the social code. Hence the school environment, where children receive their earliest education about society, norms, culture and the world around them, should be free of such biasness. One medium where linguistic sexism and gender stereotyping can exist is school textbooks. Children exposed to textbooks that contain gender ideology may internalize it. This paper, therefore, aims to study the linguistic sexism in Qatari primary mathematics textbooks. A quantitative qualitative approach is adopted. Wordsmith Tools 5.0 is used for the quantitative analysis and Fairclough's (1989) Critical Discourse Analysis (CDA) is used for the qualitative analysis. The findings reveal that males are more visible than females in imported texts. However, in the Qatari published textbooks, females are more visible and dominant than males. This paper also discusses the implications of the findings on teaching and learning in the schools. Its objective is to raise the awareness of the existence of linguistic sexism and gender stereotyping in school textbooks.

Keywords: linguistic sexism, gender stereotyping, primary education, corpus analysis, mathematics textbook.

Introduction

Research on linguistic sexism and gender role stereotyping in textbooks (Bahiyah Abdul Hamid, Mohd. Subakir, Kesumawati Abu Bakar, Yuen Chee Keong & Azhar Jaludin, 2008; Liew, 2007; Saeed Paivandi, 2008; Blumberg, 2007; Malik & Ayaz, 2010; Otlowski, 2003) has indicated that there is a strong gender bias in them. The indoctrination of such stereotyping can degrade the dignity of one group (usually women) and thus impede the advancement of this group in education, politics, and society. In addition, many studies on stereotypical gender roles reproduced in the educational system have shown that girls have a low expectation of themselves which could limit the full potential in them.

Fortunately, many programmes have been implemented with the aim of giving equal education for all and of eliminating gender discrimination. For example, the conference in Dakar, Senegal in 2000 emphasizes on the importance that girls and women receive equal and full access to education. It also focuses on the need to change the values and practices that lead to gender disparities in educational institutions (UNESCO, 2002). This is because school institutions play a vital part in socialization and in the molding of the ideologies in the students' mind.

The reproduction of gender biasness and gender role stereotyping is the result of the hidden curriculum that is unconsciously implanted during the development of the curriculum and textbooks. Kentli (2009) defines hidden curriculum as unstated norms, values, and beliefs embedded in and transmitted to students through the underlying rules that structure the routines and social relationship in school and classroom. Hidden curriculum acknowledges the socialization process of schooling and unconsciously enables the students to understand the behavioral patterns, norms and values expected in the public sphere (Kentli, 2009).

Sydney (2004) asserts that textbooks are an important element in the teaching and learning process. It provides the technical and academic knowledge that the officials want the children to achieve during their schooling years. According to Kabira and Masinjila (1997) as cited in Sydney (2004, p.13),

> "…writers of textbooks create a human world in which children learn about what people do and how they relate to one another. It is this second part of humanizing effect of textbooks that if not handled carefully could lead to the discrimination of some categories of learners and in this case a discrimination that is based on gender role stereotyping".

The nature of using textbooks that requires teachers and learners to read and revise the text numerous times, may contribute to the conditioning of the attitudes about self,

gender, occupations, life expectations and life opportunities. The children unconsciously internalize what they see in the textbooks and what they hear from the teachers as appropriate qualities for what is masculine and what is feminine. Such gender role stereotyping is not part of the explicit curriculum but rather a realization of the hidden curriculum (Sydney, 2004). Although it is not stated explicitly in the curriculum about the unintended gender biased hidden message, the writers of the textbooks unconsciously foster the practices of gender inequality starting at the early age. The educational process within the school system further reinforces the formation of these values and maintains the views of socially accepted gender roles (Posner, 2003 as cited in Bahiyah et al., 2008). Many textbooks have demonstrated gender biasness, sexism and stereotyping which led researchers (Litz, 2005, p.45) to believe that,

> "...the continuing prevalence of sexism and gender stereotypes in.. textbooks may reflect the unequal power relationships that still exist between the sexes in many cultures, the prolonged marginalization of females, and the misrepresentations of writers with social attitudes that are incongruent with the present-day realities of the target language culture."

Similarly, Bahiyah et al. (2008) found that children understanding about the world and the relationship within the society are acquired through these influential sources; textbooks. For example, in Malaysia, the textbooks are used for several years before the Ministry of Education replaces them with new ones. This initiative permits linguistic sexism and gender roles stereotyping to permeate into the mind of the students and are later reproduce in their everyday life. Therefore, it is very crucial for the school to inculcate in the younger generation the awareness of gender equality and to spread the notion that the world has equal places for both men and women.

Such non-bias values are present in Qatar as the Qatari National vision (Qatar General Secretariat for Development Planning, 2009) is to advance Qataris in the various spheres of life. It also aims to enhance women's participation in issues of linguistic sexism and gender role stereotyping. Therefore, it is important to eliminate gender discrimination at an early age in order to achieve this vision by 2030. In view of this, the present study, which is fully funded by Qatar National Research Fund, addresses the issue of linguistic sexism and gender stereotyping in Qatari primary school Mathematics textbooks. Since previous research has focused mostly on English language textbooks, there is a lack of research done on other subjects such as Science and Mathematics. This study is intended to fill this gap. Its purpose is to investigate if linguistic sexism is present in Mathematics textbooks.

Curriculum and Textbooks in Qatar

In Qatar, the education system is divided into three stages: primary, preparatory and secondary. Each of the levels is further categorized into three types of schools: government schools, government-funded independent schools and self-funded private schools. The parents have a choice in selecting which school they wish to send their children too.

Until 1970, the Ministry of Education in Qatar adopted the curricula of other Arab countries for its schools. Since independence in 1971, the Ministry has been continuously evaluating, revising and developing its own curricula. Another education reform started in 2001 was that teachers have to upgrade their skills and learn the new curriculum standards. Through this reform, the new government-funded independence schools are established in which the administrators of the schools have the autonomy to determine their own teaching methods, hire their own staff as long as they follow the curriculum standards outlined by the Supreme Education Council (SEC). The schools have the freedom of using any material and learning resource. Each student has to meet the expected knowledge, concepts and mastery skills at each grade. The students are evaluated through mandatory annual assessments and the results from the assessments provide information on the students' progress for the educators, parents and government.

This education system which resembles the Western model allows for the establishment of government-funded independent schools, an innovation that encourages teachers to be creative in meeting the needs of the student within the curriculum. This includes the choice of instructional materials and teaching approaches. The selection of textbooks in these government-funded independent schools varies from schools to schools. The textbooks are not centralized like in Japan or Malaysia. The teachers have the freedom to choose the textbooks that they feel can cater to the needs of their students. They may also develop their own independent textbooks specific for their school only. But, most of the textbooks are imported from developed countries such as the United Kingdom and the United States.

Occurrence of Linguistic Sexism in School Textbooks

The starting point of research that attempts to eliminate gender discrimination and sexism in schools is rooted in feminist work in the early 1960s. However, efforts to reduce gender role stereotyping have been a worldwide concern. Researchers have found out that apart from the written curriculum in schools, the hidden curriculum plays an important role in shaping the children's norms and values. Margolis (2001, as cited in Kentli, 2009) argues that the hidden curriculum in the education system reinforces the understanding of school's hegemonic function(s) that also maintains the power of the state. As school is the institution where most children first received their formal social education, this scenario is seen as the norms and the natural order of things, which later leads to sex-role stereotyping.

In a study that addresses the issue of how school textbooks inculcate linguistic sexism and sex-role stereotyping at a young age, Bahiyah et al. (2008) found that females are still portrayed as playing a supporting role to males. The textbooks show that males are more active than females, and females are associated with stereotypical roles. The representation of males and females does not portray the changing realities of the Malaysian society today.

Saeed Paivandi (2008), on the other hand, found that the construction of intolerance and discrimination are not accidental in Iranian textbooks. Such depictions are purposely done to inform children of the extent of gender separation in all environments. The findings reveal that women are absent in images related to work, military, social environment, and in portraits of historical, cultural, political, and scientific personalities. But, the presence of women is strongly depicted at home, in the neighborhood and religious gatherings. Gender inequality is prevalent in the textbooks as the authors of Iranian female textbooks only comprise 5% of the population. This study hopes to enlighten the people about some aspects of Iranian society and the fundamental values and beliefs that it holds in relation to gender.

Gender biasness is also seen in EFL textbooks in Japan. The study by Otlowski (2003) discusses the importance of textbook selection for EFL students with regard to the portrayal of gender representation in the targeted culture. In many cases, the representation of women in EFL textbooks portrays a stereotypical role of women as mothers and homemakers. In the study, two textbooks are investigated and the findings reveal that the conversations and illustrations in those textbooks do not represent the current role of women in their society and they still depict the stereotyping of man and woman.

Given the prevalence of linguistic sexism and gender role stereotyping in textbooks in Asia and in the Middle East, it is necessary to unravel linguistic sexism and gender role stereotyping in other countries too. The study, however, should not be limited to English language textbooks. The investigation should be extended to other textbooks such as Mathematics and Science.

Objectives

This paper presents the preliminary findings of on-going research that attempts to uncover the portrayal and occurrence of linguistic sexism and gender-role stereotyping in the Mathematics textbooks of primary schools in Qatar. Furthermore, it discusses the impact of the findings on the teaching and learning in the schools. It also hopes to raise the awareness of the existence of linguistic sexism and gender role stereotyping specifically in Mathematics textbooks of Qatari primary schools.

Research Questions

The research questions are:

1. Are there occurrences of linguistic sexism and gender role stereotyping in the Mathematics textbooks of Qatari primary schools?

2. How are linguistic sexism and sex-role stereotyping portrayed in these Mathematics textbooks?

Methodology

This study uses a quantitative-qualitative approach. For the quantitative analysis, Wordsmith Tools 5.0 is used while Fairclough's (1989) Critical Discourse Analysis (CDA) is used for the qualitative analysis. The corpus of this research is 24 Mathematics textbooks of primary independent schools in Qatar (grades 1-6). Bahiyah et al., (2008) stressed that textbooks play a vital part in the construction of cultural and social values as far as a gender relation is concerned, therefore, it is extremely important for any investigator to investigate the textbooks at this level.

Research Design

This on-going research, an adaptation of the study on Malaysian English language textbooks conducted by Yuen, Mohamad Subakir, Kesumawati, Azhar and Bahiyah (2007), involves several phases.

Phase 1: Corpus selection

The 24 selected Mathematics textbooks used in Grades 1-6 generated a corpus of 502,526 words. Since the aim of researchers was to investigate linguistic sexism found specifically in primary schools, the sampling of the textbooks was purposive in nature. The textbooks used at this level included both text and practice books which are used extensively in the classrooms because they are the primary resource of learning for the students in Qatar.

The 24 textbooks were selected from five independent schools: four from boys' schools and one from a girls' school. There were two types of textbooks, the first was published in Qatar and the second was published by foreigners. The findings and analysis of the textbooks were presented according to these two types. Then a comparison was made between them. As this research is an ongoing research under QNRF, the results could only be considered as preliminary findings for the project.

Phase 2: Digitization process

The textbooks are first transformed into digital forms by a scanning procedure. Then, the digitized forms of the data go through the conversion and merging processes.

i) Format conversion process. The scanning procedure produces .jpeg format of the textbook images. The .jpeg format cannot be used in the corpus analysis tool because the tool can only process text files. Therefore, these images have to be converted into word documents before they were converted into text files. The word document files contain both pictures and text data while the text files contain only text data. The conversion process was performed by using the ABBYY FineReader Version 10 Professional Edition software which can convert the .jpeg format to .doc format and later .txt format. The conversion process from .jpeg to word document is not very accurate. Hence, the researchers have to manually edit the text files to ensure consistency and accuracy of the

data. In order to organize the files for future references and retrieval a simple coding system was developed before the scanning process started.

ii) Merging process. In the scanning process conducted earlier, each page of a textbook is split into different text files, for example, if a textbook has 50 pages, it would be divided into 50 separate text files. Although, ABBYY FineReader 10 can convert all images found in a book into a single text file, a problem would crop up later when the researchers need to revisit the data for checking and analyzing purposes. To facilitate this process, these different files need to be catalogued and merged first and only then would the data be ready for Phase 3, Data Processing.

Phase 3: Content analysis

When the corpus database has been created, a detailed content analysis is used to identify and examine the contents and the language used to show the occurrences of linguistic sexism and sex role stereotyping in these textbooks. Mohd Faeiz (2010) and Mohd Faeiz et al. (2011) state that content analysis involves, among other things, the process of analysing the contents of documentary materials such as textbooks and the mass media. The analysis is conducted by first identifying certain characteristics of the materials and followed by investigating the meanings of the underlying messages.

The corpus database is analysed for the following characteristics:

a. representations of male and female human characters, adults and children as well as masculine and female animals and inanimate objects,
b. terms of address and referencing devices,
c. social roles depicted for male and female characters,
d. activities associated with male and female characters depicted including those involving professions, sports, games, hobbies and leisure activities, and
e. types of linguistic structures and language used for males and females

The data is then processed using Wordsmith Tools 5 to generate a list of frequency of words, which is then tabulated into figures and percentages. The identified items are then classified into categories and frequencies. Finally, the frequencies are converted into percentages and compared across genders.

The findings of this study with regard to the occurrences of linguistic sexism and gender role stereotyping in the selected textbooks would be discussed in terms of the following categories as suggested by Bahiyah et al. (2008):

(a) The use of male and female pronouns
(b) The use of terms of addresses/salutations
(c) The use of male and female nouns with regard to the family (kinship terms)
(d) The use of words related to occupations/professions
(e) The use of words related to hobbies

Phase 4: Data analysis

Wordsmith Tools 5.0

At the fourth phase, Wordsmith Tools 5 is used to a) generate a frequency list of words and b) assist in locating the collocation of words from the data. Bahiyah et al. (2008), Yuen et al. (2007), Azhar and Bahiyah (2007), Nadia (2010), Mohd Faeiz (2010) and Mohd Faeiz et al. (2011) used the identical procedures in analysing the instances of linguistic sexism in the studies conducted previously on the Malaysian school textbooks. Through Wordsmith Tools 5, the observation on how the words are used in a context and the frequency of the words found in the corpus of school textbooks was achieved. The software helps the researchers to identify the words that are significant and important for portraying linguistic sexism and gender stereotyping in the school textbooks. Thus, the use of this software complements the Critical Discourse Analysis carried out on the written discourse of the textbooks.

Critical Discourse Analysis (CDA)

The qualitative part of the analysis validates the findings in the quantitative analysis. There are three stages of CDA (Fairclough 1989). However, for the current study the researchers follow the modified approach outlined by Bahiyah et al. (2008) in analysing linguistic sexism and gender role stereotyping. Here, the CDA is used to explore how social relations, identity and power are constructed in the community, media and institutions. It is also used to explain how these relationships secure the power of people in control, thus creating power imbalances and social inequities.

Findings

The findings revealed that there is a preference of males over females where males are represented as standard. Secondly, there is a bias towards the portrayal of males over females in the depiction of characters in social and occupational activities. Thirdly, there is also a bias in the portrayal of personality characteristics.

Preference of males over females

The preference of males over females is described in three categories: i) the instances of male/female nouns, ii) terms of address/salutation, and iii) male and female pronouns.

Male and female nouns: Students are exposed to linguistic sexism and gender role stereotyping when internalizing in their mind that males are dominant and are the norms of the society. In all the textbooks, male and female characters are identified through nouns and gender related nouns such as pronouns, kinship terms, salutations, hobbies and professions. From the findings, the foreign textbooks revealed that males are more dominant than females, which is similar to the findings by Bahiyah et al. (2008), Sydney (2004), Nadia (2010), Mohd Faeiz (2010) and Mohd Faeiz et al. (2011). Although the

discrepancy between males over females is not large, 370 times compared to 341 times, the textbooks show a slight gender bias towards males (see Table 1). In contrast with Qatari Mathematics textbooks, females are slightly dominant. There were 91 occurrences of female nouns compared to males with 75 occurrences (see Table 2).

Table 1: Foreign published textbooks

Gender	Frequency
Male	370
Female	341
Total	711

Table 2: Qatar published textbooks

Gender	Frequency
Male	75
Female	91
Total	166

Terms of address/salutation: For this category (see Tables 3 and 4), the use of female salutations or terms of address is more prominent in foreign textbooks than in Qatari textbooks. The instances of male and female salutations are equal in Qatari textbooks, with 2 occurrences but in foreign textbooks, females are represented more than males – 21 compared to 12. The data indicates that in foreign published textbooks, the difference is quite large. This may be due to the different salutation terms to address women who are married and those who are single. But, in Qatari textbooks, the occurrences are minimal and the terms of address that are culturally specific to Qatar are not visible.

Table 3: Foreign published textbooks

Salutations	Frequency
Miss	4
Mr	12
Mrs	17
Ms	0
Total	
Male	12
Female	21

Table 4: Qatar published textbooks

Salutations	Frequency
Miss	1
Mr	2
Mrs	0
Ms	1
Total	
Male	2
Female	2

Male and female pronouns: The male pronoun 'he', a third-person singular is more noticeable than 'she' in both types of textbooks (see Table 5). But the instances of 'he' are very high in foreign published textbooks, 201 occurrences as opposed to the female subject pronoun 'she' with 170 occurrences. The occurrences of the male pronoun 'he' showed a higher usage in Qatari Mathematics textbooks, compared to 'she'. 'He' occurs 30 times in the textbooks and 'she' occurs only 19 times. This finding is consistent with Bahiyah et al.'s (2008) finding in the study of the Malaysian English language textbooks of Year 3 and Year 6, which also showed the same trend.

However, the third person female object pronoun 'her' is significantly higher in foreign textbooks (79 times) and male object pronoun 'his' occurs only 53 times. In Qatari textbooks, the trend is similar to 'he'. From Table 5, it is clear that the male pronoun 'his' is almost twice as many as that of 'her' in Qatari textbooks and the use of reflexive pronouns 'himself' and 'herself' are absent in Qatari textbooks. However, in foreign textbooks, there is no occurrence of 'himself' and only one occurrence of 'herself'. The lack/absent of reflexive pronouns usage in both textbooks could be due to the difficulties that young children may encounter in grasping the ideas of reflexive pronouns used to replace nouns that refer to the same person (s) or thing (s) in the same clause (Bahiyah Abdul Hamid & Wijayasuriya, 1998 as cited in Bahiyah et al., 2008). In summary, the use of masculine pronouns is slightly higher in Qatari textbooks than in foreign textbooks. Although the frequency in foreign textbooks is significantly higher, the difference in the use of males and female pronouns is almost equal. However, male and female pronouns are not evenly distributed in Qatari textbooks and it shows that the males are more dominant.

Table 5: Qatar publisher and foreign publisher – number of male and female pronouns

Pronoun	Qatar publisher		Foreign publisher	
	Male	Female	Male	Female
He/She	30	18	201	170
His/Her	21	12	53	79
Himself/Herself	0	0	0	1
Total	51	30	254	250

Portrayal of personality characteristics of males and females along traditional masculine and feminine traits

The finding indicates that there are more female nouns used with regard to kinship terms (see Table 6). There are 32 female nouns as opposed to 26 male nouns in foreign published textbooks and 7 female nouns in contrast with only 4 male nouns in Qatar published textbooks. Although the overall instances of female kinship terms exceed the male counterparts in foreign published textbooks, 'father' has the highest frequency (12 times) in contrast with mother/mum (10 times). This finding is similar to Bahiyah et al. (2008), which stated that the roles of fathers are more acknowledged lexically while society acknowledged the roles of mothers as nurturers and caregivers. In contrast with Qatar published textbooks, the most frequent male social role is 'brother' with 2 instances as opposed to 'sister' with 5 instances. The concept of religious brotherhood and sisterhood in Islam may influence the use of these terms because in this religion people are considered as brothers and sisters regardless of blood ties.

In foreign published textbooks, the three most common nouns for males are 'father'/'dad', 'brother' and 'uncle' while for those used for females are 'mother'/'mum', 'aunt' and 'sister'. In contrast, there are fewer common nouns in Qatar published textbooks, where 'brother' is the only male noun and 'sister' and 'mother'/'mum' are the only female nouns.

Table 6: Qatar publisher and foreign publisher – the use of male and female nouns with regard to kinship terms

Nouns	Male		Female	
Qatar published	Brother	2	Sister	5
	Children/Child	2	Mother/Mum	2
Frequency		4		7
Foreign published	Dad/Father	12	Mother/Mum	10
	Brother	10	Aunt	9
	Uncle	2	Sister	8
	Children/Child	1	Grandma/Granny	5
	Grandpa	1		
Frequency		26		32
Total		30		39

In Table 7, the occupational roles for females are less diverse and are restricted to stereotypical type of occupations/professions while male occupations show a wider range thus providing them with more options than females. The occupational types portrayed in the textbooks show that a subtle message is being conveyed; males are dominant with a more varied type of occupation compared to females who are restricted to certain types of occupation. This phenomenon is prominent in the foreign textbooks but is not found in Qatari textbooks. Apparently, no occupation is assigned to males but two occupations are assigned to females. The status of the country as one of the richest in the world may have

influenced the paltry portrayal of occupational roles in males and females since Qataris do not have to work. The benefits derived from the oil and natural gas revenues are providing them free social security matched only by few countries in the world.

Table 7: Qatar publisher and foreign publisher – the occupation of male and female characters

Occupations	Male	Female
Qatar published textbooks		Ballet dancers, Dogs led Racer
Frequency	0	3
Foreign published textbooks	Builder, Chicken feeding, Cyclist, Farmer, Footballers, Goalkeeper, Golfer, Kings, Holiday-maker, Painter, Player(s), Postman, Rider, Rowers, Runner (s), Salesman, Skater (s), Teacher, Wardens, Wizards, Worker.	Babysitting, Paper girl (s), Princess, Queen (s), Rider, Rowers, Village shopkeeper, Skater (s).
Frequency	29	10
Total	29	13

The portrayal of female occupational roles in foreign textbooks is less stereotypical but less varied compared to males. 'Babysitting' is synonymous with women nurturing personality but 'rider', 'rowers' and 'skaters' are occupations usually referred to males. But, in these textbooks, the roles are changing and females are shown to be participating in such occupations or professions. Generally the Qatari textbooks show the occupational roles less varied than the ones found in the foreign textbooks. This factor may due to the focus of the textbooks on numbers and mathematical problems without considering the occupational criterion in the textbooks. In addition, the writers could have stressed on achieving the objectives of the curriculum rather than emphasizing on the occupational roles of males and females.

Depiction of personality characteristics along traditional masculine and feminine traits

The personality of female characters is moving away from the stereotypical masculine and feminine lines. In Table 7, it appears that females are more involved in outdoor activities and they have not confined themselves to the more stereotypical roles of women doing domestic chores and participate only in indoor activities. The occupations in the above findings reflect the changing personalities of females today who are ready and more receptive to new challenges and are able to compete with males. It is observed that females can also perform activities such as 'riding', 'rowing' and 'skating' which

usually are male-dominated activities. The traditional feminine traits of females are slowly being transformed into more diversified and neutral traits which can be applicable to either males or females.

Despite the depiction of females that is moving away from the feminine traits, males are still seen as maintaining the traditional masculine traits by being portrayed in more powerful occupations. They are shown to be more energetic, active and dedicated in their work. From the above table 7, 'golfer', 'footballer', 'goalkeeper', 'cyclist', and 'runner(s)' are occupations/professions that are related to sports and require much energy and perseverance. None of these professions is attributed to females, giving the impression that only males are eligible to have such profession in contrast to what is happening in the real world.

Similarly, males are depicted as more accountable and responsible in their occupations. In the foreign textbooks, 'teachers' and 'wardens' are categorized specifically under jobs for males. These representations of males show that males are not only prominent, which in this society is very influential in shaping and guiding students to become important people but also a powerful symbol. They are more knowledgeable, trustworthy and reliable. The absence of these professions in female domains indicates that women are not up to par with their male counterparts.

Teaching and learning implications

When female students are comfortable with the stereotypical (mostly, negative) roles that have been depicted or assigned to them by society, they may not have the motivation to learn because there are not many opportunities for them as they live in a male-dominated society. They will not develop their full potential and will be treated as second-class citizens. Teachers as the authority in classrooms should address this issue and enlighten the children about gender equality. They should also teach them how to react when they encounter similar situations. This is a challenging task in Qatar where the schools are segregated according to genders. However, the use of school textbooks that is gender neutral is one of the best ways to educate students about gender equality. Additionally, teachers can promote gender equality in the classroom by teaching their children that the world they live on has equal places for both men and women. To decode the traditional stereotypical norms and values and to encode new ideologies would be very difficult at the initial stage. But, it will gradually show improvement if the inculcation of gender awareness is done consistently inside and outside the classrooms. There is still hope for a change.

Conclusion

Fromkin and Rodman (1993, p. 306 as cited in Bahiyah et al., 2008) assert that "language reflects sexism in the society. Language itself is not sexist. …but it can connote sexist attitudes as well as attitudes about social taboos and racism". It is evident that language is not neutral; it is shaped and influenced by the cultural values and the perceptions of the people about how the world should be seen. The Mathematics textbooks in this study

reveal that the linguistic features conveyed sexism. There is also gender bias where males are portrayed as more dominant than females, fortunately, it is not statistically significant in both types of textbooks. Last but not least, Qatari Mathematics textbooks portrayed an over-representation of female nouns than foreign textbooks but again the difference is not very significant. It shows that perhaps there is a positive move to have textbooks that are more gender balanced.

Females are still regarded as important figures in the family domains but still play only secondary roles to males in foreign textbooks. Males are recognized as breadwinners and females as caretakers of the family. Although society recognizes the roles of women as nurturers, the role of fathers is valued more in the textbooks through the instances of 'father' exceeding that of 'mother'. Quite surprisingly, it is a different scenario in Qatar textbooks, where 'brother' and 'sister' are more acknowledged in the textbooks. The view in Islam that every Muslim is a brother and a sister may have influenced the selection of kinship terms in the textbooks.

The tendency to show linguistic sexism and gender role stereotyping is still visible in the textbooks but it appears to be minimal. It is an admirable step for a country like Qatar to eliminate gender biasness gradually and to ensure gender parity before 2030 (Qatar General Secretariat for Development Planning, 2009). When the children are inculcated at a young age that the world they live has equal opportunities for both men and women, they contribute to a better future for the country, where the full potential of men and women can be fully exploited. The move to eliminate linguistic sexism and sex-role stereotyping not only requires linguistic reforms but most importantly they should be a significant step to change the perception of what is to be masculine and feminine in all spheres of the society.

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References

Azhar Jaludin & Bahiyah Dato' Hj. Abdul Hamid. (2007). Linguistic sexism and gender role stereotyping in Malaysian KBSR and KBSM English language Textbooks: Implications to Nation-Building. (Unpublished progress report). The Centre for Gender Research (CGR), Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia.

Bahiyah Dato' Hj. Abdul Hamid, Mohd. Subakir Mohd. Yasin, Kesumawati Abu Bakar. Yuen Chee Keong & Azhar Jaludin. (2008). Linguistic sexism and gender role stereotyping in Malaysian English language textbooks. *GEMA Online™ Journal of Language Studies, 8*(2), 45-78.

Blumberg, R. L. (2007). Gender bias in textbooks: a hidden obstacle on the road to gender equality in education. Paper commissioned for the EFA Global Monitoring Report 2008, Education for All by 2015: will we make it. (Online) Retrieved 4, March, 2011 from http://unesdoc.unesco.org/images/0015/001555/155509e.pdf

Fairclough, N. (1989). *Language and power.* London: Longman.

Kentli, F. D. (2009). Comparison of hidden curriculum theories. *European Journal of Educational Studies, 1* (2), 83-88.

Litz, D. R. A. (2005). Textbook evaluation and ELT management: a South Korean study. *Asian EFL Journal*. (Online) Retrieved 22 January, 2011 from http://www.asian-efl-journal.com/Litz_thesis.pdf

Malik Naseer Hussain & Ayaz Afsar. (2010). Language and gender - linguistic analysis of intermediate English textbooks in Pakistan. *Language in India 10,* 26- 42.

Mohd Faeiz Ekram Mohd Jasmani. (2010). Gender inequality in action verbs in the Malaysian English secondary school textbooks. Unpublished M.A Thesis, Universiti Kebangsaan Malaysia, Bangi, Malaysia.

Mohd Faeiz Ekram Mohd Jasmani, Mohamad Subakir Mohd Yasin, Bahiyah Abdul Hamid, Yuen Chee Keong, Zarina Othman, & Azhar Jaludin. (2011). Verbs and gender: a hidden agenda in a multicultural country. *3L: The Southeast Asian Journal of English Language Studies, 17*, 61-73.

Nadia Abdul Rahman. (2010). Linguistic sexism and gender role stereotyping in Malaysian English primary school textbooks. Unpublished MA Thesis, Universiti Kebangsaan Malaysia, Bangi, Malaysia.

Liew, Peck-Chong. (2007). An analysis of gender representations in Chinese and Malay primary school reading textbooks: grade 2-6. Unpublished Ph.D thesis. Tennessee State University.

Saeed Paivandi. (2008). Discrimination and intolerance in Iran's textbooks. Freedom House. (Online) Retrieved 3 April, 2011 from http://www.freedomhouse.org/uploads/press_release/IranTextbookAnalysis_FINAL.pdf

Otlowski, M. (2003). Ethnic diversity and gender bias in EFL textbooks. *Asian EFL Journal 5*(2), 1-15. (Online) Retrieved 12 March, 2011 from www.asian-efl-journal.com/june_03_mo.pdf

Qatar General Secretariat for Development Planning. (2009). Qatar national vision 2030. (Online) Retrieved 25 November, 2010 from http://www.qu.edu.qa/pharmacy/components/upcoming_events_material/Qatar_National_Vision_2030.pdf

Sydney G. V. Mkuchu. (2004). Gender roles in textbooks as a function of hidden curriculum in Tanzania primary schools. Unpublished Ph.D thesis, the University of South Africa.

UNESCO. (2002). Contributing to peace and human development in an era of globalization through education, the sciences, culture and communication. Paris: United Nations Educational, Scientific and Cultural Organization.

Yuen Chee Keong, Mohamad Subakir Mohd Yasin, Kesumawati Abu Bakar, Azhar Jaludin & Bahiyah Dato' Hj. Abdul Hamid. (2007). Unraveling linguistic sexism and sex role stereotyping in Malaysian English language textbooks: the Wordsmith Tools way. Paper presented at ICOSH (International Conference of Social Science and Humanities). Bangi: Universiti Kebangsaan Malaysia.

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