WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Gender (in) Equality: Sexism in the Primary Grades' English-Science-Math Modules of a Private School

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DOI: https://doi.org/10.55248/gengpi.2022.3.7.20

ABSTRACT

This quantitative-qualitative study aims to determine the gender inequality found in the nine modules produced by a private school. Using Chi-square Goodness-of-Fit Test, the results reveal that English and Math modules observe gender equality as there is no significant difference found in the proportion of female visibility and male visibility in the said learning modules. The same is true with Grades 2 and 3 modules. However, the Grade 1 and Science learning modules show that there is significance difference in the proportion of female visibility and male visibility. Hence, the modules do not observe gender equality. It should be noted however that the female illustrations outnumber male illustrations. Based on the analysis using Porreca's Linguistic Aspect of Gender Representation, certain occupations were attributed to males and females. Moreover, male characters are more frequently shown in domains such as agriculture, science and engineering and sports than their female counterparts. Women are predominantly engaged in activities related to health, education, leisure, and family. Further, the title "Mrs." refers to a married female, whereas Miss refers to a maiden. Using marital status together with a surname underrates females about males because they are presented and treated in the society according to their marital status. However, the title Mr. does not indicate a male's marital status and is frequently used to address respectfully. When it comes to Firstness, the analysis revealed that when male and female names are paired or mentioned together, males usually come first. The implications of these findings are further discussed.

Keywords*: Gender Inequality, Gender Schema, Gender-Responsive Policy, Modules*

1. INTRODUCTION

To achieve gender equality and empower all women and girls is the 5th sustainable development goal (SDG) of the 17 SDGs formulated and proposed by UN General Assembly Open Working Group in July 2014. This specific goal aims to "end all forms of discrimination against all women and girls everywhere" (UN Economic and Social Council, 2017).

The Department of Education (DepEd), to align with the said SDG, then issued "Gender-responsive Basic Education Policy that "commits to integrate the principles of gender equality, gender equity, gender sensitivity, non-discrimination and human rights, in the provision and governance of basic education" in the Philippines.

With that being said, even before the pandemic, the agency has been trying to promote gender mainstreaming of the curriculum especially when making learning materials like textbooks because, aside from being used most of the classroom time by the teachers for core learning (Martin & Baldwin, 1992), these textbooks are the main sources of gender norms which schools "taught and enforced" (Java & Parcon, 2016). Moreover, Kereszty (2009) elucidated:

Textbooks represent the everyday life for children. They offer varieties of identities, interests, attitudes, and experiences that determine the position of the children since they contain the basic factual knowledge and skills children are supposed to acquire, which strongly influence their view of life and their gender socialization. (p.3).

Textbooks are one of the first forms of media to demonstrate which educational "norms" are intended to be transmitted in the classroom (Sabir, 2008 as cited by Java & Parcon, 2016). Hence, textbooks play a critical role in the formation of cultural and social values (Brugeilles & Cromer, 2009 as cited by Izzudin, 2021 and Craeynest, 2015) as far as gender relation is concerned (Bahiyah et al. in Briones, 2019).

However, gender inequality is still persistent as reinforced through the socialization process in school where cultural knowledge is formally dispensed (Java & Parcon, 2016). As a matter of fact in the last ten years, both local (Tarrayo, 2014; Villanueva & Obaob, 2021; Javier, 2016; Balsomo, 2016; Briones, 2019; Delavin & Buayan; 2020; Casalan & Espino-Paller, 2021; Mante-Estacio, Dumalay, & Rentillo, 2018) and foreign studies (Filipovic, 2018; Shahnaz, Fatima, & Qadir, 2020; Darni & Abida, 2017; Ariyanto, 2018; Amerinian & Esmaili, 2015; Tahan, 2015; Sulaimani, 2017; Dyrskog,

2017; Craeynest, 2015) revealed that gender bias or inequality is prevalent in different learning materials such as picture storybooks (Mante-Estacio, Dumalay, & Rentillo, 2018) and textbooks (Tarrayo, 2014; Villanueva & Obaob, 2021; Briones, 2019; Casalan & Espino-Paller, 2021).

Through the representations of characters found in textbooks, children are given a preferred behavioral model, often presenting and reinforcing gender stereotypes (Marinova, 2003); therefore, the portrayed roles in textbooks influence learners to control their behaviors that do not suit their personalities and behave in a way that is considered to be "appropriate" by these materials which can cause problems throughout their development (Toci & Aliu, 2013).

Foreign Studies about Gender Inequalities in learning materials:

Several studies about gender representations were conducted abroad.

In Ireland, Filipovic (2018) investigated and analyzed the content of 15 children books. Her study revealed that there are distinct gender patterns that include underrepresentation of female characters and instances of gender stereotyping. Not only her study did also reveal that most of the educators lack awareness of gender patterns, but they attribute limited importance to gender representation in the said materials.

In Indonesia, Darni and Abida (2017) examined the language textbooks used by elementary learners. They found out that that gender biased images remain strongly present in the textbooks. These materials differentiate between men and women in the form of job types, games, and attitudes. The textbooks reinforce the stereotypical image that men dominate the public sphere and women the private sphere. Cooking, cleaning, and decorating a house and various domestic works done by women, while men performing challenging jobs and heavy manual labor.

Gender discrimination also occurs in children's game. Girls were shown playing with domestic toys and the boys were shown building and enacting stereotypically masculine roles such as doctor or police officer. The patriarchal society also sets the difference attitude between boys and girls. Girls should smile and be sensible while boys should be brave (Darni & Abida, 2017).

Same findings also were revealed in Ariyanto's (2018) study as he examined how females and males are represented in the prescribed Indonesian ELT textbook published by the Ministry of National Education. He used critical micro-semiotic analysis to indicate if the ELT textbook depicts gender bias or stereotypes which are presented through visual and verbal texts. His findings revealed that gendered texts and discourses in the textbook inadequately depict gender equality. The textbooks also showcase stereotyped gender differences.

In Iran, Amerinian and Esmaili (2015) explored and analyzed the gender representation in ELT textbooks using Fairclough's three-dimensional model. Their findings revealed that the series are suffering from two types of sexism—overt and covert ones—the overt one discriminates against females in a vivid way and the covert one exploits the women as an instrument for advertising in order to promote selling.

In Pakistan, Shahnaz, Fatima, and Qadir (2020) analyzed quantitatively thirty-six children's magazine to expose character and pictorial presentations of male and female figures in the magazines. Their research findings revealed that there is a strong presence of gender bias against females in both character and pictorial representations. Although, there was some improvement in the depiction of females in illustrations and in-story characters at the end of sample period, this change has not really affected the overall stereotypical representation of females as they are still lacking in occupying professions as well as, major and supporting roles.

In United Arab Emirates, Tahan (2015) investigated if there are balanced gender representations in illustrations, visibility in texts, topic domination, occupations, grammatical functions (the role of actor), character traits, character activities and generic masculine in EFL textbooks used by grades 1 to 12 learners in public schools. Using content and discourse analyses, he found out that males outnumber females in seven examined concepts; hence, the materials are gender-biased.

In Saudi Arabia, Sulaimani (2017), also explored gender representation in an international English as a Foreign Language (EFL) textbook. His study aimed to investigate gender frequencies in conversations in three dimensions: gender relations, subject positions, and contents. The quantitative data were analyzed using critical discourse analysis (CDA) as a model. His findings revealed that the textbook is biased in terms of gender - women are underrepresented in the textbook. They have been totally excluded from half of the units in the textbook. Also, the equal relations between the two genders are limited to friendship. Although both genders are positioned in the same subjects and contents, women are less frequently characterized than men.

In Norway, Dyrskog (2017) conducted visual content analysis on four EFL textbooks. Her study revealed that there are still more visual representations of men compared to women. Women are more frequently depicted in stereotypical roles, and are awarded less power than men. These results indicate that there are hidden ideologies and myths and these are communicated through the visual representations.

In Belgium, Craeynest (2015) assessed how men and women are represented in three EFL textbooks published in Belgium and in the United Kingdom. Using quantitative content analysis, she determined the proportion of male to female characters and assessed whether there was a difference between the proportions in the texts and in the images. The analysis showed that the proportion of male characters is higher than the proportion of female characters in all textbooks and for both texts and images. Also, the results revealed that the gender ratio imbalance is more distinct among famous characters than among unknown characters. Overall, the study found that the male-to-female ratio in the texts is similar to that in the images.

Looking at the male-to-female ratio for unknown characters per textbook, a difference was found between the texts and the images. The occupational roles in which men and women are portrayed were also analyzed. It was found that male characters are more frequently shown in domains such as

agriculture, science and engineering and sports than their female counterparts. Women are predominantly engaged in activities related to health, education, leisure, and family. Additionally, male characters make up a higher percentage in most of the domains and textbooks (Craeynest, 2015).

Regarding occupational roles, the men and women in the textbooks are not portrayed in a stereotypical manner. The study found that in the textbooks, some character traits go against the gender stereotypes while others confirm them. Both men and women are shown as being aggressive, a stereotypically male character trait, in all three textbooks (Craeynest, 2015).

Local Studies about Gender Inequalities in learning materials:

In the Philippines, few studies (Tarrayo, 2014; Villanueva & Obaob, 2021; Javier, 2016; Balsomo, 2016; Briones, 2019; Delavin & Buayan; 2020; Casalan & Espino-Paller, 2021; Mante-Estacio, Dumalay, & Rentillo, 2018) were made regarding gender representations in learning materials produced.

Tarrayo's (2014) study examined six locally published preschool English language textbooks by two publishing houses. His study revealed that the males appeared more frequently than females in the illustrations of the textbooks. In terms of "firstness", males appear before females more often; this could imply that the textbooks seem to favor males, thus, appearing to be sexist. Also, females are far less visible than men in occupational roles.

The occupational roles for females are less diverse and are restricted to stereotypical types of occupation/profession while male occupations show a wider range, thus, providing them with more options than females. Females are usually attributed with their "good" looks and passivity; by contrast, males show aggression, dominance, and activity (Tarrayo, 2014).

Java and Parcon (2016) examined ten grade one textbooks to ensure that these learning materials promote inclusive and quality education for all and promote lifelong learning, and gender equality and empower all women and girls. They used Gender Analysis in Textbooks to investigate the portrayals of both sexes based on Kabira and Masinjila's (1997) productive role, reproductive role, and community role.

The findings of their study revealed that female images dominated reproductive functions; male illustrations were assigned to wide collections of productive and community roles, and gender stereotyping was manifested by frequent portrayals of traditional roles of both sexes (Java and Parcon, 2016).

After analyzing 23 most recently published Philippine English language textbooks for Junior High School in her study, Briones (2019) found out that there is gender inequality in the use of nouns and verbs. Males are associated with certain occupations that can be treated as male-specific while females are presented frequently as teachers. Both genders are seen as intelligent, but more negative traits are associated with males.

When analysis of verbs revealed that the most common group of verbs is the material process or process of doing. However, the mental processes are more frequently used with the masculine pronoun. In terms of firstness, males usually come first (Briones, 2019).

Villanueva and Obaob's (2021) study analyzed and reviewed gender roles and the use of the English language as academic communication in selected primary education textbooks. It was found out that the selected textbooks were male-based in texts, illustrations, and language. The textbooks portrayed men in active roles mostly in Science related fields while women were depicted in conformity with the expected traditional Filipino culture of women; dependent, take care of the household, and passive.

In the study of Casalan and Espino-Paller (2021), they looked into gender representations that can be found in Grade Five Science and Math textbooks in both public and private schools. Thus, this paper investigates the various gender representations in Grade Five science and mathematics textbooks in both public and private schools. The findings of their study revealed that males are dominant among the characters found in the textbooks and females are less visible in the learning materials. It is also evident that the images and lexical features connote stereotypical gender roles.

Though they did not use textbooks as research corpus, Mante-Estacio, Dumalay, and Rentillo (2018) found out that male characters continue to be assigned more active roles in the children's storybooks. When it comes to the names used, both male and female follow a two-syllabic structure.

The Present Study:

The previous studies used textbooks (Filipovic, 2018; Shahnaz, Fatima, & Qadir, 2020; Darni & Abida, 2017; Ariyanto, 2018; Amerinian & Esmaili, 2015; Tahan, 2015; Sulaimani, 2017; Dyrskog, 2017; Craeynest, 2015; Tarrayo, 2014; Villanueva & Obaob, 2021; Briones, 2019; Casalan & Espino-Paller, 2021) and storybooks (Mante-Estacio, Dumalay, & Rentillo, 2018) as their corpus in finding out gender inequalities. Though very much related to textbooks, the researcher decided to have the learning modules as corpus of this present study. He found out that there is only one study so far that used learning modules as corpus. In their study, Delavin and Buayan (2020) investigated five elementary English modules and found out that these English curriculum modules perpetuate gender biases.

As contribution to filling this methodological gap, the researcher used nine teacher-made modules, English, Science, Math modules to be specific, that are distributed to primary grade level learners. This pandemic, the DepEd suggested that schools should be ready for three types of learning modalities when it comes to Distance Learning; to wit: Online Distance Learning (ODL), Modular Distance Learning (MDL), and TV/Radio-based Instruction (sunstar.com, 2020).

Most of the learners, however, opted to have MDL because they do not want their studies be hampered by sudden power outage and poor internet connectivity. In MDL, the learners are given modules so that they can study independently. Llego (2021) describes MDL as an individualized

instruction that allows learners to use self-access materials such as modules in print or digital format/electronic copy. Llego (2021) also emphasizes that MDL also involves resources like textbooks, activity sheets, study guides, and other study materials that are utilized through technology.

Unlike ODL wherein the teacher conducts a synchronous class through a video-conferencing platform, the teachers under MDL rely more on the materials provided and takes the responsibility of monitoring the progress of the learners according to the designated schedule of activity submissions, and if possible, home visitations whenever the students need remediation (Llego, 2021).

So far, the modules distributed by DepEd to cater to the needs of learners who opted to have MDL drew harsh criticism from the public as these modules exhibited gender-biased content or gender inequality (Vercide, 2020; Hernando-Malipot, 2021; Isinika, 2020; Layson, 2021; Fermin, 2021; Austria, 2020).

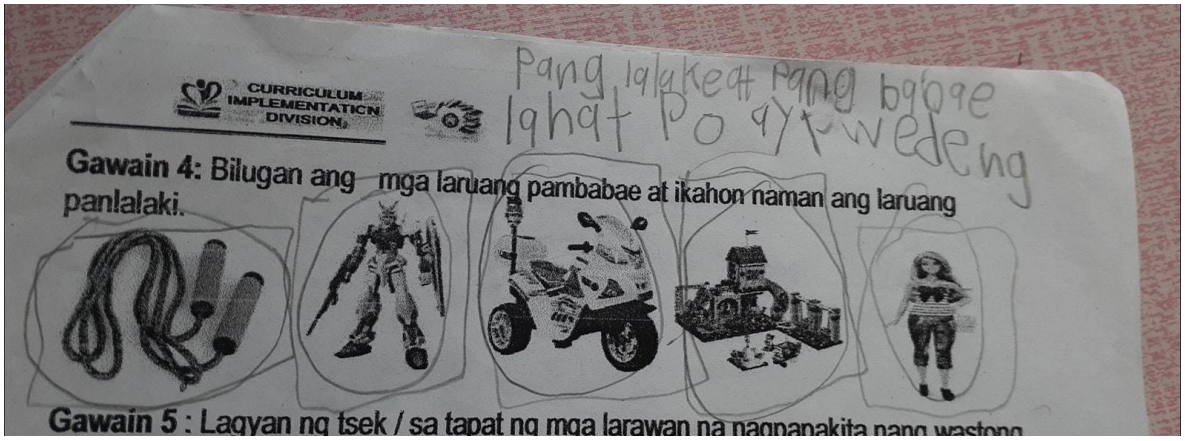

Fig. 1. An illustration used in one of activities found in the DepEd modules that asks the learners to identify toys belonging respective genders.

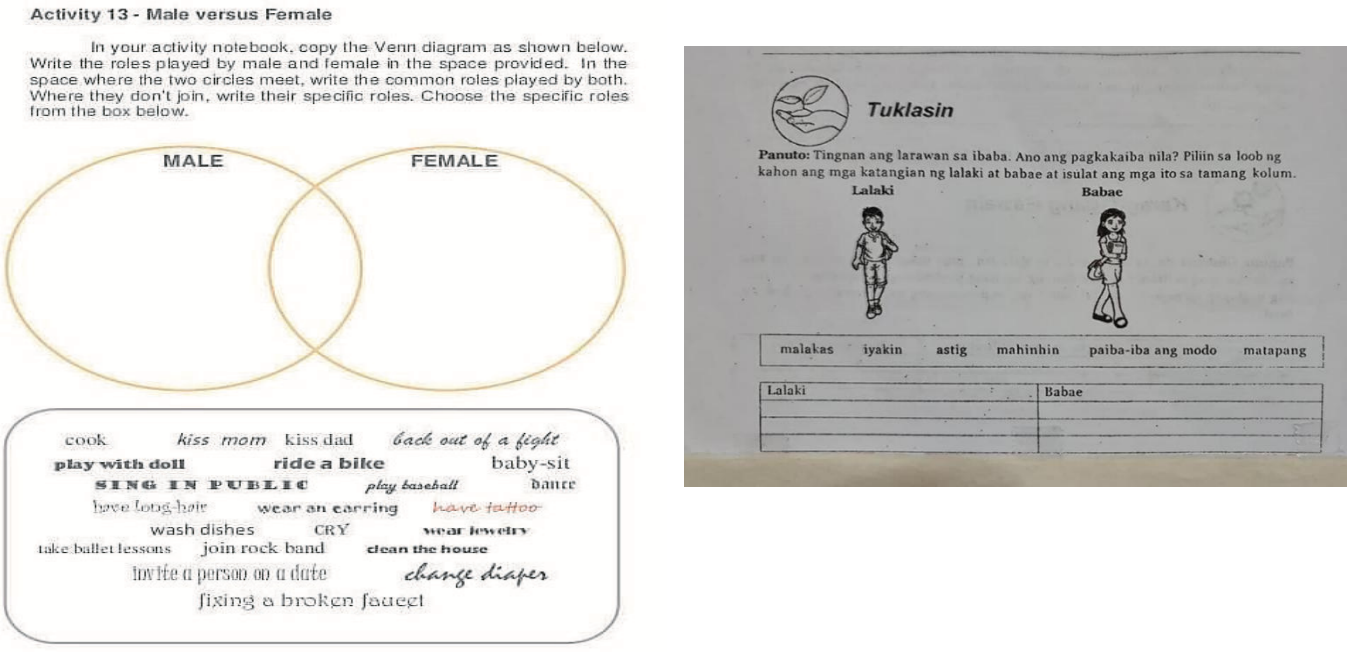

Fig. 2. Illustrations used in one of activities found in the DepEd modules asking the learners to classify character traits and roles belonging respective genders.

In the school where the modules were taken, the teachers were trained to prepare and make the modules. These teacher-made modules were then scrutinized by the Subject Area Heads, Director for Academic Affairs and the Principal. Aside from grammatical errors, these school leaders ensured that the content used in the modules are aligned with the school's Vision-Mission-Objectives and the DepEd's Most Essential Learning Competencies.

However, do these teacher-made modules promote gender equality? What are the bases of these teachers when making modules? Were they told to have "gender equality" in mind when making the modules for primary grade learners?

2. OBJECTIVE OF THE STUDY

This present study sought to find out if the chosen private school observes gender equality in the produced or distributed modules. The researcher looked into the second quarter primary grade modules of the major subjects namely English, Science, and Math.

3. STATEMENT OF THE PROBLEM

This study sought to answer the following:

1) Is sexism portrayed in the private school's primary grades' English, Science, Math (ESM) modules in terms of gender visibility (illustrations), and occupational-role representations?

2) Is there a significant difference in the proportion of female visibility and male visibility on learning modules in (a) English? (b) Science? (c) Math?

3) Is there a significant difference in the proportion of female visibility and male visibility on learning modules according to grade level?

4) How is sexism portrayed in the private school's primary grades' English, Science, Math (ESM) modules in terms of linguistic aspect such as nouns, titles and firstness?

Hypothesis:

There is no significant difference in the proportion of female visibility and male visibility on learning modules according to grade level and three subjects.

Theoretical Framework:

This study is anchored on Bem's (1981) Gender Schema Theory. This theory underscores the way people organize their mental system of information in relation to classifying gender behavior. This gender behavior is known as 'gender role,' which is based on a set of perceived behavioral norms in a particular society (Rice, 2001 as cited by Balsomo, 2018). Gender schema, as explained, is a distinction between sexes that serves as a basic shaping principle for a human culture according to Gender Schema Theory. When gender schema is applied, it results in one's perceived gender role being assimilated into one's self-concept.

4. METHODOLOGIES

Research Design and Corpus:

The study utilized the qualitative-quantitative approach in examining the sexism issues and concerns depicted in the nine primary grade modules (three per subject per grade level) produced in a private school. These modules were used for the second quarter Modular Distance Learning (MDL) class of Grades 1-3 in the Academic Year 2021-2022.

Data Collection Procedure:

The researcher prepared a letter of request asking for the copies of the said modules or materials to the Director of Academic Affairs of the private school. After the letter was approved, the researcher asked the one hardcopy of the module of English, Science, and Mathematics per grade level. A total of nine learning modules were received.

As cited by Java and Parcon (2016), the data collection on gender visibility was concentrated on the images or illustrations which are clearly visible, apprehensible, and classifiable based on Yasin, Hamid, Othman, Hashim, and Mohti (2012) classification of gender as a type of cultural categorization which is qualified by standard characteristics such as dress, hairstyle, facial structures, and others, equating the illustrations to portrayals of gender (male or female), institutional identity (e.g. school uniform), ethnic identity or relational identity (e.g. casual home/ play clothes). Images that do not belong to any of the category were not part of the observation.

Data Analysis:

To answer the first research question, a detailed content analysis was utilized. This was to identify, and examine the contents and the language used to show the occurrences of sexism and sex-role stereotyping in the corpora. The following categories were covered in the analysis: gender visibility (illustrations) and occupational-role representations. Using pen and paper analysis, the researcher tallied the number of illustration found in the modules. As cited by Delavin and Buayan (2020) and Java and Parcon (2016), Palmquaist (1998) noted that the content analysis method via paper and

pencil is advantageous in tracking down errors during the proceedings of coding compared to automated programs. Descriptive Statistical Tools such as Frequency, Mean, and Percentage were also utilized.

Two coders were asked to validate the occurrence of these categories as they code one-third of the materials. To answer the second and third research questions, Chi-square of Goodness Fit was utilized and was run through SPSS.

To answer the fourth question, Critical Discourse Analysis (CDA) under Porreca's (1984) Linguistic Aspect of Gender Representation was used in the study to qualitative analyze the gathered data. The linguistic aspect was reflected through semantic features such as generically used nouns, titles, and firstness (Briones, 2019).

Ethical Consideration:

Since the study dealt with the delicate issue of sexism in modules, the researcher ensured that the private school where modules were taken remained anonymous.

5. RESULTS AND DISCUSSION

Table 1. Descriptive Data of Male and Female Visibility in English-Science-Math Modules

Genre	Gender	English		Science		Math		Total	
		f	(%)	*f*	(%)	*f*	(%)	*f*	(%)
Grade 1	female	31	52.54	45	71.43	41	60.29	117	61.58
	male	28	47.46	18	28.57	27	39.71	73	38.42
Grade 2	female	26	53.06	66	64.71	31	43.66	123	55.41
	male	23	46.94	36	35.29	40	56.34	99	44.59
Grade 3	female	42	59.15	19	46.34	42	41.18	103	48.13
	male	29	40.85	22	53.66	60	58.82	111	51.87
Total	Female	99	55.3	130	63.11	114	47.3	343	54.8
	male	80	44.7	76	36.89	127	52.7	283	45.2

The table above shows the quantitative data collected from the nine modules. Basing on the subject, English modules have observed and counted an overall total of 99 (55.3%) female illustrations and 80 (44.7%) male illustrations; Science modules, 130 (63.11%) for female and 76 (36.89%) for male; and Math modules, 114 (47.3%) for female and 127 (52.7%) for male. Basing on the grade level, Grade 1 learning modules have observed and counted 117 (61. 58%) female illustrations and 73 (38.42%) male illustrations; Grade 2 learning modules, 123 (55.41%) for female and 99 (44.59%) for male; for Grade 3 learning modules, 103 (48.13%) for female and 111 (51.87%) for male.

The table evinces that the modules display gender inequality according to grade level and subjects based on the percentages above; however, these quantitative data should undergo inferential statistical analysis through Chi-Square of Goodness-of-Fit Test to test the significant differences. The following tables (Table 2 -7) show the result:

Table 2. Male and Female Visibility in English Modules using Chi-Square Goodness of Fit Test

	Observed N	Expected N	Residual
Male	80	89.5	-9.5
Female	99	89.5	9.5
Total	179		

Chi-Square	2.017[a]
df	1
Asymp. Sig.	.156

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 89.5.

The table above shows the actual result of the Chi- Square Goodness-of-Fit Test regarding male and female visibility in English modules. Since the p value is 0.156 which is greater than α=0.05, then the null hypothesis should not be rejected. Hence, there is no significant difference in the proportion of female visibility and male visibility on learning modules in English. This means that the English modules, when it comes to the use of illustrations, observe gender equality. This result opposed, however, the studies of Darni and Abida (2017) and Filipovic (2018) that claimed that gender biased images remain strongly present in learning materials.

Table 3. Male and Female Visibility in Science Modules using Chi-Square Goodness of Fit Test

	Observed N	Expected N	Residual
Male	76	103.0	-27.0
Female	130	103.0	27.0
Total	206		

Chi-Square	14.155[a]
df	1
Asymp. Sig.	<.001

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 103.0.

Table 3 shows the actual result of the Chi- Square Goodness-of-Fit Test regarding male and female visibility in Science modules. Since the p value is 0.001 which is lessen than α=0.05, then the null hypothesis should be rejected. Hence, there is a significant difference in the proportion of female visibility and male visibility on learning modules in Science. This means that the Science modules, when it comes to the use of illustrations, observe sexism or gender inequality. The result supports the studies of Darni and Abida (2017) and Filipovic (2018) that claimed that gender biased images remain strongly present in learning materials. It should be noted also that the female pictures used outnumber that of male. There are many factors that could affect this result – one of these could be the gender of the author who made these modules. Nonetheless, writers should still observe that illustrations or pictures used in the learning materials should be balanced.

Table 4. Male and Female Visibility in Math Modules using Chi-Square Goodness of Fit Test

	Observed N	Expected N	Residual
Male	127	120.5	6.5
Female	114	120.5	-6.5
Total	241		

Chi-Square	.701[a]
df	1
Asymp. Sig.	.402

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 120.5.

The table above shows the actual result of the Chi- Square Goodness-of-Fit Test regarding male and female visibility in Math modules. Since the *p* value is 0.402 which is greater than α=0.05, then the null hypothesis should not be rejected. Hence, there is no significant difference in the proportion of female visibility and male visibility on learning modules in Math. This means that the Math modules, when it comes to the use of illustrations, observe gender equality. This result opposed, however, the studies of Shahnaz, Fatima, and Qadir (2020) and Tahan (2015) that claimed learning materials such as textbooks contain gender-biased contents.

Table 5. Male and Female Visibility in Grade 1 Modules using Chi-Square Goodness of Fit Test

	Observed N	Expected N	Residual
Male	73	95.0	-22.0
Female	117	95.0	22.0
Total	190		

Chi-Square	10.189[a]
df	1
Asymp. Sig.	.001

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 95.0.

Table 5 shows the actual result of the Chi- Square Goodness-of-Fit Test regarding male and female visibility in Grade 1 modules. Since the *p* value is 0.001 which is lessen than α=0.05, then the null hypothesis should be rejected. Hence, there is a significant difference in the proportion of female visibility and male visibility on Grade 1 learning modules. This means that the Grade 1 learning modules, when it comes to the use of illustrations, observe sexism or gender inequality. The result supports the studies of Dyskorg (2017) and Craeynest (2015) that claimed that gender biased images remain strongly present in learning materials. It should be noted also that the female pictures used outnumber that of male. There are many factors that could affect this result – one of these could be the gender of the author who made these modules. Nonetheless, writers should still observe that illustrations or pictures used in the learning materials to avoid gender ratio imbalance.

Table 6. Male and Female Visibility in Grade 2 Modules using Chi-Square Goodness of Fit Test

	Observed N	Expected N	Residual
Male	99	111.0	-12.0
Female	123	111.0	12.0
Total	222		

Chi-Square	2.595[a]
df	1
Asymp. Sig.	.107

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 111.0.

The table above shows the actual result of the Chi- Square Goodness-of-Fit Test regarding male and female visibility in Grade 2 learning modules. Since the *p* value is 0.107 which is greater than α=0.05, then the null hypothesis should not be rejected. Hence, there is no significant difference in the proportion of female visibility and male visibility in Grade 2 learning modules. This means that the Grade 2 learning modules, when it comes to the use of illustrations, observe gender equality. This result opposed, however, the studies of Java and Parcon (2016) and Tarrayo (2014) claiming that the learning materials such as textbooks contain gender-biased contents.

Table 7. Male and Female Visibility in Grade 3 Modules using Chi-Square Goodness of Fit Test

	Observed N	Expected N	Residual
Male	111	107.0	4.0
Female	103	107.0	-4.0
Total	214		

Chi-Square	.299[a]
df	1
Asymp. Sig.	.584

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 107.0.

The table above shows the actual result of the Chi- Square Goodness-of-Fit Test regarding male and female visibility in Grade 3 learning modules. Since the *p* value is 0.107 which is greater than α=0.05, then the null hypothesis should not be rejected. Hence, there is no significant difference in the proportion of female visibility and male visibility in Grade 3 learning modules. This means that the Grade 3 learning modules, when it comes to the use of illustrations, observe gender equality. This result opposed, however, the studies of Villanueva and Obaob (2021) and Casalan and Espino-Paller (2021) claiming that the learning materials such as textbooks contain gender-biased contents.

Table 8. Occupational Role Representations between Male and Female according to

Illustrations used in ESM modules

Male	Female
student, teacher, judge, painter, cameraman, reporter, fisherman, driver, doctor, priest, policeman, farmer, guard, scientist, janitor veterinarian, lawyer	student, teacher, pharmacist, fire woman, nurse, librarian, nun

The table above shows the occupational role representations between male and female that are found in primary grades' English-Science-Math modules. Using content analysis, the result of the present study shows that there are more roles given to male than to female (15:7); hence supports the findings of Java and Parcon's (2016) study that male illustrations were assigned to wide collections of productive and community roles, and gender stereotyping was manifested by frequent portrayals of traditional roles of both sexes. Also, Villanueva and Obaob (2021) and Craynest (2015) reported that male characters are more frequently shown in domains such as agriculture, science and engineering and sports than their female counterparts. Women are predominantly engaged in activities related to health, education, leisure, and family.

Noun: Porreca's (1984) Linguistic Aspect of Gender Representation was used to analyze how the nouns were used in the identified sentences in the ESM modules.

Table 9. Occupational Role Representations between Male and Female in ESM modules according to Sentences used in ESM module

Based on the sentences used, the table above shows the occupational role representations between male and female that are found in primary grades' English-Science-Math modules. Occupations like fire officer, janitor, barber, engineer, police officer, chef, electrician, security guard, lawyer, dentist, farmer,

Occupation	**Male**	**Female**
Teacher		3
Nurse		4
Fire Officer	1	
Pharmacist		1
Janitor	1	
Barber	1	
Engineer	1	
Police Officer	1	
Chef	1	
Electrician	1	
Security Guard	1	
Librarian		1
School Principal		1
Lawyer	1	
Dentist	1	
Farmer	3	
Veterinarian	1	
Painter	1	
Doctor	1	
Total	16	10

veterinarian, painter, doctor were attributed to males and can be treated as male-specific. Occupations like teacher, nurse, pharmacist, librarian, school principal were attributed to females. Briones (2019) pointed out that women are more nurturing than men that is why most of the professions stated, especially teacher, are taken by women.

Titles:

In the English language, Mrs. refers to a married female, whereas Miss refers to a maiden. Using marital status together with a surname underrates females about males because they are presented and treated in the society according to their marital status. However, the title Mr. does not indicate a male's marital status and is frequently used to address respectfully (Briones, 2019).

Miss Omero is a teacher.

Mrs. Betita is our teacher.

Miss Michelle is our librarian.

The nurse is Ms. Tin.

Mr. Kunang is our guard.

Mang Ambo is an electrician.

Also, professions are used to honor both genders. The most common are lawyer and doctor for males while professor and sister for females (Briones, 2019).

Sr. Aremar is our principal.

Atty. Cortez is a lawyer.

Our school dentist Dr. Ramirez.

Firstness:

Firstness means stating first men before women when both are mentioned together. The tendency to mention males first weakens women and generates the attitude that males are dominant. Moreover, it is not a mistake to mention a female first, but the tendency to place males in front of females is so deeply embedded in the patterns of language usage that saying female first sounds strange and unnatural (Briones, 2019). The analysis revealed that when male and female names are paired or mentioned together, males usually come first.

My uncle and aunt live in Japan.

6. CONCLUSION

This present study sought to find out if the chosen private school observes gender equality in the produced or distributed modules. The researcher looked into the second quarter primary grade modules of the major subjects namely English, Science, and Math. This study sought to answer the following questions: (a) Is sexism portrayed in the private school's primary grades' English, Science, Math (ESM) modules in terms of gender visibility (illustrations) and occupational-role representations? (b) Is there a significant difference in the proportion of female visibility and male visibility in learning modules in (a) English? (b) Science? (c) Math? (c) Is there a significant difference in the proportion of female visibility and male visibility on learning modules according to grade level? How is sexism portrayed in the private school's primary grades' English, Science, Math (ESM) modules in terms of linguistic aspect such as nouns, titles and firstness?

Though the descriptive data shows that one gender outnumbers another in terms of illustration or pictures, the results from the inferential statistical analysis show that English and Math modules observe gender equality as there is no significant difference found in the proportion of female visibility and male visibility in the said learning modules. The same is true with Grades 2 and 3 modules.

However, the Grade 1 and Science learning modules show that there is significance difference in the proportion of female visibility and male visibility. Hence, the modules do not observe gender equality. It should be noted however that the female illustrations outnumber male illustrations. One factor could be the gender of the author of these teacher-made modules. All modules taken as samples in this study were all female.

When it comes to occupational role representations using content analysis, the result of the study shows that there are more roles given to male than to female (15:7); hence supports the findings of Java and Parcon's (2016) study that male illustrations were assigned to wide collections of productive and community roles, and gender stereotyping was manifested by frequent portrayals of traditional roles of both sexes. Also, Villanueva and Obaob (2021) and Craynest (2015) reported that male characters are more frequently shown in domains such as agriculture, science and engineering and sports than their female counterparts. Women are predominantly engaged in activities related to health, education, leisure, and family.

Based on the analysis using Porreca's Linguistic Aspect of Gender Representation, certain occupations like fire officer, janitor, barber, engineer, police officer, chef, electrician, security guard, lawyer, dentist, farmer, veterinarian, painter, doctor were attributed to males and can be treated as male-specific. Occupations like teacher, nurse, pharmacist, librarian, school principal were attributed to females; women are more nurturing than men that is why most of the professions stated, especially teacher, are taken by women. Further, the title "Mrs." refers to a married female, whereas Miss refers to a maiden. Using marital status together with a surname underrates females about males because they are presented and treated in the society according to their marital status. However, the title Mr. does not indicate a male's marital status and is frequently used to address respectfully. When it comes to Firstness, the analysis revealed that when male and female names are paired or mentioned together, males usually come first.

Several questions arose after this study was conducted: (a) Does this make the modules feminist? (b) Is there a scheme or program that will help the teachers be aware of gender-fair language if they are asked to prepare learning modules in the near future? (c) Is there a standardized tool that will measure teachers' awareness regarding gender equality?

Pedagogical Implications:

Due to the presence of gender inequality in the DepEd curriculum through the distributed textbooks, the agency must revise the learning materials. They need to apply textbook analysis and make the guidelines regarding textbook analysis just like what Vietnam did (Ministry of Education and Training, 2010).

As learners in the midst of the pandemic spent more time in answering their modules, the content included in the learning materials might be taken as irrefutable truth; hence, teachers should be made aware on how to apply gender-fair language and illustrations in the learning modules.

Recommendations:

Based on the findings of the study, it is recommended that the Department of Education continue holding workshops in different regions of the country regarding the "Use of Gender Fair Language and Illustrations in Module Making" to ensure that the teachers will observe gender equality when making learning materials. Teachers should read more local and foreign articles and studies on gender representations found in different learning materials to widen their knowledge regarding this sensitive topic.

It is recommended that future researchers delve on analyzing the data qualitatively using different analytical framework like Transitive Analysis of Halliday (1994) to dissect the sentences (in T-units) found in the modules. It is also recommended that the future researchers use more samples of learning modules to verify the findings of the study.

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