Is Gender Stereotyping still an Issue? An Analysis of a Hong Kong Primary English Textbook Series

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Abstract

This study aimed to investigate gender representation in an English textbook series used in Hong Kong schools. The corpus software *AntConc* was used to analyse the collocations of gendered terms *He/he, She/she, Man/man, Woman/woman, women, Boy/boy, Boys/boys, Girl,* and *Girls/girls* in the textbook series in order to find out if gender stereotyping, which was a problem in previous studies (e.g., Cincotta, 1978; Sakita, 1995), is still an issue. The results of the study showed that females were no longer regarded as delicate or weak but stronger than males. In occupational roles, females were no longer portrayed only as housewives in the family, but they also worked in society. On the other hand, the stereotyped images of males wearing shorts, jeans or shirts and females putting on skirts or dresses still exist. In addition, while it was found that the male terms have more collocates and both males and females were imbued with positive characteristics, negative adjectives were only used to describe males and males were never described in terms of their physical attractiveness.

Keywords: Hong Kong; textbooks; gender representation; collocations; collocates

Introduction

In 1996, the Equal Opportunities Commission (EOC), a statutory body in Hong Kong, was established. One of its responsibilities was to implement the Sex Discrimination Ordinance to promote "equality" and "equal opportunities for all" (Equal Opportunities Commission, n. d.). Despite the Sex Discrimination Ordinance, people in Hong Kong still have a strong perception of differences in gender. According to a survey conducted by the Equal Opportunities Commission, based on the masculine and feminine traits in the *Bem Sex-Role Inventory*, people perceive the following as male stereotypes: willing to take risks, having leadership abilities, possessing strong personality, defending own beliefs, independent, willing to improve, aggressive, and assertive. For females, the respondents consider "fond of children, shy, sensitive to the needs of others, gentle, compassionate, affectionate, sympathetic, and understanding" to be their stereotypical personality traits (Equal Opportunities Commission, 1997, p. 13).

Law and Chan (2004) argue that people's internalised stereotypical differences are formed by different socialisation agents (e.g., schools) and processes. In schooling, textbooks can be one of the major sources that influence people's values and attitudes. Students can develop positive values and attitudes with the use of quality textbooks (Curriculum Development Council, 2004). Their attitudes learnt from growing within a culture will then be "reinforced and/or transformed with what

is conveyed in textbooks" (Luk, 2004, p. 3). Scott (1980) also believes that books may have considerable impact on children's attitudes, values, and behavior as children spend a great deal of time reading them at schools. Though teachers are advised to use a wide range of teaching resources to broaden students' learning experiences (Curriculum Development Council, 2004), textbooks are still the major teaching materials in most primary and secondary English classrooms in Hong Kong.

In many previous textbook studies (e.g., Cincotta, 1978; Sakita, 1995), males and females were found to be typically portrayed doing stereotypical male and female activities and having stereotypically different interests. In their examined Australian English-language textbooks, Lee and Collins (2009) found that males tended to be involved in activities which are physically demanding. In some of the textbooks, men engaged in social activities but supportive roles in the family for females. They were also represented as having stereotypically different characters or personality traits and occupational roles. For example, in ESL materials, women were often described as having stereotypically emotional reactions (Hartman & Judd, 1978). Kobia (2009), in his recent study of primary English textbooks used in Kenya, also found that women were largely depicted with negative personality traits such as *weak*, *submissive* and *dependent* whilst men were described as *brave*, *adventurous* and *hardworking*. As for language, there are gender differences in the use of adjectives. For example, the adjectives for females are usually related to attractiveness whereas those within the categories of reputation (e.g., *famous*) and intellect (e.g., *intelligent*) are more likely to be used to describe males (Porreca, 1984).

According to the Hong Kong Federation of Women (2006), gender stereotyping and gender-based biases still exist in Hong Kong, and gender stereotyping is commonly found in teaching materials and textbooks. In the English lessons of many schools in Hong Kong, a large part of learner input is still provided by textbooks. For this reason, an analysis of a Hong Kong primary English textbook series was conducted and the focus of this study was to analyse the collocations of gendered terms in the textbook series in order to explore if gender stereotyping would still be an issue in recently published textbooks. In this study, particular attention was given to analysing collocations because of their importance in language acquisition (Lewis, 2000). The acquisition of collocations is one of the processes in second language acquisition (Ellis, 1996). Also, Caldas-Coulthard and Moon (2010) suggest that collocational patterns reveal societal attitudes, particularly in terms of gender stereotypes. To achieve the aim of the study, the following research questions were posed:

1. What are the different collocates used for males and females in the textbook series?
2. What are the similarities and/or differences in the types of collocates used for males and females in the textbook series?

Before explaining the methodology used in this study, some of the literature on collocation and studies of gender in textbooks is reviewed.

Collocation

Collocation refers to the situation where some words have a tendency to co-occur with other words in certain contexts (Baker, 2008; Hunston, 2002; Kennedy, 1998). To define it more precisely, it means "the habitual co-occurrence of two (or more) words" (Stubbs, 1996, p. 176). Another related term is collocates. Contrasting collocation with collocates, Baker (2006) distinguishes them clearly by suggesting that collocation is a statistically significant relationship in which certain words occur next to or near each other frequently, whereas such co-occurrences are 'collocates'. In a corpus, a collocate is a word that co-occurs with a node or node word (i.e., the word that is being investigated) (Stubbs, 2002). In other words, as Scott (2010, p. 109) suggests, collocates occur in the "neighbourhood" of a search word. Stubbs (2002, p. 30) also suggests that collocation is a relation between words "in a linear string" and therefore, a node predicts the occurrence of a preceding or following word.

Measuring Collocation in a Corpus

Corpus linguistic techniques are helpful to researchers in investigating collocations because they give information about the absolute frequency of each collocation. Any corpus program which calculates collocation takes a node word (Stubbs, 2002), and then counts the instances of all words occurring within a particular span. A span is "the number of word-forms, before and/or after the node, within which collocates are studied" (Stubbs, 2002, p. 29). Stubbs (1996) points out that apart from the absolute frequency of a collocation, we also need to know how often the node and the collocate occur independently because if the node and/or collocate themselves are frequent words, then their occurrence might just happen by chance.

Hunston (2002) points out that it is more reliable to measure collocation statistically so as to make sure that pairs of words are likely to constitute significant collocations and do not occur together by chance (McEnery & Wilson, 2001). Corpus software can do this. When the corpus software searches for collocations, it "compares the predicted likelihood … that two words will occur in the same environment with their actual occurrence in the same environment" (O'Keeffe, McCarthy, & Carter, 2007, p. 60). For example, with *AntConc*, it is possible to calculate the statistical significance of each co-occurrence of collocation by measuring either the MI (Mutual Information) or the T-score (Hunston, 2002). Both the MI and the T-score can be computed in the *Collocates* in the *AntConc* program. The more strongly connected any two items are, the higher the MI score. It is considered to be significant if the MI score is 3 or higher.

The Current Study

The present study aimed to investigate gender representation in a currently published Hong Kong primary English textbook series through analysing the collocations of gendered terms. Contrary to Hsu's (2008) study in which different types of multiword lexical units (including collocations) in the EFL/ESL textbooks were counted manually, a corpus-based method of analysis was conducted by scanning the textbook texts and then saving them as text files so that they could be

analysed with concordance software. With a corpus, the extent to which particular sequences of words occur repeatedly can be found (Hunston, 2002). In a number of previous studies, corpus-analytic techniques were used to study gendered terms. In one part of Sigley and Holmes' (2002) investigation of five corpora (Brown, LOB, Frown, FLOB, WWC) which investigated collocates of *girl(s)* and *boy(s)*, it was found that particularly in Brown and LOB, the collocates indicated a greater emphasis of the appearance of girls than boys, with girls being "described as *pretty*, *attractive*, *-looking*, *fair*, *golden*, *pale*; and with references to body parts (e.g., *hand*, *eyes*, *face*, *voice*)" (p. 151). Pearce (2008) analysed the representation of males and females in the British National Corpus (BNC) by focusing on the collocational behaviour of *man* and *woman*, when *man/woman* functions as a subject or an object and when attributive adjectives are associated with *man/woman*. It was found that males and females were represented in stereotypical ways. Lastly, Caldas-Coulthard and Moon (2010) investigated adjectival premodification of *man*, *woman*, *girl* and *boy* in the Bank of English (BoE) corpus and found that men were evaluated in terms of their status in society (e.g., *powerful*) while women were evaluated in terms of their appearance and sexuality, in particular for girls or younger women. In the next section, the methods used in this study are explained in detail.

Methods

The Data: Textbook Texts

The data for this study included all the reading passages of the whole series of *New Magic*, one of the English textbook series authored by JoAnn Dionne (*New Magic* 1A to 3B) and Wendy Arnold (*New Magic* 4A to 6B), and published in Hong Kong by Oxford University Press (China) Ltd. It was selected from the *List of Recommended Primary School Textbooks in English Subject: English Language* published by the Education Bureau (2010). This textbook series was chosen for analysis because it was newly published, and from the best knowledge of the researcher, used in many primary schools in Hong Kong. The whole series of *New Magic* is comprised of 12 textbooks, for Primary One to Six students, two for each level (e.g., 1A, 1B; 2A, 2B). Each book has six units and each unit includes different parts such as reading passage, vocabulary, phonics and grammar focus. Instead of compiling the texts of all the different sections, only the texts of reading passages were analysed because, in the researcher's experience as a school teacher for a number of years, teachers in Hong Kong usually spend a great deal of time teaching the reading passages, and the vocabulary, phonics and grammar items introduced in a particular unit are all based on the reading passage.

As 12 textbooks in the whole series of *New Magic* were analysed, which include altogether 72 reading passages, manual analysis would be very time-consuming and would involve an enormous amount of work. Since the soft copies of the textbooks could not be obtained, all the reading passages were scanned and then saved as text files so that they could be analysed with *AntConc*, a free concordance program developed by Laurence Anthony. *AntConc* was used because it is a freeware which is simple and easy to use (Anthony, 2004). The version used in this study was *AntConc 3.2.1w* for Windows. The total number of word tokens computed by *AntConc*, comprising all the reading passages of the whole series of *New Magic*, was 14,340. *Collocates* in the software was used to compute the collocates, with the

level of significance of each collocate being computed.

The Span Length

The choice of span length is an important decision because, as emphasised by Baker (2006), slightly different results will be obtained with different span lengths. To analyse the collocations of gendered terms in the textbook series, the span length of four words either side of the node was chosen, because Kennedy (1998) suggests that collocation is most likely to occur in a span of up to four words in each side of the node. Jones and Sinclair (1974, as cited in Stubbs, 2002) also consider that significant collocates are more likely to be found within a span of 4:4, though there is no general consensus about the exact span length.

Procedure and Method of Analysis

To explore how gender was represented in *New Magic*, the gendered terms which included *He/he*, *She/she*, *Man/man*, *Woman/woman*, *women*, *Boy/boy*, *Boys/boys*, *Girl*, and *Girls/girls* were chosen to be the node words of this study. Following the procedure suggested by Stubbs (1996), the occurrences of the node words in the corpus and their frequency were identified (the word list which showed the frequency of each node word was generated automatically when computing collocates in *AntConc*). Then, the collocates of the nodes which showed how males/females were represented, within the span of four words on the left and right of the nodes, were recorded. The concordance lines were also analysed so that the context in which the collocates occur could be explored.

In order to obtain a significant figure about the collocation, the MI score was calculated. The reasons are as follows: First, the top collocates from the point of view of T-score tend to give information about the grammatical behaviour of a word, but the top collocates from the point of view of MI-score give information about a word's lexical behaviour (Hunston, 2002). Another reason is that the T-score is more significant if the corpus size is large enough. In the present study which includes the words from only one textbook series of twelve books published by one single publisher, it seems that the value of an MI-score is more helpful because it is not affected by the size of the corpus.

Results and Discussions

Collocates Used for Males and Females in the Textbook Series

Replicating Sigley and Holmes' (2002) corpus study, the investigation of gendered terms begins with overall frequencies. It was found that all the gendered terms for males had a higher occurrence than those for females. The word *He/he* occurred 124 times in total, while *She/she* occurred only 78 times. Other gendered terms, including *Man/man*, *Woman/woman, women*, *Boy/boy*, *Boys/boys*, *Girl* and *Girls/girls* could also be found in the textbook series but their occurrences were infrequent. Besides, except for *Boys/boys*, the reference of gender in plural form was used less frequently than the singular form. The details of the number of occurrences of these gendered terms are shown in Table 1 below.

Table 1
Frequency of gendered terms in the textbook series

Gendered Terms for Males	Frequency	Gendered Terms for Females	Frequency
He/he	124	She/she	78
Man/man	22	Woman/woman	9
		women	2
Boy/boy	3	Girl	2
Boys/boys	3	Girls/girls	3

After finding the total number of occurrences of each gendered term, the next step of the study was to explore the collocates used for the males and females. In this study, the words associated with the search word, i.e., the "coherence collocates" defined by Scott (2010, p. 110), and the words that co-occur with the search word, i.e., the "neighbourhood collocates" (Scott, 2010, p. 110), were identified.

The collocates of *he* and *she* in the span length from 4L to 4R include some grammatical words such as 'the,' 'and,' 'a,' and 'to' which do not tell us anything about how males and females were described in the textbooks. Thus, the grammatical words were excluded from the analysis, with only those lexical words (i.e., nouns, verbs, adjectives, and adverbs) being considered. The collocates found within the span length of 4L/4R for males and females which had an MI-score of 3 or above (sort by frequency) are listed in the following tables:

Table 2A
Collocates of He/he and She/she

Node Words	Collocates	Frequency	Node Words	Collocates	Frequency
He/he	short	10	*She/she*	school	8
	hair	7		alien	6
	big	7		hair	5
	alien	7		goes	5
	man	6		thin	5
	Harry	6		likes	4
	fat	6		friendly	4
	tall	5		wear	3
	likes	5		sports	3
	wear	4		sister	3
	sad	4		reading	3
	old	4		PE	3
	eat	4		mother	3
	doctor	4		long	3
	asked	4		Holly	3
	young	3		hiking	3
	work	3		drive	3
	visual	3		comb	3
	thin	3		young	2
	swimming	3		works	2
	swim	3		teacher	2
	shorts	3		tall	2
	school	3		talking	2
	record	3		sweeping	2
	Maths	3		studies	2

	word	count		word	count
	help	3		soft	2
	Father	3		small	2
	father	3		skirt	2
	Brother	3		skip	2
	Bobby	3		short	2
	Art	3		principal	2
	hard-working	2		primary	2
	talking	2		plans	2
	shopping	2		old	2
	setting	2		music	2
	sends	2		mother	2
	polite	2		loved	2
	listen	2		library	2
	Jeans	2		librarian	2
	ill	2		karate	2
	hungry	2		hands	2
	fireman	2		Emma	2
	fingers	2		drinks	2
	feet	2		dance	2
	Emperor	2		care	2
	driver	2		Beauty	2
	drive	2		asks	2
	draw	2		wrote	1
	dance	2		write	1
	Dad	2		work	1
	cook	2		tidies	1
	comb	2		taller	1
	climbed	2		takes	1
	cleaning	2		sunbathing	1
	caretaker	2		student	1
	brother	2		stronger	1
	broke	2		stole	1
	Brian	2		skating	1
	Blatt	2		sitting	1
	Beauty	2		sits	1
	Beast	2		sing	1
	asks	2		shorter	1
	afraid	2		read	1
	wore	1		playing	1
	won	1		planned	1
	Tom	1		patient	1
	told	1		older	1
	Tim	1		nice	1
	tied	1		music	1
	thinks	1		mum	1
	table	1		Mrs	1
	sweep	1		Miss	1
	sweeping	1		listens	1
	strong	1		listening	1
	stories	1		kind	1
	stepped	1		Kay	1
	song	1		helps	1
	snacks	1		fatty	1
	skip	1		famous	1
	sing	1		fairy	1
	shoes	1		enjoys	1
	shirt	1		English	1
	rich	1		eat	1
	read	1		dress	1
	Ray	1		doctor	1

	postman	1		daughter	1
	poor	1		crawl	1
	poet	1		cook	1
	poem	1		complained	1
	pictures	1		cleverest	1
	patiently	1		cheerful	1
	nice	1		bravest	1
	music	1		beautiful	1
	Mr	1		Beast	1
	monitor	1		attentive	1
	medals	1			
	Man	1			
	listens	1			
	legs	1			
	jumped	1			
	Jim	1			
	Jay	1			
	hurdling	1			
	Hurdles	1			
	hurdler	1			
	holding	1			
	helpful	1			
	height	1			
	hanging	1			
	good	1			
	fatter	1			
	fastest	1			
	eats	1			
	drives	1			
	Doctor	1			
	dad	1			
	cruel	1			
	crawl	1			
	collecting	1			
	clothes	1			
	clinic	1			
	cleverest	1			
	clever	1			
	careless	1			
	calm	1			
	business	1			
	bravest	1			
	boy	1			
	book	1			
	athlete	1			
	Asian	1			
	Aladdin	1			

Table 2B
Collocates of Man/man, Woman/woman and women

Node Words	Collocates	Frequency	Node Words	Collocates	Frequency
Man/man	young	4	***Woman/woman***	old	3
	long	3		young	2
	legs	2		ponytail	1
	hair	2		Kay	1
	curly	2			
	wealthy	1			
	waistcoat	1			
	thin	1			

	tall	1			
	strong	1			
	short	1			
	Ray	1			
	patiently	1			
	old	1			
	Joe	1			
	Jay	1			
			women	wore	1

Table 2C
Collocates of Boy/boy, Boys/boys, Girl and Girls/girls

Node Words	Collocates	Frequency	Node Words	Collocates	Frequency
Boy/boy	Scouts	1	***Girl***	Guides	1
	poor	1		Brownies	1
	Aladdin	1			
Boys/boys	comics	1	***Girls/girls***	puzzles	2
				jigsaw	2

Tables 2A, 2B and 2C show that except for the nodes *Boy/boy*, *Boys/boys*, *Girl* and *Girls/girls* which have a similar number of collocates, the male terms have more collocates than those of the female terms. One possible reason is the fact that the gendered terms for males occur more frequently in this textbook series, when compared with those terms for females. In terms of frequency, it shows a certain degree of gender imbalance, with females and their experience being represented less often than males. However, we should be cautious when we interpret the results because, as shown in the three tables above, most of the frequencies of the collocates are too small to be significant (with the frequency of 3 or below) because of the small data size. Also, among all the analysed node words, *He/he* and *She/she* have the most collocates, compared with other gendered terms. Among the collocates, there are some adjectives that describe the physical characteristics of males/females (e.g., *short*, *fat*, *young*) or their character (e.g., *friendly*, **cheerful*)[1], action verbs (e.g., **swim*, **drive*, **climbed*) and nouns in gerunds (e.g., **reading*, **hurdling*) that express the actions or activities of the male/female characters, proper nouns which are the names of the male/female characters (e.g., *Harry*, **Bobby*, **Holly*), and some nouns such as the familial relationship (e.g., **father*, **mother*) and occupational/social roles in society (e.g., *doctor*, **fireman*, **teacher*) of the male/female characters, school subjects (e.g., **Maths*, **PE*), or the clothing of the characters (e.g., **jeans*, **skirt*).

Similarities and/or Differences in the Types of Collocates Used for Males and Females in the Textbook Series

To explore how males and females are represented in *New Magic*, the collocates and the discourse prosodies (that is, semantic categories) surrounding these words were looked at closely in this section.

In terms of physical characteristics, while a male is described as either a *young* man or an *old* man, these two adjectives are also used to describe a woman (see Figures 2A and 2B for the concordance of *young* and *old*). In fact, the adjectives *young* and *old* are used to describe a man as frequently as a woman. This aspect is

different from Sigley and Holmes' (2002) study of English corpora in which *young* is used more frequently with *girl(s)* than *boy(s)*, and *boy* tends to occur more frequently with *small*.

asked Blatt. 'He was a tall, **young** man with long, curly hair and
Splatt. The doorbell rang. A **young** man with curly hair and a mou
k to find out. There is a **young** woman named May. She asks me
es on Sunday.' There is a **young** man named Jay. He asks me,
ball on Monday.' There is a **young** woman named Kay. She asks me
on Wednesday.' There is a **young** man named Ray. He asks me,
m. Background: Brownies are **young** Girl Guides. Members: Girls
in the Cubs in 1916. Cubs are **young** scouts. Members: Boys between

Figure 2A. Concordance of *young*

to come inside. She was an **old** woman with a ponytail. Her husband
there, too. He was a thin, **old** man in a striped waistcoat and che

Figure 2B. Concordance of *old*

Similarly, the adjective *strong* is not only used to describe a male but also a female character in *New Magic*. As can be seen below, whilst *He* or a *man* is described as *strong* (hit 1 and hit 6 in Figure 3A), *she* (Mrs Pang) looks *stronger* than a male (Mr Pang), though she is shorter than Mr Pang (see Figure 3B). In other words, a female is no longer considered to be weak. This aspect is different from Bettoni's (2006) analysis of the US English *Thesaurus* in Microsoft Word 6 in which the word *womanlike* can be substituted by some negative 'feminine' synonyms such as *delicate* if *womanlike* can mean *feminine*.

train. My father is tall and **strong**. He has short hair. He can
salad to keep you healthy and **strong**. And maybe a few fish balls
m to keep your bones and teeth **strong**. Meat helps you grow strong,
strong. Meat helps you grow **strong**, but too much meat may make
and clothes inside so that the **strong** wind won't blow them away. I
had no food to eat. One day, a **strong** man named Hou Yi shot down n

Figure 3A. Concordance of *strong*

shorter than Mr Pang, but she looks **stronger** than him. They have two dogs,

Figure 3B. Concordance of *stronger*

Nevertheless, it should be noted that there is only one instance of the use of *stronger* to describe a female in this textbook series, though the calculated MI-score is 9.16.

In terms of physical appearance and body shape, in this textbook series, a male character is described as having *short hair*, and *tall/short* and *fat* in body shape, whereas a female is described as having *long hair*, and *tall/short* and *thin*. In Hong Kong, being fat is not preferred by most females but thin or slim is considered to be beautiful. In *New Magic*, the adjective *fat* is used to describe males in three instances but it is not used for females, though a female is described to eat *fatty* and other unhealthy food ("Jenny eats too much salty food, sweet food and *fatty* food"). Also, *He* is described as having *big feet*, while *She* is described as having *small hands*.

This can be illustrated in Figure 4A (hit 3) and 4B (hit 4).

ese opera performances and had **big** meals there at different fest
long legs. The man can see a **big** mouth. 'It is a lion! Help!
n. He is tall and fat. He has **big** feet. He can sing and dance.
he? He is Brother Alien. He is **big** and fat. He has short fingers
do on Friday?' I say, The hall is **big**. And Holly likes the pig, So we
can put my little bear In the **big** pocket! Does he want to wear
l. Sing, sing, sing! We have a **big** and comfortable karaoke room.
k or half past eight? I saw a **big** windmill in your online photo
lost on his way home. He saw a **big** castle, so he climbed into it.

Figure 4A. Concordance of *big*

Chinese white dolphins eat **small** fish. Threats: Dolphins are killed
birds, mammals, and sometimes, **small** crocodiles. Threats: Crocodiles are hu
two horses. The horses have **small** eyes. They have long legs. The man
short and thin. She has **small** hands. She can read and write.
on Monday?' I say, 'I am **small**. And I want to be tall, So I pl
dogs, Bibi and Kiki. They're **small** and light. I can hold them in my a
e lived with his mother in a **small** hut. Aladdin comes home from work.

Figure 4B. Concordance of *small*

In this textbook series, *curly* hair is used to describe a young man, but not a young woman or a young girl, whilst an old woman is described as having a *ponytail*.

In familial relationships, people in this textbook series are family members of either sex. Males are *father/dad* or *brother* whereas *mother/mum* and *sister* are the domestic roles for females.

Considering the occupational or social roles, *doctor* is no longer an occupation for a male only but also for a female. This aspect is different from Gupta and Lee's (1989) study in which the roles of women portrayed in Singaporean primary English textbooks were mostly in the nurturing professions such as teaching. Figure 5 below shows the concordance of *doctor* used to describe *He* (hit 1) and *She* (hit 5).

the same height. He's a **doctor**. Mrs Pang is a PE teacher. She's shorter
emperature. You should see a **doctor**. People over 65 years old or children should
cough. You should see a **doctor** now. Don't go to work. Take a rest at ho
He keeps telling the **doctor** what problems he has. The doctor is a
what problems he has. The **doctor** is attentive. She listens to what he says
says patiently. Man: **Doctor**, I feel sick. Doctor: What's wrong w
Doctor, I feel sick. **Doctor**: What's wrong with you? Man: I got o
mirror and felt dizzy. **Doctor**: I see. Perhaps you shouldn't look in
tomorrow. 2 Girl: **Doctor**, how can I stop my nose from run
my nose from running? **Doctor**: Why don't you stick your foot out a
our nose up? 3 Boy: **Doctor**, I …. I have a frog in my throat.
a frog in my throat. **Doctor**: Maybe you can give the frog a fly.

Figure 5. Concordance of *doctor*

Similarly, *principal* (or a primary school principal in this textbook series) is no longer an occupation for a male only but also for a female. This can be seen in the concordance of *principal* in Figure 6, with *Principal* Ma (hit 1) as a male and the *principal* in hit 3 is a female who takes care of the school and makes plans for the

school, when looking at the node word from the source text. These aspects, to a certain extent, reflect the changes in Hong Kong with females enjoying higher educational status and therefore, attaining higher positions on the social ladder.

> return home in the evening.' **Principal** Ma works in a primary school
> proud of our teachers and **principal** Because they're caring
> Mrs Yip. She's our school **principal**. She's very friendly.

Figure 6. Concordance of *Principal/principal*

Also, *teacher* is a job not only for females but also a male, as shown in the concordance lines in Figure 7 below, though it is a statistically significant collocate only with the node word *she* in this textbook corpus (with an MI-score of 8.16). This phenomenon, again, can reflect the reality in Hong Kong because in the 2009/2010 school year, 67.5% of the teachers are female (i.e., 46,691), whereas male teachers comprise 32.5% (i.e., 22,514) of all the teachers in Hong Kong (Census and Statistics Department, 2010).

> n form and hand it into your **teacher**. 2 We will provide a light lunch
> friendly. She was my English **teacher**. Her name was Miss Fisher. Miss
> Harry is reading about his **teacher** Mr Gordon on the school websit
> s a doctor. Mrs Pang is a PE **teacher**. She's shorter than Mr Pang, bu

Figure 7. Concordance of *teacher*

Nevertheless, *driver* (or, more specifically, *bus driver* in this textbook series), *fireman* and *postman* are still portrayed as the occupations for males (see Figure 8), with *man-suffixes* used in the latter two job titles instead of using the gender-neutral terms (*fire fighter* and *letter carrier* or *mail carrier* respectively), which may have a strong impact on children's perceptions and make them believe that *firefighter* and *mail carrier* are jobs for males only.

> His name is Jim. He is a bus **driver**. He drives people from place to pl
> His name is Tom. He is a **fireman**. He puts out fires. He goes to
> them in my arms! Mr Lo is a **postman**. He's short and fat. He's fatter

Figure 8. Concordances of *driver*, *fireman* and *postman*

For activities, in this textbook series, the male and female activities are similar. As shown in Table 3 above, while *dance* and *cook* are generally considered to be female activities, males are to do the same activities (e.g., "He can sing and *dance*"), though there is one example which shows that "He (father) can *cook*. He cannot *dance*." Similarly, household work which was traditionally considered as female domestic activity is not only done by females, but also by males. Figures 9A and 9B below illustrate that males are described as *setting* the table and *cleaning* the windows respectively. These findings replicated Esen's (2007) study in which there is an illustration in the Life Studies textbook that the mother is cleaning the windows while the father is ironing.

> dining room. What is he doing? He is **setting** the table. Harry and I

Figure 9A. Concordance of *setting*

bathroom. What is he doing? He is **cleaning** the windows. Grandma

Figure 9B. Concordance of *cleaning*

In addition, both males and females were portrayed to engage in sports or outdoor activities in this textbook series. This can be illustrated in the collocates *swimming* or *swim*, and *hurdling* for the node word *He/he*, whereas the node *She/she* has the collocates *hiking*, *karate*, *sunbathing* and *skating* (*ice skating*). While the *PE* teacher in this textbook series is a female, the node *He* collocates with *record*, *hurdler*, *athlete*, *medals* and *Asian*. Analysing the concordance lines in detail gives us a clearer picture that "*He* (Liu Xiang) is the fastest *hurdler* in the world", "Liu broke the World Junior and Asian *record* for Hurdles in 2002. He won gold *medals* in different world events" and "At the 2006 *Asian* Games in Doha, *he* broke the world *record*". In other words, these collocates refer to only one female and one male respectively in the whole textbook series. Overall, males are portrayed as more active, which "conforms to gender role expectations about male behaviour" (Pearce, 2008, p. 7). This can be illustrated from the fact that *He* patterns with a number of action verbs such as *dance*, *climbed*, *skip*, *jumped*, *hanging* (upside down) and *crawl*.

As far as hobbies are concerned, *She* collocates more significantly than *He* with *reading* in this textbook series. Nevertheless, it does not mean that males do not like reading but reading comics may be more preferable for them. This can be revealed from the fact that the node word *boys* collocates highly significantly with *comics* (MI-score of 10.49) and the concordance lines ("A lot of *boys* like *reading comics*. They usually *read comics* and magazines about *comics*"). The collocate *shopping* is worthwhile examining further as it patterns with the node word *He* for two times in this textbook series. It can be implied from the analysis of concordances that a male goes shopping with a purpose, for example, to buy some gifts for family members in a business trip ("*He* is in Hong Kong for business. He is in a *shopping* centre. He wants to buy gifts for his family"), which is different from females who treat shopping as their hobby and go shopping as a leisure pursuit.

Regarding the adjectives used for males and females, while it can be found that a female (or *She/she* in this study) is *friendly*, *patient*, *nice*, *kind*, *cheerful*, *beautiful*, and *attentive*, a male (or *He/he*) is also described as *hard-working*, *polite*, *nice*, *helpful*, *clever*, and *calm*. In terms of physical appearance, whereas females can be described as *beautiful*, males are never described with adjectives related to attractiveness. Nevertheless, for negative characters, no negative adjectives are used to describe females, but *cruel* (e.g., "Soon, Hou Yi became proud and *cruel*") and *careless* (e.g., "Harry was very *careless*") are used for males. This aspect is similar to that in Mukundan and Nimehchisalem's (2008) study of English language textbooks used in Malaysian secondary schools in which the frequency of the negative characters attributed to females in all of the analysed textbooks was only 7% and males were usually attributed to negative qualities (e.g., *naughty*).

Finally, the word *comb* is interesting to be discussed here. It co-occurs with both *He* and *She* in this textbook series. However, it is used to express the different abilities of a male and a female. In hits 1 and 3 of Figure 10, it is implied that the male has a higher ability than the female in *combing hair* as he could do this action when he was still a young child. This aspect is different from our expectation

because *combing hair* is usually associated with females who like to make them look tidy and more beautiful.

> hair was long. She could not **comb** her hair when she was five. The
> hair when she was five. The **comb** always stuck in her hair and s
> Harry's hair was short. He could **comb** his hair when he was five. Harry c
> quickly. Where's Holly's **comb**? Six years old Harry and Ho

Figure 10. Concordance of *comb*

Conclusion

To conclude, the purpose of this study is to investigate if gender bias and gender stereotyping still exist in the recently published textbooks in Hong Kong. To achieve the aim of the study, the texts of reading passages of the whole series of *New Magic*, one of the commonly used English textbook series for primary school students in Hong Kong, were compiled and the corpus software *AntConc* was used to analyse the collocations of gendered terms *He/he*, *She/she*, *Man/man*, *Woman/woman*, *women*, *Boy/boy*, *Boys/boys*, *Girl* and *Girls/girls*. Based on the results, it can be concluded that the writers of this textbook series seem to have become aware of the issue of gender equality and have shown some attempts to avoid gender stereotyping. This is evident from the fact that a female is no longer delicate or weak but is described as even stronger than a male. In domestic and occupational roles, females are no longer portrayed only as housewives who do all the household work, but they also work in society as doctors or school principals who take care of the whole school, and males do share the household work with females at home. In other words, females are described to engage in a wider range of jobs, which is different from Lee and Collins' (2008) analysis of Hong Kong English textbooks in which women have consistently played a more limited range of social roles than men. Besides that, both males and females are engaged in different outdoor and sports activities. Not only can males be good at sports, but also females, and a PE teacher can be a female.

On the other hand, the stereotyped images of males wearing shorts, jeans or shirts and having big feet and females putting on skirts or dresses and having small hands still exist, and the *man*-suffixes used for names of occupations (*fireman* and *postman*) could still be found. In addition, all the gendered terms for males have higher occurrence than those for females, and except for the nodes *Boy/boy*, *Boys/boys*, *Girl* and *Girls/girls* which have a similar number of collocates, the male terms have more collocates than those of the female terms. Nonetheless, it does not necessarily imply any gender bias and gender stereotyping. In fact, it is impossible for the number of gendered terms for males and females to be totally equal. Sometimes, the portrayal of stereotyped images of males and females is unavoidable because males and females are born to be physically different, and such kind of physical differences make males and females engage in different types of activities or prefer doing certain types of jobs. In other words, textbooks are merely reflecting the reality instead of showing any gender bias or gender stereotyping unless such kind of differences are being marked (i.e., expressed explicitly).

The major limitation of the current study is that only the reading passages of one single textbook series were analysed. A more generalisable conclusion could be

drawn if this study can be improved by collecting more data, for example, the texts in different parts of the whole textbook series, including grammar focus and dialogues. The question of whether gender stereotyping is still an issue in currently published Hong Kong primary English textbooks can be more fully answered if more different textbook titles and those textbooks published at different time periods (for example, those published in 1998, 1988, etc.) can be compiled so as to conduct a corpus-based comparative study of gendered items.

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Notes
1. Collocates marked with an asterisk (*) only have the frequency of 3 or below.

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