

An analysis of gender representation in Territory-wide System Assessment English Language papers for primary school students in Hong Kong

Chi Cheung Ruby YANG (PhD)

The University of Hong Kong

rccyang@hku.hk

Tsoi Lam YAN

The Education University of Hong Kong

s1116847@s.edu.hk

Abstract

Gender stereotyping has long been an issue for gender and language research from as early as the 1970s, and analyses on gender representation in English language textbooks have been frequently conducted. However, gender representation in assessment papers, another commonly occurring genre in education, remains unexplored in Hong Kong research. Therefore, this paper was aimed to explore how males and females are represented in Territory-wide System Assessment (TSA), a territory-level assessment administered in Hong Kong, to find out if gender stereotyping is still an issue. The data of the current study include the recent 10 years of TSA Primary 3 English Language Reading & Writing papers. A total of 33 sets of TSA Primary 3 English Language Reading & Writing papers was analysed by using content and linguistic analyses for their written texts and visual analysis for visual elements. The key findings include: males and females are represented similarly in the written texts and in the visuals, and females are portrayed as involving in occupational roles more frequently than males in both the written texts and visuals. However, it is always females who were drawn to be focused on family matters, and the marital status of a female is still distinguished by the use of either *Miss* or *Mrs*. Suggestions for test paper designers and examination authorities are given and implications for future research studies are drawn at the end of this paper.

Keywords: English language; gender representation; Hong Kong; language testing; Territory-wide System Assessment (TSA)

Introduction

Gender stereotyping has long been an issue for gender and language research from as early as the 1970s. In Hong Kong, gender equality is a policy concern and therefore, the Equal Opportunities Commission (EOC) was set up in 1996 to promote the attitude of “equality” (Equal Opportunities Commission, n.d.). Nevertheless, in the modern era, gender stereotypes are still deep-rooted in Hong

Kong people's minds (see Equal Opportunities Commission, 1997; Women's Commission, 2009). This phenomenon can be found in a survey undertaken by Women's Commission (WoC) (2009) in which, among the 1530 people interviewed, about half of the respondents (50.1%) strongly agreed and somewhat agreed that women should be more focused on family than careers. Thus, the focus of this study is to investigate how gender is represented and, in particular, if gender stereotyping can be found in the assessment papers in Hong Kong.

Language assessments play an important role in the transmission of gender roles especially in a Confucian heritage culture dominated education system. Students drill for examinations and may repeatedly attempt the past examination papers. In many previous studies (e.g. Ariyanto, 2018; Dahmardeh & Kim, 2019; Evans & Davies, 2000; Islam & Asadullah, 2018; Lee, 2014, 2018; Lee & Collins, 2008; Tajeddin & Enayat, 2010; Yang, 2011, 2014, 2016), an investigation on gender representation in English language textbooks has been frequently conducted, but gender representation in assessment papers, another commonly occurring genre in the education setting, remains unexplored in Hong Kong research. This has established the niche to carry out the current study because gender stereotypes may also occur in language tests - in the same way as language textbooks (Sunderland, 2000). In fact, examination papers, like other learning resources such as textbooks, can have a strong influence on students towards their concepts and ideas about gender (Centre for English Language Education Commission, 2001). However, the Hong Kong Examinations and Assessment Authority (HKEAA), an organisation administering public examinations in Hong Kong (Hong Kong Examinations and Assessment Authority, 2018) does not have any guidelines about how gender should be represented in examination materials (Centre for English Language Education Commission, 2001). Therefore, this study was aimed to explore how males and females are represented in Territory-wide System Assessment (TSA), a territory-level assessment administered in Hong Kong (Hong Kong Examinations and Assessment Authority, n.d.), Primary 3 English Language Reading & Writing papers to find out if gender stereotyping is still an issue. Based on the purpose of the study, the following research questions were answered:

1. How are male and female characters represented in the written text of the TSA Reading and Writing papers in terms of:
 - a) frequency of occurrence (including names, titles, and pronouns);
 - b) their familial and occupational roles;
 - c) their associated adjectives; and
 - d) male/female firstness?
2. How are male and female characters represented in the illustrations of the TSA Reading and Writing papers in terms of:
 - a) frequency of occurrence;
 - b) their familial and occupational roles; and
 - c) their activities engaged in?

Before introducing the methodology adopted in this study, the key concepts that are relevant to the study have to be explained and the background information about the analysed assessment papers - TSA, needs to be provided.

Literature Review

Gender and sex

The term 'gender', as "a cultural or social construct" (Litosseliti, 2006, p. 10), is different from 'sex' because gender is socially constructed instead of biologically determined (Eckert & McConnell-Ginet, 2013). This view of gender reflects the notion of sex roles being "learned" (Sunderland, 2006, p. 29; Talbot, 1998, p. 7) through a process in which someone acquires characteristics which are considered as masculine or feminine.

Gender representation and gender stereotyping

Representation occurs and can be seen in written and visual texts. Therefore, gender representation can be explored by analysing the words used to refer to and describe males and females, and the illustrations drawn to portray males and females (Yang, 2014). In fact, gender representation is often based on gender stereotyping (Sunderland, 2004, 2006).

On the other hand, gender stereotyping can be defined as "beliefs about the characteristics and behaviour of each sex" (Manstead & Hewstone, 1995, p. 256) which are "widely shared" among members of a culture (Etaugh & Bridges, 2010, p. 28). According to the 'kernel of truth' theory, gender stereotypes do not simply reflect but "exaggerate" real differences between males and females in their behaviours (Basow, 1992, p. 9).

The potential influence of gender stereotyping

Bandura's (1977) social learning theory emphasises the influence of observation in the development of gender-related behaviours. Through observing the males and females around them (e.g. parents and teachers), children can know which behaviours are gender-appropriate.

Apart from parents and teachers being examples of male and female models, the influence from school teaching materials and test papers should never be underestimated. According to Cherland (1994), schooling is never neutral; instead, it is an important agent of reproducing gender roles to preserve the stratified patriarchal society. Some educational theorists (e.g. Bourdieu & Passeron, 1990; Cherland, 1994) mentioned that the reproduction of gender roles can be demonstrated in the pedagogy, curriculum and school structure so eventually students learn to accept them and see them as natural. If a curriculum aligns with assessments, it is possible that the reproduction of gender roles also occurs in test papers. These gender roles can be manifested in texts that students read and write to drill for their tests. This is supported by sociologists such as Foucault (1979) and Bourdieu (1991) that examination has the power to mould individuals to societal and institutional norms. Hanson (1993)

also pointed out that one of the most significant consequences of tests is that they are the mechanisms that define and produce the concept of a person. Thus, gender roles can be subconsciously absorbed by students in the process of preparing and sitting for tests.

Gender representation in language testing

While there is abundant research related to gender representation in language textbooks, the one that is related to gender representation in language testing is very limited.

A study analysing gender bias in language testing was conducted more than twenty years ago by Willbrand and Iwata-Reuyl (1994). In this study, standardised language tests developed or revised after 1980 were randomly chosen and analysed. Several key findings could be found: The first one is that males were more frequently represented than females (31% of men and 28% of boys versus 21% of women and 20% of girls) in the tests. Another important result is the stereotypical representation of males and females in terms of their jobs and depicted roles. 74% of jobs outside the home were taken on by males, but 60% of females were depicted involving in jobs inside the home. Even at home, 61% of males were depicted as taking stereotypical male roles (e.g. fixing the car), but 78% of females were depicted as taking stereotypical female roles (e.g. cooking, taking care of babies).

Assessment culture in Hong Kong and Territory-wide System Assessment (TSA)

Gender representation in Hong Kong's assessment papers is worthwhile being investigated because of its examination-oriented education system. In Confucian-heritage settings like Hong Kong, it is believed that examinations can bring out positive qualities (Zeng, 1999). On the one hand, to prove themselves to be hardworking, students rote learn and memorise lots of information for their tests/exams. On the other hand, teachers tend to adopt a drilling method as this approach is regarded as time-saving and more favoured by their students (Deng & Carless, 2010).

TSA was launched in Hong Kong in 2004 for school development and to provide schools and the government with data on school standards in the three core subjects, Chinese, English and Mathematics. It is designed to be low-stakes in nature since schools only receive results at school and territory-wide level, and the assessment items are designed to determine students' basic competency attainment level. After reviewing the results, teachers can have better knowledge on students' weaknesses and adjust their teaching accordingly (Hong Kong Examinations and Assessment Authority, 2015). However, scholars have identified mismatch of the assessment nature between the official claim and the reality nowadays. From the perspectives of teachers and schools, TSA reveals how well the school is performing so it is a high-stakes assessment (Carless, 2010). Wong (2014) even stressed that TSA makes comparisons at a school level. Therefore, school administration poses immense pressure on teachers and students to boost TSA results and enhance school reputation (Lam, 2018). In a study conducted by Hong Kong Professional Teachers' Union (2014), 70% of the teachers agreed that learners must receive additional training to fulfil all requirements of TSA, and these

teachers arranged intensive supplementary TSA training lessons which take up more than 2 hours each week for students. Some students even started their TSA training lessons since Primary 1.

Because of Hong Kong students' frequent exposure to TSA papers at the early stages of their primary education, the TSA papers may become an important source that influences young children's view of gender. Therefore, in the present study, gender representation in the TSA papers was investigated. The TSA papers for English Language were analysed in this study (but not for Chinese Language or Mathematics) because of the great importance and high status of English in Hong Kong, and Primary 3 TSA papers were focused on in the study because some sociologists (e.g. Lindsey, 2011) believe that children develop an awareness of gender stereotypes in the early years of schooling. In the coming section, the data needed and the methods of data analysis will be explained.

Methodology

The data

The data of the current study include the recent 10 years (i.e. 2010-2019) of TSA Primary 3 English Language Reading & Writing papers. In 2010-2012, there are 4 sub-papers in the Reading & Writing papers (Sub-paper 1, Sub-paper 2, Sub-paper 3, and Sub-paper 4), but there are only 3 sub-papers starting from 2013 onwards. In total, 33 sets of TSA Primary 3 English Language Reading & Writing papers were analysed.

Methods of data analysis

To answer Research Question 1, content analysis was used to analyse how male and female characters are represented in the written text of the TSA papers because content analysis can provide objective and quantified information about the frequency of occurrence of males and females (Centre for English Language Education Commission, 2001).

First, by using *AntConc*, a kind of corpus analysis software, the frequency counts of both 'tokens' and 'types'¹ of male and female terms (in terms of names, pronouns, and address titles) could be done accurately and objectively to find out if the number of male and female characters is equal (Clark, 2002). To build up a corpus, the 33 sets of TSA papers were converted into text files and inserted into the software. The Concordance tool was used to count the frequencies of target words. Then a chi-square value (χ^2) was calculated to determine if the difference in the number of male and female terms is statistically significant.

For 'firstness' (Winter, 2010) or order of mention (Lee & Collins, 2008), when both male and female terms are mentioned within the same phrase, for example, *boys and girls* ('male firstness') or

¹ The term 'tokens' refers to the total number of words no matter how many times they are repeated in a piece of text. However, the term 'types' refers to the different words in the text (Scott, 2010).

ladies and gentlemen ('female firstness'), it was analysed by counting the frequency of males or females being mentioned first within the mixed-sex phrases.

Regarding the males and females' familial or occupational roles and their characters/traits (e.g. *gentle, helpful*), every instance of male and female characters being portrayed as having different familial (e.g. *father*) or occupational (e.g. *teacher*) roles and characters/traits was recorded and then the total number of 'tokens' and 'types' was calculated.

To answer Research Question 2, Sunderland (2011) mentions that content analysis also includes quantitative visual analysis. Therefore, frequency counts of males and females illustrated in the visuals of the TSA Reading & Writing papers were done to find out if one sex outnumbered the other. Again, a chi-square test was conducted to calculate its significance level. Gender stereotyping can also be found if males and females were drawn having certain occupational roles or engaging in certain types of activities. A tally was made of the number of male and female characters, and their familial and occupational roles, together with the activities engaged in by them in the visuals, and the total number of 'tokens' was counted. The visual analysis was first conducted by one of the researchers of this study and then the results were cross-checked by another researcher.

Results

In this section, the results obtained from analysing the written texts and the visuals of the 33 sets of TSA Primary 3 English Language Reading & Writing papers will be presented to answer the two research questions.

Textual representation of gender in the TSA Reading & Writing papers

Below are the results of how males and females are represented in the written texts of the analysed TSA papers regarding their frequency of occurrence (including names, titles, and pronouns), familial and occupational roles, associated adjectives, and male/female firstness in mix-sex phrases.

Frequency of occurrence of male and female characters

To investigate whether males and females are represented equally in the texts of the TSA papers, each character was counted once, regardless of the number of appearances of the character, that is, the number of 'types', was counted. The number of males and females in the written texts in the most recent ten years of TSA Primary 3 Reading & Writing papers is presented in Table 1 below:

Table 1: Total number of male and female characters in the written texts

Year	Number of Males	Number of Females
2010	14	24
2011	16	18
2012	27	20
2013	13	31
2014	27	19
2015	22	22
2016	7	8
2017	17	13
2018	19	3
2019	12	31
Total	174	189

Referring to the table, although there are more male than female characters in the texts of 2012, 2014, 2017 and 2018 TSA Primary 3 Reading & Writing papers, in total, there is a higher frequency of female than male characters (189 females and 174 males). A chi-square (χ^2) value was also calculated to determine if the difference between the number of males and females is significant, with the value of greater than 3.841 for $p < 0.05$ with 1 degree of freedom (df) being significant. Here, $\chi^2(1, n = 363) = 0.62, p < .05$, which means that the difference between the number of male and female characters in the written texts is not statistically significant.

The finding above is further supported by the frequency of occurrence of address titles used for males and females (see Table 2). If the number of occurrences of each address title in the analysed TSA papers (i.e. the number of 'tokens') was counted, it can be found that there is a higher frequency of the use of *Miss* and *Mrs* for females than *Mr* for males (84 vs. 53 instances respectively). $\chi^2(1, n = 137) = 7.01, p < .05$, which means the difference between the frequency of occurrence of female and male address titles is statistically significant.

Table 2: Frequency of occurrence of address titles in the written texts

Address titles	Frequency
Miss	71
Mrs	13
Mr	53

The titles used for males are *Mr.* (e.g. *Mr. King, Mr. John Ma*, etc.), and *Miss* (e.g. *Miss Wong, Miss Anne Chow*, etc.) and *Mrs* (*Mrs Tam, Mrs Janet Yip*, etc.) are the titles for females which can distinguish their marital status. No instances of *Ms* can be found in the analysed papers.

However, when looking at the figures on the frequency of occurrence of masculine and feminine pronouns (see Table 3), there is a more frequent use of masculine pronouns, including *he, his* and *him* (286, 201 and 42 instances respectively), than feminine pronouns, including *she* and *her* (189 and 137 instances respectively), in the analysed TSA papers. If the number of ‘tokens’ is counted, the total numbers of masculine and feminine pronouns are 529 and 326 respectively. $\chi^2 (1, n = 855) = 48.20, p < .05$ and so, the difference between the frequency of occurrence of masculine and feminine pronouns is statistically significant.

Table 3: Total numbers of masculine and feminine pronouns in the written texts

Year	Number of Masculine pronouns	Number of Feminine pronouns
2010	98	94
2011	54	2
2012	70	4
2013	10	71
2014	71	9
2015	41	3
2016	67	24
2017	59	12
2018	44	4
2019	15	103
Total	529	326

Familial and occupational roles of male and female characters

After counting the frequency of occurrence of male and female characters, their familial and occupational roles portrayed in the written texts of the TSA Primary 3 Reading & Writing papers were also analysed.

The familial roles of male and female characters described in the written texts and the frequency of occurrence of each of them are presented in Table 4. Overall, there is a higher frequency of females being described to have familial roles than males (144 and 49 instances for females and males respectively), with *mother/mum* being the most frequently occurring familial role (101 instances) and *aunt* being the second most frequent (38 instances) which is even higher than the most frequently occurring male familial role *father/dad* (25 instances). $\chi^2 (1, n = 193) = 46.76, p < .05$ and so, the

difference between the frequency of males and females being described as having familial roles is statistically significant.

Table 4: Familial roles of males and females in the written texts

Males' familial roles	Frequency	Females' familial roles	Frequency
Father/Dad	25	Mother/Mum	101
Uncle	14	Aunt	38
Brother	10	Sister	5
Total	49 (25.39%)	Total	144 (74.61%)

Regarding the occupational roles, again, there is a higher frequency for females to be portrayed as having occupational roles than males (48 and 24 instances respectively). Also, females are described to take up a wider range of occupations than males (11 vs. 6 types respectively). Apart from the occupational roles that are involved in by either males or females only (i.e. males/females-only occupational roles), five occupations are involved in by both males and females (i.e. gender-shared occupational roles). They include *teacher*, *illustrator*, *principal*, *student*, and *author*. Among all, *teacher* is the most frequently portrayed occupation for females (see Table 5), and there is a female who is described as a *PE teacher* in two instances in Sub-papers 2 and 3 of TSA 2019 Reading & Writing paper in the sentence “My aunt Ada is a P.E. teacher”. Lastly, sexist language can be found in two males-only occupational roles *policeman* and *postman* and two females-only occupations *actress* and *headmistress*, with ‘generic’ *man* being used in the former and the suffix *-ess* added to form female occupational terms in the latter.

Table 5: Occupational roles of males and females in the written texts

Males-only occupational roles	Frequency	Females-only occupational roles	Frequency	Gender-shared occupational roles	Frequency
Shopkeeper	4	Actress	4	Teacher	4 (M) + 9 (F)
Animal doctor	2	Car racer	4	Illustrator	3 (M) + 1 (F)
Artist	2	Dancer	4	Principal	2 (M) + 2 (F)
Runner	2	Helper	4	Student	2 (M) + 2 (F)
Policeman	1	Swimmer	4	Author	1 (M) + 2 (F)
Postman	1	Basketball player	2		

		Dance teacher	2		
		Headmistress	2		
		Housewife	2		
		Singer	2		
		Writer	2		
Total	12	Total	32	Total	28

Adjectives used for males and females

After analysing the familial and occupational roles, the adjectives used for males and females (no matter they are in the attributive or predicative position, i.e. before or after a noun) were also investigated to find out if males and females are described differently. The ‘positive’ and ‘negative’ adjectives used to describe the males and females in the written texts of the analysed TSA papers with their frequency are presented in Table 6. Here, ‘positive’ and ‘negative’ refer to those adjectives that are used to describe someone in a way conventionally thought of as good or bad, with reference to context. Some adjectives, however, could not be categorised in this way, for example, those used to describe a person’s physical characteristics (e.g. *big, tall*).

Table 6: Adjectives used for males and females in the written texts and their frequency

Adjectives used for males	Frequency	Adjectives used for females	Frequency
*helpful (+)	7	*famous (+)	8
*slow (-)	6	*naughty (-)	8
*kind (+)	5	*kind (+)	7
*big	4	cheerful (+)	5
*brave (+)	4	*brave (+)	4
careless (-)	4	nice (+)	4
dirty (-)	4	pretty (+)	4
fast (+)	4	*strong (+)	4
*hardworking (+)	4	tall	4
quick (+)	2	*helpful (+)	3
*strong (+)	2	beautiful (+)	2
bad (-)	1	*big	2
*famous (+)	1	busy	2
heavy	1	cute (+)	2
*naughty (-)	1	fat	2
smart (+)	1	*hardworking (+)	2

		lazy (-)	2
		lovely (+)	2
		old	2
		poor	2
		quiet (+)	2
		*slow (-)	2
		small	2
		young	2
		careful (+)	1
		super (+)	1
Total	51 (38.64%)	Total	81 (61.36%)

*gender-shared adjectives

As can be seen in the table, in the written texts of the analysed TSA papers, females are more frequently described than males (81 and 51 instances respectively) and are described with a wider range of adjectives than males (29 vs. 16 types of adjectives for females and males respectively). While females are described with more positive adjectives than males (15 and 9 positive adjectives respectively), they are described with fewer negative adjectives (3 and 5 negative adjectives respectively). Among these adjectives, 9 of them are gender-shared adjectives, marked by an asterisk (*), meaning that they are used to describe both males and females. For example, *brave* is used for both males and females (as in “He is helpful and *brave*” and “Sally thinks Alice is *brave*”). Another example is that while *slow* is used for 6 times to describe a male (as in “Robert was *slow*”), it is used to describe females in 2 instances (as in “She is fat and *slow*”).

Frequency of male/female firstness in mixed-sex phrases

Finally, concordance lines were analysed to find out the number of instances of male/female firstness (i.e. when two terms for sex are paired in a phrase). Results show that there are much more instances of male firstness than female firstness (37 and 8 instances respectively). $\chi^2(1, n = 45) = 18.62, p < .05$ and, therefore the difference in the number of instances of male and female ‘firstness’ is statistically significant. The instances of male/female firstness found in the analysed TSA papers include pairs of pronouns (e.g. *he/she*), proper nouns (e.g. *Tom and Mary, Judy and Chris*), common nouns (e.g. *mum and dad*), possessive nouns (e.g. *Ben’s and Gigi’s*), titles (e.g. *Mr and Mrs*), and titles and names (e.g. *Mr Ken Ma or Mrs Candy Lau, Miss Mary Lo or Mr Tony Wong*).

Visual representation of gender in the TSA Reading & Writing papers

After analysing the written texts, the results of how males and females are represented in the drawn illustrations of the analysed TSA Reading & Writing papers in terms of their frequency of occurrence,

familial and occupational roles, and their activities engaged in will be presented to answer Research Question 2.

Frequency of occurrence of male and female characters

To find out whether males or females are represented more frequently in the illustrations of the analysed TSA papers, each occurrence of a visualised male or female character, that is, the number of ‘tokens’, was counted. Counting ‘types’ was not done in this study because many illustrated characters are not given names, which made identifying individuals complicated. Those characters that are too small or not clear enough to allow recognition of their sex were not analysed. The number of males and females in the drawn illustrations in the most recent ten years of TSA Primary 3 Reading & Writing papers is presented in Table 7 below:

Table 7: Total number of males and females in the visuals

Year	Number of Males	Number of Females
2010	40	76
2011	86	28
2012	62	60
2013	65	61
2014	43	32
2015	25	18
2016	8	9
2017	27	12
2018	26	12
2019	15	39
Total	397	347

As can be seen in the table, except in 2010, 2016 and 2019, there are more male than female characters in the visuals of the TSA Reading & Writing papers. Adding the total, there is a higher frequency of occurrence of males than females (397 males and 347 females in the drawn illustrations of the 33 sets of analysed papers). Given that $\chi^2(1, n = 744) = 3.36, p < .05$, the difference between the number of males and females in the visuals is however not statistically significant.

Familial and occupational roles of male and female characters

Regarding the familial roles of male and female characters in the analysed TSA papers, females were illustrated to have more types of familial roles than males (5 vs. 3 types for females and males respectively). The familial roles of females include mother, daughter, sister, aunt, and grandma. For males, their familial roles include son, father, and grandson (see Table 8 for details). Overall, there is a higher frequency for females to be illustrated with having familial roles than males (115 and 73

instances for females and males respectively), with mother being the most frequently illustrated familial role for females (65 instances) and son for males (38 instances).

Table 8: Familial roles of males and females in the visuals

Males' familial roles	Frequency	Females' familial roles	Frequency
Son	38	Mother	65
Father	32	Daughter	26
Grandson	3	Sister	12
		Aunt	8
		Grandma	4
Total	73 (38.83%)	Total	115 (61.17%)

On the other hand, there is a higher frequency for males than females to be illustrated with occupational roles (153 and 87 instances for males and females respectively), and males were drawn to have more different types of occupations than females (12 vs. 9 types respectively). As can be found in Table 9, both male and female characters were most frequently illustrated as students in the analysed TSA papers.

Table 9: Occupational roles of males and females in the visuals

Males' occupational roles	Frequency	Females' occupational roles	Frequency
Student	115	Student	63
Animal doctor	10	Teacher	11
Teacher	8	Ballet dancer	2
Policeman	4	Cashier	2
Postman	3	Fruit seller	2
Basketball instructor	2	Nurse	2
Basketball player	2	Shop assistant	2
Cashier	2	Violinist	2
Chef	2	Singer	1
Pickpocket	2		
Train operator	2		
Thief	1		
Total	153 (36.25%)	Total	87 (63.75%)

However, policeman and pickpocket or thief must be a male, and there is a higher frequency for females than males to be teachers (11 and 8 instances respectively). One interesting phenomenon can be found in Sub-paper 2 of 2013 TSA that females were drawn as being an English teacher, a Mathematics teacher, a Chinese teacher, and a PE teacher (see Figures 1 and 2).

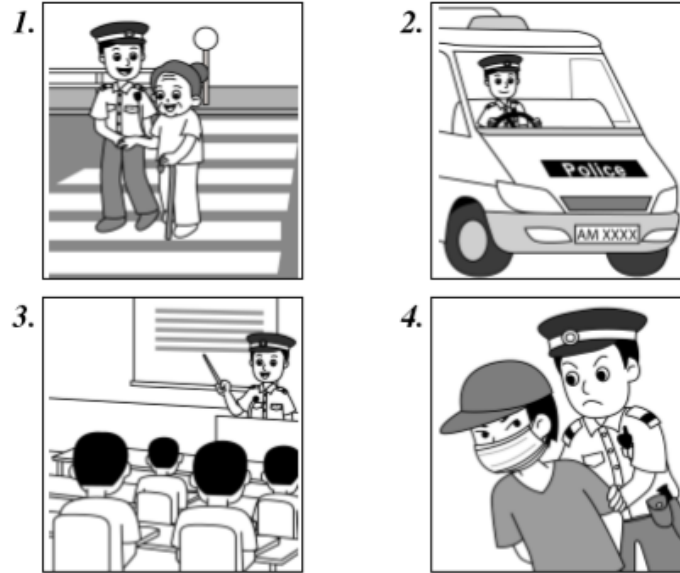


Figure 1. A male as a policeman or a thief in TSA 2013 English Language Reading & Writing (Sub-paper 2)

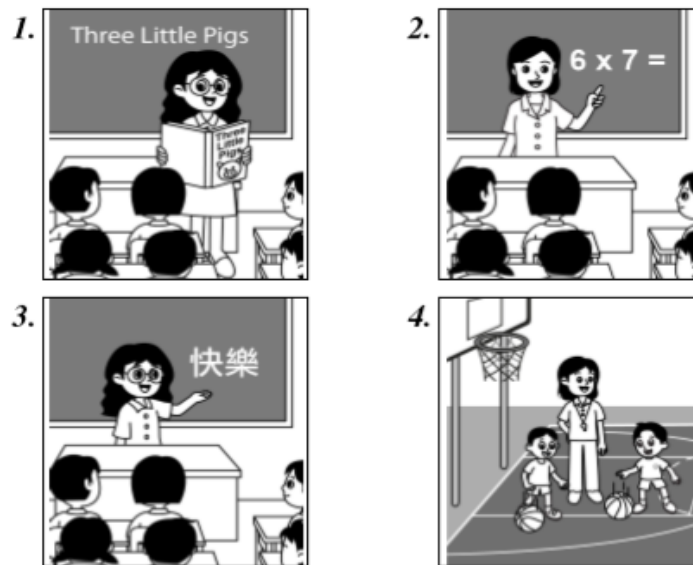


Figure 2. Female teachers in TSA 2013 English Language Reading & Writing (Sub-paper 2)

Activities engaged in by male and female characters

After analysing the visualised familial and occupational roles, the activities engaged in by the drawn male and female characters were also examined to find out if males and females are represented

differently. The activities engaged in by the males and females in the illustrations of the analysed TSA papers and their frequency are summarised in the table below.

Table 10: Activities engaged in by male and female characters in the visuals and their frequency

Activities engaged in by males	Frequency	Activities engaged in by females	Frequency
*Doing homework	10	Shopping at the market	8
*Running	10	Dancing	6
Sleeping and dreaming during a lesson	10	*Reading	6
*Taking photographs	10	*Doing homework	4
*Playing badminton	8	Playing ball	4
Playing computer	6	Playing card games	4
*Playing football	5	*Running	4
*Making a sandcastle	4	*Taking photographs	4
*Reading	4	*Cooking	3
*Skipping	4	*Hiking	3
*Hiking	3	*Swimming	3
Climbing on a rock	2	Cleaning the blackboard	2
*Cooking	2	*Playing badminton	2
Pickpocketing	2	*Playing basketball	2
*Playing basketball	2	*Playing football	2
*Teaching	2	Playing hopscotch	2
*Throwing stones to the ducks	2	Playing the violin	2
*Swimming	1	Playing with rabbits	2
		Preparing breakfast for the daughter	2
		Racing a car	2
		*Skipping	2
		Singing	2
		Sweeping the floor	2
		*Teaching	2
		Telling bedtime stories	2
		*Throwing stones to the ducks	2
		Waking up the daughter	2
		Walking the dog	2

		Drawing	1
		*Making a sandcastle	1
Total	87 (50.58%)	Total	85 (49.42%)

*gender-shared activities

As shown in Table 10, males were illustrated to be involved in activities slightly more frequently than females (87 and 85 instances for males and females respectively), but females were drawn to engage in a wider range of activities than males (30 vs. 18 types for females and males respectively). Although it is always mothers who were illustrated as playing the traditional nurturing roles (by preparing breakfast for the daughter, telling bedtime stories, and waking up the daughter) (see Figure 3), females were also drawn as engaging in ball games (e.g. playing badminton), outdoor activities (e.g. hiking), and art and music-related activities (e.g. dancing, playing the violin).

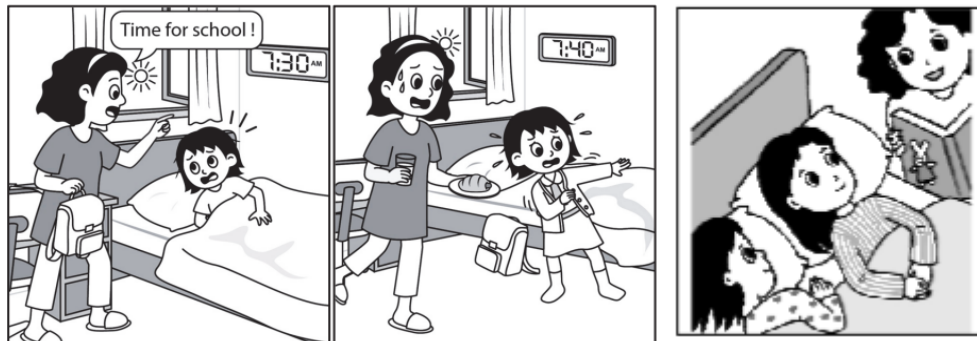


Figure 3. Mothers playing the traditional nurturing roles in TSA 2016 English Language Reading & Writing (Sub-papers 1 and 2) and TSA 2010 (Sub-papers 3 and 4)

Among the activities engaged in by the characters, 14 types of them are gender-shared activities, meaning that they were drawn as being involved in by both male and female characters in the illustrations (see, for example, Figure 4).

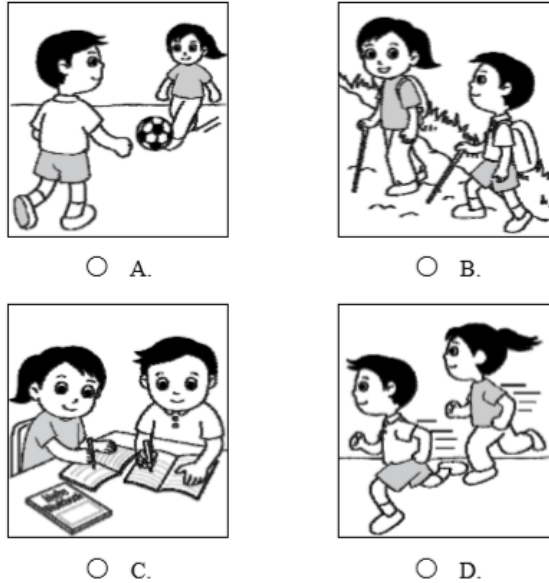


Figure 4. Males and females illustrated engaging in the same types of activities in TSA 2011 English Language Reading & Writing (Sub-papers 3 and 4)

For misbehaviour, while only males were drawn pickpocketing (Figure 5), and sleeping and dreaming during a lesson (Figure 6), both males and females were illustrated as throwing stones to the ducks in a pond in both Sub-paper 1 and Sub-paper 2 of TSA 2011 English Language Reading & Writing (see Figure 7).



Figure 5. A male illustrated pickpocketing in TSA 2013 English Language Reading & Writing (Sub-papers 1 and 2)

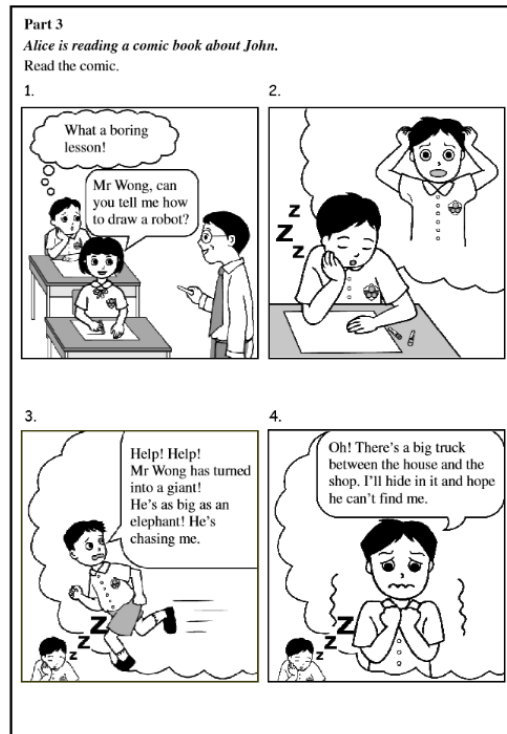


Figure 6. A boy illustrated sleeping and dreaming during a lesson in TSA 2010 English Language Reading & Writing (Sub-papers 1 and 3)



Figure 7. A boy and a girl illustrated throwing stones to the ducks in a pond

Discussion

From the analyses of the written texts and visuals in the most recent 10 years of TSA Primary 3 English Language Reading & Writing papers, it can be found that gender is represented fairly equally, and no gender bias is shown. Quantitatively, males and females are represented similarly (174 and 189 types of males and females in the written texts, and 397 and 347 tokens in the visuals, and the differences between males and females in the numbers of types and tokens are not statistically significant). Regarding the adjectives used in the texts, and the familial and occupational roles in both

the texts and visuals, females are even represented more often than males when tokens were counted. Nevertheless, an emphasis is still given on their physical appearance when describing females (as evidenced in the use of the adjectives *pretty*, *beautiful*, *cute* and *lovely*), and it is always females who were drawn to be focused on family matters such as shopping at the market, preparing breakfast for the children, telling bedtime stories to the children, and waking up the children to school. With respect to address titles, the marital status of a female is still distinguished by the use of either *Miss* or *Mrs*, instead of using a neutral term *Ms*. Nonetheless, contrary to Willbrand and Iwata-Reuyl's (1994) study in which most jobs outside the home were taken by males and jobs inside the home were often done by females, in the present study, females were portrayed as involving in occupational roles more frequently than males in both the written texts and visuals.

One possible explanation concerns the changes of values in Hong Kong society and the establishment of the Equal Opportunities Commission. Traditionally, Chinese society was patriarchal in which women had lower status and were controlled by men (Gallagher, 2001). However, due to its historical colonial background, Hong Kong is strongly influenced by western values. Also, the Sex Discrimination Ordinance (SDO), an anti-discrimination law, was passed in Hong Kong in 1995 and the Equal Opportunities Commission, a statutory body, was set up in 1996 (Equal Opportunities Commission, n.d.). Thus, both males and females enjoy equal opportunities in education and employment as human rights. Given the social background of Hong Kong, it is therefore, not surprising that extreme examples of gender stereotyping could not be found in the analysed TSA papers.

Another possible reason is test developers of TSA attempted to reflect on the reality of the Hong Kong population statistics and characteristics. Regarding the findings that there is a higher frequency for females than males to be portrayed in occupational roles (including teacher) in both written texts and visuals, these can be explained by the figures from the Census and Statistics Department (2018). In 1986, only 50.0% and 61.0% of female and male population aged 15 and over received secondary education and above. However, in 2017, the percentage of the female population from the same age group attaining secondary level and above in education increased to 79.0% (compared with 85.1% for their male counterparts). Because of the higher education background of females, women can fully participate in society in different aspects. The higher number of female than male teachers appeared in the written texts and visuals of the TSA papers is also reflecting the reality of Hong Kong society, as there are always more female than male teachers in primary schools in Hong Kong (e.g. there were 76.9% and 23.1% of female and male primary school teachers in 2017).

Although some positive results regarding gender representation have been found, *man*-compounds are used in two job titles (*policeman* and *postman*) in the written texts. Referring to context, they are all sex specific to refer to a male police officer (Uncle Bobby is a smart *policeman*) and a male letter carrier (Peter is a *postman*). Similarly, the suffix *-ess* is used in the occupational terms *actress* and *headmistress* to specify the sex of referents as females (Judy Wong is a famous

actress, John gets a medal from the *headmistress*. She puts it round John's neck). Interestingly, a gender-neutral occupational term *principal* is also used to refer to both males and females. For the results of male/female firstness, there are much more instances of male-firstness than female firstness in the texts (37 vs. 8 instances). However, the use of male/female firstness can be explained by conventions. There are conventional usages of male firstness such as *he/she*, *his/her*, *him/her*, and *Mr and Mrs*, and female firstness *mum and dad*. If the order of these phrases is deliberately changed, they may sound odd. Worse still, students may learn something wrong as they start drilling TSA papers at a young age to prepare for the test.

Based on the results of the current study, some implications for examination authorities can be drawn. Although the HKEAA does not have any guidelines about how gender should be represented in examination materials, it still should ensure that the assessment papers developed by it are free from gender bias or gender stereotyping. Below are some suggestions for test paper designers and the HKEAA when developing assessment materials:

- (1) There should be fairly equal or similar representation of males and females in textual and visual elements in terms of their frequency of occurrence, occupational roles, and associated adjectives.
- (2) For non-conventional phrases (e.g. *Tom and Mary*, *Jack's and Helen's*), the order of mention can be alternated when two terms for sex are paired.
- (3) Gender-neutral terms such as *mail/postal carrier*, *police officer*, and *principal* should be used to replace *postman*, *policeman*, and *headmaster/headmistress*, so as to avoid making males as the norm (Miller & Swift, 1988) and females "marked" (Graddol & Swann, 1989, p. 100; Pauwels, 2003, p. 553) in occupational terms.

Since gender representation in language testing has rarely been investigated, many test types have not yet been explored. The present study has not included analyses of the TSA English Language Listening and Speaking papers, and these can be analysed in future research. Apart from English Language papers, the TSA Chinese Language and Mathematics papers should also be investigated in future studies so that a more comprehensive understanding of gender representation in the TSA papers, the test papers that students have frequent drilling, can be developed.

Conclusion

The current study has provided understandings on gender representation in language testing - the selected TSA Primary 3 English Language Reading & Writing papers (2010 and after). It is encouraging to find that gender bias, in terms of the number of occurrence of males/females, and the depiction of males and females in stereotyped roles and lower status of females found in a study conducted in the 1990s, is not an issue in this study. Nonetheless, the titles *Miss* and *Mrs*, which can distinguish females' marital status, are still used and a few instances of using the suffix *-ess* in occupational terms can still be found. Suggestions have been given to test paper designers and examination authorities on developing more gender-equal assessment materials such as alternating the

order of mention when both male and female nouns are mentioned within a single phrase. A joint effort of all stakeholders, from the HKEAA to school teachers, is needed in developing children's appropriate concepts of gender which emphasise gender equality.

Compliance with Ethical Standards

Conflict of interest: The authors declare that they have no conflict of interest.

Ethical approval: This article does not contain any studies involving human participants performed by any of the authors.

About the Authors

Chi Cheung Ruby YANG is a lecturer of Faculty of Education, The University of Hong Kong. She obtained her PhD in Applied Linguistics from Lancaster University. Her major research interest is gender and language. She has a range of publications in academic journals (e.g. *Gender and Education*) and presented in different local and international conferences. She is also actively involved in the editorial boards in a number of journals.

Tsoi Lam YAN is an undergraduate student at The Education University of Hong Kong majoring in English Language Education. She is interested in researching on gender representation in test papers and early readers. She has recently got a paper accepted by an international conference for presentation.

References

- Ariyanto, S. (2018). A portrait of gender bias in the prescribed Indonesian ELT textbook for junior high school students. *Sexuality & Culture*, 22, 1054-1076.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Basow, S. A. (1992). *Gender: Stereotypes and roles* (3rd ed). Pacific Grove, Calif.: Brooks/Cole Publishing Company.
- Bourdieu, P. (1991). *Language and symbolic power*. Cambridge, MA: Harvard University Press.
- Bourdieu, P., & Passeron, J. C. (1990). *Reproduction in education, society and culture*. London: Sage.
- Carless, D. (2010). Classroom assessment in the Hong Kong policy context. In B. McGaw, E. Baker, & P. Peterson (Eds.), *International encyclopedia of education* (3rd ed) (pp. 438-442). Oxford: Elsevier.
- Census and Statistics Department. *Women and men in Hong Kong: Key statistics* (2018 edition). Hong Kong: Census and Statistics Department.
- Centre for English Language Education. (2001). Stereotypes in textbooks and teaching materials in Hong Kong. Retrieved July 12, 2019, from <https://www.hurights.or.jp/archives/pdf/asia-s-ed/v06/11Hongkong.pdf>

- Cherland, M. R. (1994). *Private practices: Girls reading fiction and constructing identity*. London: Taylor & Francis.
- Clark, R. (2002). Why all the counting? Feminist social science research on children's literature. *Children's Literature in Education*, 33(4), 285-295.
- Dahmardeh, M., & Kim, S. (2019). Gender representation in Iranian English language coursebooks: Is sexism still alive? *English Today*, 1-11. DOI: <https://doi.org/10.1017/S0266078419000117>
- Deng, C., & Carless, D. (2010). Examination preparation or effective teaching: conflicting priorities in the implementation of a pedagogic innovation. *Language Assessment Quarterly*, 7(4), 285-302.
- Eckert, P., & McConnell-Ginet, S. (2013). *Language and gender*. Cambridge: Cambridge University Press.
- Equal Opportunities Commission. (n.d.). Equal Opportunities Commission. Retrieved August 14, 2009, from <http://www.eoc.org.hk/EOC/GraphicsFolder/default.aspx#>
- Equal Opportunities Commission. (1997). *A baseline survey of equal opportunities on the basis of gender in Hong Kong: 1996-1997*. Hong Kong: Equal Opportunities Commission.
- Etaugh, C. A., & Bridges, J. S. (2010). *Women's lives: A psychological exploration* (2nd ed). Boston: Allyn & Bacon.
- Evans, L., & Davies, K. (2000). No sissy boys here: A content analysis of the representation of masculinity in elementary school reading textbooks. *Sex Roles*, 42(3-4), 255-270.
- Foucault, M. (1979). *Discipline and punish: The birth of the prison*. New York: Vintage Books.
- Gallagher, M. (2001). Women and gender. In H. Giskin & B. S. Walsh (Eds.), *An introduction to Chinese culture through the family* (pp. 89-105). Albany, NY: State University of New York Press.
- Graddol, D., & Swann, J. (1989). *Gender voices*. Oxford: Blackwell.
- Hanson, F. A. (1993). *Testing testing: Social consequences of the examined life*. Berkeley, CA: University of California Press.
- Hong Kong Examinations and Assessment Authority. (n.d.). TSA: Introduction. Retrieved July 5, 2019, from <https://www.bca.hkeaa.edu.hk/web/TSA/en/Introduction.html>
- Hong Kong Examinations and Assessment Authority. (2015). *Territory-wide System Assessment 2015 (Primary Schools) Quick Guide Part 1*. Hong Kong: Hong Kong Examinations and Assessment Authority.
- Hong Kong Examinations and Assessment Authority. (2018). About HKEAA. Retrieved July 13, 2019, from http://www.hkeaa.edu.hk/en/about_hkeaa/
- Hong Kong Professional Teachers' Union. (2014). Territory-wide System Assessment: Results of Investigation by Questionnaire. Retrieved July 5, 2019, from <https://www.hkptu.org/573>
- Islam, K. M. M., & Asadullah, M. N. (2018). Gender stereotypes and education: A comparative content analysis of Malaysian, Indonesian, Pakistani and Bangladeshi school textbooks. *PLoS ONE*, 13(1). DOI: <https://doi.org/10.1371/journal.pone.0190807>

- Lam, R. (2018). Testing, drilling and learning: What purpose does the Grade 3 Territory-wide System Assessment serve? *Asia Pacific Education Review*, 19, 363-374.
- Lee, J. F. K. (2014). Gender representation in Hong Kong primary school ELT textbooks – a comparative study. *Gender and Education*, 26(4), 356-376.
- Lee, J. F. K. (2018). Gender representation in Japanese EFL textbooks – a corpus study. *Gender and Education*, 30(3), 379-395.
- Lee, J. F. K., & Collins, P. (2008). Gender voices in Hong Kong English textbooks—Some past and current practices. *Sex Roles*, 59(1-2), 127-137.
- Lindsey, L. L. (2011). *Gender roles: A sociological perspective* (5th ed). Boston: Prentice Hall.
- Litosseliti, L. (2006). *Gender and language: Theory and practice*. London: Hodder Arnold.
- Manstead, A. S. R., & Hewstone, M. (Eds.) (1995). *The Blackwell encyclopedia of social psychology*. Oxford: Blackwell.
- Miller, C., & Swift, K. (1988). *The handbook of nonsexist writing* (2nd ed). New York: Harper & Row.
- Pauwels, A. (2003). Linguistic sexism and feminist linguistic activism. In J. Holmes & M. Meyerhoff (Eds.), *The handbook of language and gender* (pp. 550-570). Malden, MA: Blackwell Publishing.
- Scott, M. (2010). Type/token ratios and the standardised type/token ratio. Retrieved July 13, 2019, from https://lexically.net/downloads/version5/HTML/index.html?type_token_ratio_proc.htm
- Sunderland, J. (2000). Issues of language and gender in second and foreign language education. *Language Teaching*, 33(4), 203-223.
- Sunderland, J. (2004). *Gendered discourses*. Basingstoke [England]; New York: Palgrave Macmillan.
- Sunderland, J. (2006). *Language and gender: An advanced resource book*. London: Routledge.
- Sunderland, J. (2011). *Language, gender and children's fiction*. London; New York: Continuum.
- Tajeddin, Z., & Enayat, M. J. (2010). Gender representation and stereotyping in ELT textbooks: A critical image analysis. *Teaching English Language*, 4(2), 51-79.
- Talbot, M. M. (1998). *Language and gender: An introduction*. Cambridge: Polity Press.
- Willbrand, M. L., & Iwata-Reuyl, G. (1994). Gender bias in language testing. *Asha: A Journal of the American Speech-Language-Hearing Association*, 36(11), 50-52.
- Winter, R. (2010). Maria Diets and Mr. Schmitt Does Overtime: Gender bias in textbooks for learners of Japanese. *The Journal and Proceedings of GALE 2010*, 3, 4-17.
- Women's Commission. (2009). Findings of survey on community perception on gender issues. Retrieved May 7, 2014, from http://www.women.gov.hk/text/en/research_statistics/research_CP_on_gender.htm
- Wong, M. (2014). *Teacher-student power relations in primary schools in Hong Kong*. Lanham: Lexington Books.
- Yang, C. C. R. (2011). Gender representation in a Hong Kong primary English textbook series: The relationship between language planning and social policy. *Current Issues in Language Planning*, 12(1), 77-88.

- Yang, C. C. R. (2014). Gender representation in Hong Kong primary English language textbooks: A study of two widely-used textbook series. Unpublished PhD thesis, Lancaster University.
- Yang, C. C. R. (2016). Are males and females still portrayed stereotypically? Visual analyses of gender in two Hong Kong primary English Language textbook series. *Gender and Education*, 28(5), 674-692.
- Zeng, K. (1999). *Dragon gate: Competitive examinations and their consequences*. London: Cassell.