A Project entitled

Changing Perspectives: A Diachronic Corpus-Based Critical Discourse Analysis on the

Portrayal of Sex Education in Mainland China, Hong Kong and Singapore, 2000-2019

Submitted by

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Declaration

I, *GAO Liyuan*   , declare that this research report represents my own work under

the supervision of *Dr XIE Qin*, and that it has not been submitted previously for examination

to any tertiary institution.

Signed:

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Date: May 23rd 2020

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Abstract

The purpose of this corpus-based study was to explore the portrayal of sex education in Mainland China, Hong Kong and Singapore in two periods. Six sub-corpora were built based on news articles from online databases for further critical discourse analysis. Findings suggested that sex education was portrayed differently depending on the time and the region/country. Discussion focuses on the factors related to the diachronic changes and regional differences including political, social, and cultural aspects.

Keywords: sex education; corpus analysis; critical discourse analysis

1. Introduction

Sex education is gaining increased attention not only in the field of education but also in public discourses. It generates the need to look into the real situation of sex education and to investigate voices from different stakeholders. However, little has been researched about this topic in linguistics. Many existing studies focused on gender representations and sexual

identities using discourse analysis of popular media, e.g. advertisements, TV commercials, and films. Therefore, it could be interesting to undertake a diachronic corpus-based critical discourse analysis (CDA) of news discourses (Bednarek & Caple, 2014) to study the portrayals of sex education. In addition to Mainland China (i.e. the hometown of the author), two other Confucius-heritage societies - Hong Kong Special Administrative Region (SAR) and Singapore are chosen for comparison. While sharing a common cultural heritage, the three regions have undergone different levels of western influence, which may affect the general attitudes to and the values attached to sex education. The research was guided by the following three research questions (RQs):

1. How has sex education been portrayed in education-related/mainstream newspapers in Mainland China, Hong Kong SAR and Singapore between 2000 and 2019?

2. What are the potential factors related to the diachronic changes of portrayals of sex education in each region?

3. What are the potential factors that can explain the differences among the three regions?

The following section will review literature about concepts related to the methods and background knowledge about sex education in the three contexts.

2. Literature Review

In this section, literature about the use of corpus-based critical discourse analysis will be reviewed regarding corpus linguistics and critical discourse analysis. Then research findings of sex education in media discourses will be presented and discussed. Finally, the progress of sex education in Mainland China, Hong Kong SAR and Singapore will be examined to provide direction for quantitative and qualitative analyses.

2.1 Corpus-based critical discourse analysis

Corpus linguistics (CL) techniques usually make use of statistics generated by computer software for further quantitative and qualitative analysis. The advantages of this approach are widely discussed. For example, it offers a relatively high degree of objectivity (Baker, Gabrielatos, KhosraviNik, Krzyżanowski, McEnery & Wodak, 2008) suggesting a reduce of the bias from researchers when investigating. Moreover, it enables researchers to examine incremental language use (Baker, 2006; Mautner, 2009), e.g. searching certain language patterns and categorizing manually. Such characteristics, however, may lead to the criticism on its tendency to neglect the context. Nevertheless, it could be solved by the examination of concordances to recreate the context (cited in Baker et al., 2008). With the contextual elements inferred from the concordance lines, analysts could make interpretations of the social meanings contained in the language in addition to linguistic meanings.

CDA is essentially an analytic approach in discourse analysis (DA). What makes CDA differ from other approaches is that it takes a constructivist/discursive approach and views linguistic data as a social practice. It emphasizes on understanding language functions in contexts (cited in Baker et al., 2008) to show that how social phenomena (e.g. views towards "sex education" in this study) are discursively constituted by considering ethical, political and cultural structures (Williamson, Given, & Scifleet, 2017). For example, Wilkinson (2019) uses CDA to analyse how bisexual identity is constructed and represented in *The Times* corpus from 1957 to 2017. It investigated how sexual identity is ideologically shaped by relations of societal changes over history, e.g. the meaning of "bisexual" changes over 60 years. Such a study shows the significance of implementing CDA in analysing public discourses (e.g. news) to reveal the relationship between language and society. When analysing with CDA, different approaches could be considered. For example, Fairclough's Dialectical-Relational Approach tries to find out social conflicts in discourses by critical semiotic reflection (Fairclough, 2016); Van Dijk"s Socio-Cognitive Discourse Analysis emphasizes the interaction between discourses, society and cognition (Van Dijk, 2016); Wodak's Discourse-Historical Approach (DHA) brings historical, political, and social analyses together at both textual and contextual levels (Reisigl & Wodak, 2016). In this study, DHA is chosen to analyse diachronic changes under historical background.

Since the two methods, i.e. CL and CDA, have their strengths and weaknesses, it becomes natural to combine them (Mautner, 2009) to eliminate the potential problems and exploit the strong points at the same time. Bednarek and Caple, for instance, argued that CL techniques can help provide indications of discursive construction on specific topics and quantify discoursal phenomena in CDA (Baker et al., 2008), e.g. absolute and relative frequencies. More importantly, CL analysis could utilize the framework of CDA to interpret the findings, e.g. utilize CDA notions to group keywords and collocates based on semantic preference (as in this research). Furthermore, the synergy of the two methods may enable researchers to study the collocations from both theoretical and methodological perspectives (Salama, 2011). For instance, collocations could help re-contextualise the discourse topic by analysing the collocated words. Hence, the combination of CL and CDA could be a profitable approach in analysing social-cultural topics such as sex education.

Sex education has become a huge topic of public debate since the last century when the "sexual revolution" took place in the 1960s and the "AIDS (Acquired Immune Deficiency Syndrome) crisis" in the 1980s. There is no surprise that sex education has reflected the evolving ideas about gender relations, sexual identities, hygiene and health (Carr & Bednarek, 2019; Rothmüller, 2018). The increased public attention could be inferred from issues reported in

media about sexually transmitted infections (STI), sex crimes, safer sex, and maternal health (Boynton & Callaghan, 2006). Nonetheless, the portrayals of sex and gender in media discourses tend to be stereotypical. For example, abstinence is encouraged among young women (Carr & Bednarek, 2019) while virginity for young men is discouraged (Clarke, 2009); bisexual people are not treated as the same as homosexuality and heterosexuality in *The Times* corpus (Wilkinson, 2019) while a joint statement by 12 United Nation entities (2015) has been released for years calling for an end to discrimination against the group. Such gender inequality/stereotype represented in media discourses also provides circumstantial evidence for the current situation of sex education and the need for development.

2.2 Sex education in Mainland China, Hong Kong SAR and Singapore

In Mainland China, sex education in school is directed by the national curriculum but the content is integrated into different school subjects (UNESCO, 2018). The main purpose of sex education in school is to regulate young people to be self-disciplined and rational for being sexually healthy. The construction of sexual knowledge emphasizes on defining healthy sexual and social behaviours to encourage adolescents to improve hygiene and observe sexual abstinence as a way to prevent sexually transmitted diseases (STD) and teenage pregnancy (Aresu, 2009). Relating to the Confucianism culture, which encourages repressing sexual desires, issues related to sex are taboo topics for discussion and tend to be avoided in schools

such as sexuality and HIV (Human Immunodeficiency Virus) / AIDS (Zhang, Li & Shah, 2007).

Teenagers curious about such topics would seek knowledge from the media and the internet by

themselves, which at times exposes them to false information and even sexual predators. Sex

education in Mainland China, therefore, focuses primarily on moral values (Liang, Tan &

O'Halloran, 2017) and sexual abstinence for the prevention of STD such as HIV/AIDS and

teenage pregnancy (Xiao, Mehrotra & Zimmerman, 2011). The abstinence approach could be

an effective way to meet the social purpose of controlling the population and promoting public

health in the last century. However, its limitations gradually emerged (Aresu, 2009). One of

the biggest variables is the societal changes which are largely influenced by western culture.

With more open-minded views about sexuality introduced to Mainland China, sex education

shifts from valuing virginity to cherishing sexuality as part of personal subjectivity, which

means people start to think about themselves as sexual beings (Liang, Tan & O'Halloran, 2017).

While the social trend nowadays in Mainland China advocates more open attitudes towards

sex, sex education in school has not seemed to catch up with the trend, nor is it able to prepare

young people before they encounter their first sexual experience. In general, the traditional

approach of abstinence and the changing social situations could be challenges for sex education

in Mainland China but also opportunities for change.

Similar to the strategy in Mainland China, sex education in Hong Kong SAR is not treated as

a separate subject but integrated into relevant school subjects, e.g. Science and General Studies.

It is developed as a school-based curriculum supplemented with extra-curricular activities like

workshops and exhibitions which are organized by schools. However, the barriers in the

implementation were also noticed. Schools tended to give it low priority and did not treat it as

an explicit learning objective. At times, teachers of sex education were found not equipped

with proper knowledge to teach related topics (Legislative Council Secretariat, 2018). It could

be a reason to explain that the sexual knowledge of youths in Hong Kong declines nowadays

(The Family Planning Association of Hong Kong, 2017). Also, the schools lacked time in

providing effective AIDS/HIV or sex education and avoided sensitive topics such as the usage

of condoms (Department of Health, 2014). It is not surprising to find the traditional Chinese

culture still had an impact on people's views towards "taboo" topics of sex education as above

while youths in the postcolonial Hong Kong, which has been an international city and

encountered various values from the outside world for decades, adopted greater acceptance of

diverse sexual orientations and received increased exposure to pornography (The Family

Planning Association of Hong Kong, 2017). In summary, sex education in Hong Kong has

developed stably with influence from the mixed culture of the East and West while the school-

based curriculum has encountered some barriers to be solved.

Sex education in Singapore is similar to that in Mainland China to some extent. For example, the abstinence-only approach is promoted by the government through different programmes to help "protect students from sexual advances and abuse, and avoid sexual experimentation and activities that lead to problems related to teenage pregnancies and STIs/HIV" (MOE, 2019). One major reason for that is that the People's Action Party (PAP), Singapore's ruling political party has portrayed itself as "morally conservative" to maintain its political legitimacy (Chong, 2011). On the other hand, the business-minded PAP government also shows tolerance to sexual diversity, which is driven by economic interests on the economic opportunities from the LGBTQ culture (also called pink capitalism) such as LGBTQ-specific products and nightclubs and LGBT tourism. It brings another point that is worth noticing in Singaporean conservative sexuality education—the almost "non-existence" of LGBTQ group, i.e. the group is seldom mentioned in school education. Though thanks to the public arenas of popular culture and the widespread mass media, the diverse sexual identities gained visibility under the cultural and economic globalization, comprehensive sex education is needed to solve the problem thoroughly (Liew, 2014; Koh & Chong, 2014).

Table 1 presents a summary of the similarities and differences among the three contexts.

Table 1:

A Brief Summary of Sex Education in Mainland China, Hong Kong and Singapore

	Mainland China	Hong Kong SAR	Singapore
Background (in general)			
Eastern culture	☐	☐	☐
Western culture	☐	☐	☐
Government			
Provide guidelines	☐	☐	☐
School Curriculum			
Regional/national curriculum	☐	☐	☐
School-based	☐	☐	☐ / ☐ [1]
Abstinence approach	☐	☐	☐
Topics about gender diversity	☐ / ☐ [2]	☐ / ☐ [2]	☐
Explicit teaching time	☐	☐	☐
Compulsory teacher training	☐	☐	☐

[1] : Independent and faith-based government-aided schools may conduct their sexuality education programmes which are required to be aligned to the MOE framework for sexuality education (Legislative Council Secretariat, 2018).

[2] : The decision depends on the schools.

3. Methodology

The section includes the introduction of corpus building and brief analytic procedures.

3.1 Building the Corpora

As the research is about sex education, education-related newspapers are the first choices for data collection and then the mainstream newspapers, which are more likely to talk about the issue in columns like "education", came into consideration. Therefore, "*China Education Daily (中国教育报)*", "*China Teacher's Paper (中国教师报)*", "*Jiangsu Education Daily (江苏教育报)*", and "*Tianjin Education Daily (天津教育报)*" which are closely related to education in China are chosen. However, no such newspapers in Hong Kong SAR and Singapore are orienting at education. In that case, "*South China Morning Post (Hong Kong)*" and "*The Strait Times (Singapore)*" are selected as they are one of the largest and most influential newspapers in the regions (Centre for Communication and Public Opinion Survey, 2016; Singapore Press Holdings, 2019) with separate columns to discuss issues about education.

The newspaper texts related to Hong Kong SAR and Singapore are collected from the global news database "Factiva" and those about Mainland China are from "China National Knowledge Infrastructure" (CNKI/中國知網) with different criteria (see Appendix 1). Considering the diachronic research, there will be six sub-corpora in total as listed below, i.e.

C1 & C2 for mainland China, HK1 & HK2 for Hong Kong and S1 & S2 for Singapore. The texts exported from both databases are first shown on a web page and then copied and saved in text files (UTF-8) while the articles from CNKI are saved separately due to the technical feature of the CNKI database. Further modifications include deleting redundant information such as dates and publishers so that only the title and the main body will be included. For the two Chinese sub-corpora, the Chinese texts are segmented based on the Hidden Markov Model by using an application called "Fenci" before the data were entered into AntConc for analysis.

Table 2: List of Sub-corpora and Corpus Size (Word Tokens)

	Mainland China	**Hong Kong**	**Singapore**
Phase 1: 2000~2009	C1 (61,617) – 48 articles	HK1 (196,662) – 292 articles	S1 (174,506) – 289 articles
Phase 2: 2010~2019	C2 (35,419) – 36 articles	HK2 (99,917) – 151 articles	S2 (103,528) – 177 articles

3.2 Analytical Procedures

The corpora data will then be analysed by the programme AntConc. The analysis usually starts by studying the "word list" and categorizing the words of high frequency by corresponding topics, e.g. government, AIDS, and sexual abuse. Then a set of deeper research on the keywords of the topics will be done with statistics from "concordance", "collocates", and "clusters", e.g.

searching words "abuse" and "assault" for the topic "sexual abuse". Extracts from the news

articles will be examined by clicking the results for further CDA about the social, political, and

cultural impact. Moreover, "keyword list" will be used with the sub-corpora of larger size as

the reference corpus for comparing the diachronic changes, e.g. use C1 as the reference corpus

to export a keyword list for C2.

4.   Findings and Discussion

In this section, results will be shown and discussed to answer the research questions. The

findings supported with AntConc screenshots and texts extracted from certain databases are

mainly shown to answer the first research question (RQ1), i.e. how sex education is portrayed

in different periods of different countries/regions. Minor discussions will be made accordingly.

The possible factors of the synchronic changes and regional differences, i.e. RQ2 and RQ3,

will then be discussed by looking into political and cultural aspects under certain historical

backgrounds. (Note: sources of extracts follows the titles in the databases.)

4.1   RQ1: Portrayals of Sex Education

Table 3 below is constructed based on the results of Word List in each sub-corpora (see

Appendix 2, 5, 7, 14, 19, and 27 for detail). The topics in the table do not always consist of

words with high frequency, but the existence of the words under a certain topic shall indicate the significance of interpreting the topic in the issue of sex education. To avoid ambiguity, the highest word frequency of words in each topic are listed with "( )" below.

Table 3: Topics Generated by Studying Six Sub-Corpora

	Phase 1: 2000~2009	**Phase 2: 2010~2019**
Mainland China	AIDS (141) / sexual abuse (64) / family (172) / love (43) / homosexuality (20)	AIDS (47) / sexual abuse (97) / family (88) / rural areas (14)
Hong Kong SAR	AIDS (257) / sexual abuse (134) / family (522) / pregnancy (94) / government (372) / internet (160) / religion (57) / sexuality (73)	AIDS (57) / sexual abuse (64) / family (255) / pregnancy (73) / government (178) / pornography (69) / religion (23) / sexuality (52)
Singapore	STI (348) / sexual abuse (77) / family (585) / pregnancy (148) / government (165) / internet (127) / religion (129) / homosexuality (239) / abstinence (170) / medicine (70)	STI (86) / sexual abuse (57) / family (391) / pregnancy (49) / government (60) / pornography (104) / religion (46) / sexuality (185) / abstinence (35)

The frequency identified in the table will not be further mentioned in the report.

4.1.1 Common characteristics among the regions

Regardless of the time and region, the three common characteristics of the portrayal of sex education are the concerns for AIDS prevention, sexual abuse, and family sex education suggested by the high frequency in the table above. Firstly, the high word frequency of words "艾滋病"(AIDS) and "AIDS" in the corpora of Mainland China and Hong Kong SAR and the cluster "预防 艾滋病" (AIDS prevention), i.e. 30 times in C1 (see Appendix 3) demonstrate that the focus of sex education is on the health care and providing knowledge about self-protection for students. Similar results could also be found in the corpora of Singapore whereas the terminology changes to STD/STI. For example, the word frequencies of "aids", "hiv", "sexually", "transmitted", "diseases", and "infections" in S1 are 348, 165, 158, 102, 80, and 59 (see Appendix 19-STD). However, the needs for education about AIDS prevention are still noted in the corpora such as the lack of unified health education curriculum in universities in Mainland China:

> "...目前，我国高校里没有统一的健康教育课，一些学校的健康教育课尤其是性教育和防治艾滋病教育是'羞答答的玫瑰静悄悄地开'，很难满足广大青少年学生的需求。..." (quoted from 中国教育报: "'防艾'教育的理想与现实" on December 4th, 2009)

It possibly results from the cultural background of Chinese as "sex" tends to be a taboo topic for discussion which makes it difficult for sex education to have progressive changes with such a large population.

The prevention of sexual abuse is another main issue of sex education in schools. What is surprising is the high relevancy to "child" regarding "abuse" or "sexual abuse". For instance, the most frequently collocated content word with "性侵犯" (sexual abuse) in C1 is "儿童" (kids) with the frequency of 26 and followed by "孩子" (children) with the frequency of 22 (see Appendix 4); the two groups "未成年人" (juveniles) and "孩子" (children) in C2 are collocates of "侵害" (assault) with frequencies of 17 and 10, respectively (see Appendix 6); and the frequency of the cluster "child abuse" (i.e. 10) in S1 is just below that of "sexual abuse " (i.e. 28) when searching by the cluster size of 2 to 3 (see Appendix 22). It somehow illustrates the lack of sex education in younger generations and coincides with the circumstance that the younger the students are, the less the schools are mentioned in the corpora. Considering the result of HK2 (see Appendix 14), the frequency of secondary schools (i.e. 55) is higher than that of primary schools (i.e. 22) which is followed by kindergartens (i.e. 3). The tendency of the higher frequency with higher education indicates an assumption that sex education is more and more needed or more proper to be discussed when students grow up. However, such a tendency does not seem to be positive for sex education thinking about the need for preventing child sexual abuse and therefore, provides implications for the government and related educational departments. Nevertheless, a change in Singapore in the recent decade should be noticed since "abuse" is not frequently collocated with "child" – no cluster "child abuse" with

more than 2 frequencies in S2 (see Appendix 29). It may imply that the prevention of child sexual abuse and related strategy in sex education become effective in Singapore.

In addition to the performance of schools, "家庭" (family) sex education is expected to play a role in sex education properly. It could be indicated by extracts from the corpora and high frequencies of certain clusters, e.g. "parents should" ranks 3rd with frequency 28 in HK1 (see Appendix 8) and in HK2, "parents may" and "parents should" appear 7 times each (see Appendix 15). However, there are obstacles to family sex education which have been mentioned in the news articles, e.g.:

> *"...阻碍家庭性教育的主要原因，一方面是家长的性教育能力不足（50.60%），对性教育的教授内容和方法均缺乏认知；另一方面则与态度保守有关（26.36%）..." (quoted from 中国教育报: "调查显示 多数家长忽视子女的兴趣和情绪" on November 13th, 2014)*
>
> *"...old-school corporal punishment to discipline children... such punishment can quickly escalate into child abuse, hurting the children physically as well as damaging their self-esteem..." (quoted from South China Morning Post: "Violence is not parenting" on February 24th, 2018)*

Not only parents' knowledge about sex education but also their perceptions could affect the implementation of family sex education. Their conservative attitudes were clear in the news:

> *"...parents should be less conservative and must not avoid answering their kids' questions about sex..." (quoted from South China Morning Post: "Should repeat animal abusers be barred from owning pets?" on February 25th, 2008)*

"…Hong Kong is a very conservative society and while some parents may be reluctant, they must discuss the subject with their children, so they are aware of the risks involved…" (quoted from South China Morning Post: "Differentiating legal and illegal trade" on November 3rd, 2012)

Furthermore, schools might follow parents' attitudes on "sex" and skip some topics.

"…在家长对性避而不谈的情况下，不少学校也采取了对性避重就轻的态度。…" (quoted from 中国教育报: "让孩子有准备地成长" on April 23rd, 2003)

It could form a "vicious" circle with students' needs – if children can hardly get appropriate support from their families as well as the schools, they may be easier to make mistakes about sex, e.g. teenage pregnancy. While the limited ability of parents in teaching, inadequate knowledge in sex education, and their conservative attitudes remain to be solved, the schools shall take the initiative to change the curriculum as needed.

4.1.2 Different characteristics among the regions

Mainland China

One more issue on sex education in Phase 1 of Mainland China is about "爱情" (love). The importance of having "love" in sex education to meet the physical and mental needs of teenagers could be addressed:

"…调查显示：76.28％的初中生和79.47％的高中生都向往异性交往……这些数据表明，中学生对友情和爱情的体验已相当丰富。…" (quoted from 中国教育报: "'性'，该如何对学生说" on May 11th, 2002)

"...当我们以成人的眼光去审视学生的生长、发育时，很可能忽视了与"性"密不可分的"爱情"。对儿童来说，这两者的神秘性实际上不分伯仲。..." (quoted from 中国教育报："学生需要的不仅是性教育" on January 9th, 2009)

But the position it takes is against the normal cognition of Chinese society where "love" is always expressed silently not openly discussed just like "sex". Lastly, the "taboo" topic "同性恋" (homosexuality) gains attention:

"...如果没有以组成家庭为目的的，同性的俩人在一起不能算同性恋。如果孩子间相好，彼此亲密一些，又无反常行为，那是友谊，不能叫同性恋。..." (quoted from 中国教育报："让'非常'走向'正常'" on August 5th, 2003)

It shows an initial need for explanation in sex education while "sensitive" manner could be noticed since the concepts might not be clear to the public.

In Phase 2 of China, sexual knowledge to be conducted in sex education is also tightly related to "艾滋病" (AIDS) (see Appendix 5 - AIDS) while homosexuality comes to the concern of AIDS prevention:

"...高校男男同性恋者已成为艾滋病高发人群……大学生日益开放的性观念与同性恋行为不被社会所接受之间构成的紧张关系，导致大学生男同性恋者背负了诸多精神压力和社会歧视..." (quoted from 中国教育报："高校防艾教育需冲破观念藩篱" on December 1st, 2015)

As suggested by the article, it could be due to the contradiction between the open attitudes of students toward sex and the society where the existence of homosexuality has long been neglected and negated in history. Finally, the focus is directed to "农村" (rural areas):

"...青少年性健康教育在老少边穷地区的农村中小学相对薄弱甚至存在空白，性健康教育教材内容陈旧，用书稀缺..." (quoted from 中国教育报: "别让青少年性教育成为真空地带" on September 29th, 2012)

The industrialization and urbanization in the last century left villages in China less developed place and hence, sex education is rarely discussed or even not mentioned. But the change of the situation could be expected with the development of China.

Hong Kong SAR

The topics discussed in the two phases of Hong Kong are quite similar with the evidence of the high word frequency in Table 3 about the topics "government", "pregnancy", "religion", "internet" and "sexuality". Minor differences could be noticed by analysing extracts from the corpora.

Firstly, the cluster "government should" is mentioned frequently in HK1 (i.e. 33 times) and HK2 (i.e. 15 times) and in both corpora it ranks second (see Appendix 9 &16). The public's expectation on the government to take efforts on improving sex education could then be noticed and illustrated with examples from extracts:

"...the government should increase public education on sex, especially teaching women how to protect themselves and to report to police if they were sexually molested..." (quoted from South China Morning Post: "HK women growing in sexual confidence" on September 12th, 2005)

"...the government should incorporate real cases in sex education..." (quoted from South China Morning Post: "Critics of new subject are so intolerant" on September 6th, 2012)

"...Another problem is the lack of a centralised database to help design a pro-child policy... the number of child abuse cases is the highest in Yuen Long..." (quoted from South China Morning Post: "Violence is not parenting" on February 24th, 2018)

A change on the perspectives towards what the government should do could be identified with the evidence above – voices and suggestions from the public are becoming more purposeful and clearer, e.g. from "increase public education on sex" in phase 1 to "incorporate real cases" and "a centralized database" in phase 2. It also suggests that the public has developed a more thoughtful understanding of sex education in the recent decade.

Secondly, sexuality comes to be a controversial topic among the public and for the government's position. In the first decade, "gay" is the most frequently mentioned word by frequency of 67 under the topic "sexuality" (see Appendix 7). By looking at the collocates, "HIV" was the second closely collocated content word with "gay" (with the first one being "men") (see Appendix 13). It implies the need for health education about AIDS prevention for gay people as well as raising the public's awareness of the issue. Meanwhile, various issues are discussed including "gay organisation", "gay rights", "gay sex", and "gay teachers" (see Appendix 12). The increasing concern and arguments for gay rights indicate a big step further

of teaching sexuality in sex education in Hong Kong. However, the government seems to have done little for the group and hence, voices for the rights still emerge in the next decade:

> *"...the government must passbinding ordinances against bullying and extend basic equality and protections to the LGBT community…" (quoted from South China Morning Post: "Too cruel for school A campaign aims to show solidarity with the young victims of anti-gay bullying, writes Charley Lanyon" on May 27th, 2012)*

One big change in phase 2 is using the term LGBT to refer to lesbian, gay, bisexual, and transgender people as a whole and the related issues become "LGBT sex", "LGBT identity", "LGBT marriage", and "LGBT rights" (see Appendix 18). The reasons for open discussion about them should include the development of society and technology which makes the western culture expressed both online and offline have a stronger impact on people.

Another area that the government should notice about the implementation of sex education is religion. Topics such as homosexuality are not easy to be accepted by some religious groups:

> *"...the issue was too sensitive, especially for schools with religious backgrounds…" (quoted from South China Morning Post: "Teachers too busy for sex lessons" on December 29th, 2003)*

> *"...homosexuality has given rise to much controversy in Hong Kong. It touches upon family, education, medical health, legal liabilities, religion and psychology…" (quoted from South China Morning Post: "Share private hospital fees" on July 17th, 2005)*

> *"…A number of schools exclude the chapter on sexual orientation, for example, for religious reasons…" (quoted from South China Morning Post: "Sex education reform must be part of focus on 'real life' education" on April 12th, 2014)*

The phenomenon is not surprising since the ideologies of religious beliefs vary and most of them hold a conservative attitude towards sex such as in Confucian culture. The diverse background of students and beliefs of schools could make it difficult to make a comprehensive guideline for sex education by the Education Bureau.

Different from the case in Mainland China, pregnancy gains more attention in Hong Kong SAR with frequencies of 94 and 73 in two phases. The frequent clusters "pregnant girls" (i.e. 13 times) and "pregnant teenagers" (i.e. 6 times) (see Appendix 10) raise the problems of unplanned pregnancy and lack of knowledge for self-protection in sex. Moreover, the psychological preparation for teenagers to become mothers is not sufficient and therefore, the situation may go tragic:

> *"…a 19-year-old woman who found she was pregnant attempted suicide after her boyfriend left her…" (quoted from South China Morning Post: "Drop in number of teenage abortions may be misleading" on May 15th, 2008)*

The existence of such accidental pregnancy, as well as the irrational way to deal with it, may suggest the lack of consideration and poor implementation of sex education for the young.

A noteworthy topic in the region is the use of "internet" and the issue of "pornography". Based on results from HK1, it could be identified that the word "internet" is collocated with "pornography" and "obscenity" with relatively higher frequency than other content words and with a high stat over 7 (see Appendix 11). The use of the internet seems to negatively impact on teaching students about sex:

> "...obscenity on the internet had "distorted young people's perceptions on sex" and that internet access to minors should be restricted..." (quoted from South China Morning Post: "How can we better protect our rivers and streams?" on March 5th, 2008)

The rich information and little restriction online bring more challenges to than opportunities for sex education when young people cannot wisely select information to learn:

> "...Hong Kong's secondary school students are watching more pornography online, but their knowledge of sex has declined..." (quoted from South China Morning Post: "More pupils watching porn, study finds" on June 13th, 2017)

Such phenomenon reveals the fact that students who lack sex education in schools could not necessarily gain proper information from other resources and therefore, emphasizes the need for internet regulation and the importance of sex education in schools.

Singapore

The concerns for sex education in the two decades in Singapore do not differ a lot to those in Hong Kong SAR which include the involvement of the government, teenage pregnancy and abortion, the need of religious groups, issues related to gender minorities, and online

pornography. Differences in the topics above also exist. For example, the cluster "ministry of"

ranks the first regarding the word "ministry" in S1 but the clusters "ministry should" in S1 (see

Appendix 20) and "moe should" in S2 are rarely mentioned (see Appendix 28). In that case,

we might conclude that expectation on the government to further improve sex education is

relatively low, which could be evidence of the success of sex education in Singapore.

One unique issue in sex education in Singapore is the abstinence approach. Suggested by the

collocates of "contraception" where the frequency of "abortion" is 12 and "abstinence" is 7

(see Appendix 23), the approach should be planned for handling problems like teenage

pregnancies and abortions. Different from the traditional way of using condoms for

contraception, the adoption of abstinence was a controversial topic.

> *"…As much as she emphasises the importance of not having premarital sex, she also tells*
> *her children about contraception…" (quoted from The Strait Times: "Kids, let's talk*
> *about sex" on March 28th, 2010)*

Despite students' choices on whether or not to follow the strategy, how abstinence could be

introduced by government policies and schools remains unclear:

> *"…The choices of abstinence and the consequences of indulging in premarital sex should*
> *be shared and revealed…"(quoted from The Strait Times: "Teach sex education in*
> *context of meaningful relationships" on May 23rd, 2009)*

Possible factors might be related to the mixed culture in Singapore where eastern culture may

support abstinence while western culture can hardly show restriction about sex.

The last noteworthy aspect lies in phase 1: the ministry provides support that consists of both physical and emotional resources:

> "...It is also encouraging that the ministry has not only introduced sex education, but has also provided content...that covers both the physical and the emotional..." (quoted from The Strait Times: "Time to talk frankly about sex" on October 18th, 2000)

> "...girls below 16 who seek an abortion, were put through a structured abortion-counselling programme by trained nurses and medical social workers..." (quoted from The Strait Times: "Teenage abortions - Parents want to know" on October 23rd, 2000)

Other evidence includes the word frequencies of "medical", "counselling" and "counsellors" that are 70, 47, and 46, respectively. It shows the progress that the focus of sex education in Singapore moves from young people's physical needs to respect and care for their mental health. The important role of counselling services could then demonstrate the comprehensive understanding of sex education of the Singaporean government.

4.2 RQ2: Factors Related to the Diachronic Change

In this section, the main diachronic changes will be first summarized based on the analysis in section 4.1 and keyword comparison from AntConc. Selected results of keyword lists are shown in Table 4 below.

Table 4: Selected Results of "Keyword List"

Rank	Keyness	Keyword
Mainland China: (see full results in Appendix 32)		
1	+149.28	侵害
4	+102.35	幼儿
7	+80.22	案件
8	+65.89	幼儿园
Hong Kong SAR: (see full results in Appendix 33)		
3	+108.81	lgbt
6	+65.59	porn
36	+21.97	transgender
Singapore: (see full results in Appendix 34)		
3	+85	porn
44	+24.43	cyber
57	+21.22	pornography
59	-143.52	aids
60	-103.12	hiv

For Mainland China, high keyness of phrases such as "侵害" (assault/abuse), "幼儿" (kids), "案件" (legal case), and "幼儿园" (kindergarten) suggests the major diachronic change be that more importance is attached to the issue of childhood sexual assault and legal protections for children and teenagers. Factors pushing the changes should include at least the social situation and the development of law. A growing number of child sexual abuse was shown in media where crimes committed by acquaintance took a high proportion (He & Lin, 2017). Such increasing cases indicate the ineffectiveness of sex education for young kids while efforts of the government could be seen. Concluded by Wen (2018), the study of law in the 21 century had experienced stages from preventing female from sexual abuse to preventing child sexual abuse. Policies such as "《中国儿童发展纲要（2011-2020）》" (the program for the development of Chinese children) in 2011 and "《关于做好少年儿童遭受性侵工作的意见》" (opinions on doing a good job of child sexual abuse) in 2013 were issued to protect sex rights of teenagers and facilitate the prevention of sexual assault. It is good that the Chinese government steps forward to see the need for child sex education. However, the increasing discussion could also be the evidence that the issue continues to exist at a level that the public is not satisfied with. The concern expressed on the issue should then raise awareness of the public in society as well as the government.

For Hong Kong SAR and Singapore, "porn" becomes a keyword for changes in the two decades. The popularity is inseparable from the development of the internet. Internet brings not only opportunities for people to get access to various information such as gender minorities but also challenges for sex education. For example, how to ensure the information processed by children are "healthy" is a question for both parents and governments. Moreover, "LGBT" is noteworthy for changes in Hong Kong. The international influence of the trend might account for the raise of the fact that a few topics come to the discussion in the public media such as "LGBT rights". Such open discussion leads attention to be paid by the public (i.e. readers of the newspaper) and changes to be made by the government. Lastly, news reports in Singapore gradually switch from "AIDS" and "HIV" to "STD" and "STI"; this change in terminology is probably related to the development of Medicare in Singapore as well as a better understanding of STDs as the need to prevent STDs other than AIDS was concerned. Also, the strategy of changing the terms could raise the public's awareness of contraception/abstinence when the danger of unplanned sex is not limited to AIDS/HIV.

4.3   RQ3: Factors Related to the Regional Differences

Based on the analysis in section 4.1, major differences across the regions/countries could be concluded as a) the involvement of and expectations on the government; b) the attitudes toward LGBT issues; c) the influence from religions and; d) the position of pornography in sex

education. Several factors are listed below with a discussion on how they may take effect on the above differences.

Firstly, the demographic structures are different across the three regions. Relating to Hong Kong's colonial history, school education in Hong Kong continued to be influenced by major religious groups. For example, many elite secondary schools are affiliated to Christianity, which viewed non-normative sexuality and gender expression as "deviant and socially unacceptable" (Suen, 2015). Similarly, the sizeable Catholic and Muslim population in Singapore also implicated the implementation of sex education in this region (Lee, 2016).

Secondly, political influence differs in the construction of societies. The Chinese government takes a policy of sinicizing racial and ethnic minorities, which helps to group the Chinese altogether. Hence, the attitude towards sex education is "united" (i.e. needs of ethnic and gender minorities were not well noted) by the conservative government. As for Hong Kong SAR, the relationship between the Hong Kong government and the Chinese government might be a cause. It was stated that a closer relationship would make the people in Hong Kong more mobilised and resistant (Lee, 2016). People would not welcome policies that follow the idea of the Chinese government but turn to seek more "advanced" views on sex education, e.g. gay marriage. However, PAP dominated Singaporean government takes a relatively mild and

liberal attitude towards social control. The careful attitudes and the principle of coexistence could contribute to the obstruction of the promotion of LGBT rights based on views from the religious community.

Thirdly, the culture of the three places is an important factor regarding the regional changes. We may see that the development of sex education in Mainland China differed a lot from the other two places in that the gender-related issues were mentioned in higher frequency and more depth. In Hong Kong SAR and Singapore, activists could encounter more conflicts because the culture is mixed with the west. The colonial legacy in their culture and their geopolitical relationship with Mainland China can greatly affect social attitudes towards sex in Westernised-Confucian societies. However, the fact that Hong Kong SAR embodies many Chinese traditional values, e.g. heterosexuality is the inherent sexuality, shows the great impact of Confucian culture. For example, heteronormative culture fostered in families would bring enormous social pressure on family members who encounter struggles about gender identities (Kong, 2012; Suen, 2015). Another evidence can be that spreading pornography is officially illegal in Mainland China but the position in Hong Kong SAR and Singapore is more ambiguous. The prohibition of the correlated porn industry by the Chinese government does not only express a conservative attitude on "sex" but also limit the freedom for the public to access knowledge about sex from another perspective.

5. Limitations

In this research, the newspapers of Hong Kong SAR and Singapore are not education-oriented because there are no such newspapers that meet the criteria. Also, the sizes of the corpora for Mainland China are relatively small compared with those for the other two places. To increase credibility, future researches may try to avoid the above limitations. Moreover, since the study adopts a bottom-up approach to generate the topics about sex education and do further analysis, an alternative way is to find keywords from previous literature and search for more information as a top-down process.

6. Conclusion

Sex education has received more and more attention in the 21st century. However, there is not much research that draws on newspapers as the data source to examine social attitudes and values towards sex education and that compares both the diachronic changes and regional differences. In this paper, we have looked at the portrayal of sex education based on corpus analysis and critical discourse analysis in three regions/countries in Asia, i.e. Mainland China, Hong Kong SAR, and Singapore. Six sub-corpora were built by using articles from newspapers

that are education-oriented or include education columns for analysing the characteristics in each period (i.e. 2000~2009 and 2010~2019) and each place. The study has found that shared concerns about AIDS prevention, sexual abuse (especially among children), and family sex education. Discussion topics about sex education varied over time, e.g. the increasing focus on child sexual abuse in Mainland China and pornography in Hong Kong SAR and Singapore. Similarly, regional differences could be noticed such as homosexuality was not concerned much in Mainland China while various related topics (e.g. "LGBT marriage") were discussed in the other two places. Factors explaining the diachronic changes and regional differences mainly are discussed from historical, social, cultural, and political perspectives with regard to DHA to CDA. For instance, the experience of colonialism led to increasing attention on the needs of religious communities, e.g. in issues about gender minorities.

Though the results show positive changes in sex education during the years, more remains to be done with efforts made by the government, families, and educators. Based on the findings in the research, policymakers should take consideration of the social development (e.g. the influence of the internet), the diverse needs of different groups (e.g. religious groups), and the social situation (e.g. public's knowledge) when making policies. Meanwhile, educators should try to design a comprehensive curriculum including topics about gender diversity and generate a mutual understanding of sex education with parents for cooperation. Future studies may focus

on how internet (e.g. porn sites) may affect students in Asia on their understanding of topics in

sex education and how social changes could influence policymaking in sex education such as

laws about child sexual abuse.

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8. Appendix

Appendix no.	Content
1.	Selection Criteria for Corpus Building
2.	Selected "Word List" of C1
3.	Selected "Clusters" of C1 - "AIDS"
4.	Selected "Collocates" of C1 - "sexual assault"
5.	Selected "Word List" of C2
6.	Selected "Collocates" of C2 - "assault"
7.	Selected "Word List" of HK1
8.	Selected "Clusters" of HK1 – "parents"
9.	Selected "Clusters" of HK1 – "government"
10.	Selected "Clusters" of HK1 – "pregnant"
11.	Selected "Collocates" of HK1 – "internet"
12.	Selected "Concordance" of HK1 – "gay"
13.	Selected "Collocates" and "Concordance" of HK1 – "gay"
14.	Selected "Word List" of HK2
15.	Selected "Clusters" of HK2 – "parents"
16.	Selected "Clusters" of HK2 – "government"
17.	Selected "Clusters" of HK2 – "abuse"
18.	Selected "Clusters" of HK2 – "lgbt"
19.	Selected "Word List" of S1
20.	Selected "Clusters" of S1 – "ministry"
21.	Selected "Concordance" of S1 – "transmitted"
22.	Selected "Clusters" of S1 – "abuse"
23.	Selected "Collocates" of S1 – "contraception"
24.	Selected "Clusters" of S1 – "homosexual"
25.	Selected "Collocates" of S1 – "internet"
26.	Selected "Clusters" of S1 – "porn"
27.	Selected "Word List" of S2
28.	Selected "Clusters" of S2 – "moe"
29.	Selected "Clusters" of S2 – "abuse"
30.	Selected "Clusters" of S2 – "gender"
31.	Selected "Collocates" of S2 – "internet"
32.	"Keyword List" of C2 with C1 as the Reference Corpus
33.	"Keyword List" of HK2 with HK1 as the Reference Corpus
34.	"Keyword List" of S2 with S1 as the Reference Corpus

Appendix 1: Selection Criteria for Corpus Building

Selection Criteria in Factiva				
Sub-corpora	**HK1**	**HK2**	**S1**	**S2**
Region	Hong Kong		Singapore	
Source	South China Morning Post (Hong Kong)		The Strait Times (Singapore)	
Search form	The exact phrase: "sex education"			
Date	1/1/2000-31/12/2009	1/1/2010-31/12/2019	1/1/2000-31/12/2009	1/1/2010-31/12/2019
Duplicates	Similar			
Language	English			

Selection Criteria in CNKI		
Sub-corpora	**C1**	**C2**
Newspapers (报纸名称)	a. 中国教育报(China Education Daily) b. 中国教师报(China Teacher's Paper) c. 江苏教育报(Jiangsu Education Daily) d. 天津教育报(Tianjin Education Daily)	
Search from	全文：“性教育”(full text: "sex education")	
Date (报纸时间)	01/01/2000-31/12/2009	01/01/2010-31/12/2019

Appendix 2: Selected "Word List" of C1

School

Rank	Freq	Word	Meaning
16	331	学校	school
12	402	学生	student
40	172	家长	parents
43	170	老师	teacher
50	146	教师	teacher

Schools

Rank	Freq	Word	Meaning
16	331	学校	school
97	80	大学	university
208	42	中学	middle school
266	35	高中	high school
268	34	初中	junior high school
300	31	中小学	middle and primary school
336	29	小学	primary school
378	26	高校	colleges and universities
669	14	幼儿园	kindergarten

Sexual abuse

Rank	Freq	Word	Meaning
137	64	性侵犯	sexual abuse
170	48	困惑	puzzled
242	37	保护	protect
319	30	伤害	hurt
333	29	创伤	hurt
380	25	侵犯	violate
437	21	困扰	perplex
443	21	敏感	sensitive
468	20	尴尬	embarrassed

AIDS

Rank	Freq	Word	Meaning
54	141	艾滋病	AIDS

711	13	性病	sexually transmitted diseases (STD)
763	12	性传播	sexual transmission

Family

Rank	Freq	Word	Meaning
40	172	家长	parents
67	111	父母	parents
94	84	家庭	family
155	56	妈妈	mother
221	40	女儿	daughter
295	32	母亲	mother
393	24	儿子	son
533	18	爸爸	father
580	16	家庭教育	family education

Love

Rank	Freq	Word	Meaning
205	43	爱情	love
224	40	爱	love
426	22	恋爱	be in love
624	15	早恋	puppy love

Homosexuality

Rank	Freq	Word	Meaning
464	20	同性恋	homosexuality

Appendix 3: Selected "Clusters" of C1 - "AIDS"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
20000720_请到这里来
20020206_欲说还羞的
20020424_儿子的性教
20020511_"性",该如
20020912_"性"要怎么
20021009_我的性教育
20021023_美国性教育
20021121_5岁，性教
20021205_父母教育与
20030108_解惑.txt
20030122_以学生的发
20030310_大学生需要
20030312_面对"道德
20030423_让孩子有准
20030805_让"非常"走
20030917_日本教师呼
20031008_澳大利亚性
20031008_男子高中弊
20031008_男子高中的
20031029_在尴尬中前
20031029_法国政府推
20031029_联合国人口
20031105_"引诱"孩子
20040218_加拿大：性
20040218_近八成美国
20040418_大学生在心
20040901_未成年人性
20040923_"科学"教育
20041013_布什克里教
20050926_中学生还需
20051013_为了成长不
20060126_解答这些"不
20060705_青春期性教
20070227_"健康成长
20070405_"摆渡"之职

Total No.
48
Files Processed

| Concordanc | Concordance Plc | File Vie | Clusters/N-Gram | Collocate | Word Lis | Keyword Lis |

Total No. of Cluster Types 69　　　　**Total No. of Cluster Tokens** 141

Rank	Freq	Range	Cluster
1	30	5	预防 艾滋病
2	7	2	世界 艾滋病
3	7	1	防治 艾滋病
4	5	2	和 艾滋病
5	5	4	的 艾滋病
6	4	2	感染 艾滋病
7	4	1	控制 艾滋病
8	3	2	了 艾滋病
9	3	1	年 艾滋病
10	3	1	联合国 艾滋病
11	2	1	万名 艾滋病
12	2	1	了解 艾滋病
13	2	1	于 艾滋病
14	2	1	其中，艾滋病
15	2	1	存活 艾滋病
16	2	1	家庭 艾滋病

Search Term ☑ Words ☐ Case ☐ Regex ☐ N-Grams　　Cluster Size
艾滋病　　　　　　　　　　Advanced　　Min. 2　　Max. 2
Start　　Stop　　Sort　　　　Min. Freq.　Min. Range
Sort by ☐ Invert Order　**Search Term Position**　1　　1
Sort by Freq　　☐ On Left ☑ On Right
Clone Results

Appendix 4: Selected "Collocates" of C1 - "sexual assault"

Appendix 5: Selected "Word List" of C2

School

Rank	Freq	Word	Meaning
12	216	学校	school
11	253	家长	parents
10	273	学生	student
16	172	教师	teacher
38	88	老师	teacher

Schools

Rank	Freq	Word	Meaning
12	216	学校	school
80	57	幼儿园	kindergarten
145	33	中小学	middle and primary school
170	29	小学	primary school
229	23	大学	university
235	22	中学	middle school
339	17	高校	colleges and universities

Family

Rank	Freq	Word	Meaning
37	88	父母	parents
56	72	家庭	family
86	52	子女	children
187	27	妈妈	mother
218	24	家庭教育	family education
351	16	父亲	father
434	13	爸爸	Father

Sexual abuse

Rank	Freq	Word	Meaning
31	97	侵害	violate
41	84	保护	protect
42	83	安全	safety
83	54	案件	legal case
155	32	猥亵	obscenity

255	21	案例	case
274	20	性侵	sexual assault
334	17	犯罪	commit a crime
344	16	困惑	puzzled
422	13	性骚扰	sexual harassment

AIDS

Rank	Freq	Word	Meaning
103	47	艾滋病	AIDS
225	24	防艾	against AIDS

Homosexuality

Rank	Freq	Word	Meaning
860	6	同性恋	homosexuality

Rural areas

Rank	Freq	Word	Meaning
384	14	农村	country

Appendix 6: Selected "Collocates" of C2 - "assault"

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	83	26	57	3.47162	的
2	59	52	7	4.92736	性
3	23	1	22	7.28100	案件
4	21	10	11	4.06544	是
5	18	9	9	6.08234	侵害
6	17	10	7	6.92736	未成年人
7	14	11	3	7.19039	校园
8	13	6	7	6.59805	发生
9	11	6	5	3.71909	对
10	10	8	2	7.92736	遭受
11	10	7	3	3.12344	孩子
12	10	7	3	4.28736	不
13	9	2	7	6.39685	行为
14	8	6	2	7.34240	防范
15	8	4	4	4.45704	等
16	8	3	5	1.58455	教育
17	8	4	4	3.52933	家长
18	8	3	5	3.75744	学校
19	7	0	7	3.22692	学生
20	7	4	3	2.48996	在
21	7	6	1	2.55149	和
22	7	6	1	6.99775	受
23	7	2	5	5.27528	一些
24	6	5	1	5.77536	知道
25	6	2	4	8.77536	敢于
26	6	2	4	4.92736	如何
27	6	2	4	7.92736	前提
28	6	1	5	6.34240	事件
29	5	3	2	5.31069	这些

Appendix 7: Selected "Word List" of HK1

Schools

Rank	Freq	Word
44	585	students
48	531	school
51	515	schools
85	312	teachers
105/882	223/29	university/universities
222	104	student
From "Concordance"	99	secondary school(s)
357	66	teacher
From "Concordance"	36	primary school(s)
From "Concordance"	23	kindergarten(s)

Family

Rank	Freq	Word
50	522	children
64	423	parents
99	251	family
175	132	mother
331	72	maternal

Government

Rank	Freq	Word
78	372	government
173	135	rights
187	124	police
279	85	policy
603	40	legal

AIDS

Rank	Freq	Word
98	257	aids
138	167	hiv
288	82	condoms
485	49	condom

Abuse

Rank	Freq	Word
174	134	abuse
887	28	abusers
982	25	harassment

Pregnancy

Rank	Freq	Word
243	94	pregnant
251	90	abortions
253	90	pregnancy
288	82	condoms
290	82	pregnancies
337	70	abortion
344	68	marriage
485	49	condom

Sexuality

Rank	Freq	Word
323	73	sexuality
349	67	gay
931	27	homosexuality
1364	17	homosexual

Internet

Rank	Freq	Word
146	160	internet
583	41	pornography
936	27	pornographic
1084	23	porn

Religion

Rank	Freq	Word
405	57	religious
408	56	catholic
1385	17	religion

Appendix 8: Selected "Clusters" of HK1 – "parents"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK1 antconc.txt

Concordance | Concordance Plot | File View | Clusters/N-Grams | Collocates | Word List | Keyword List

Total No. of Cluster Types 179   Total No. of Cluster Tokens 425

Rank	Freq	Range	Cluster
1	54	1	parents and
2	33	1	parents are
3	28	1	parents should
4	24	1	parents to
5	9	1	parents must
6	8	1	parents have
7	7	1	parents who
8	7	1	parents, teachers
9	6	1	parents don
10	6	1	parents of
11	5	1	parents do
12	5	1	parents think
13	4	1	parents at
14	4	1	parents can
15	4	1	parents did
16	4	1	parents is

Search Term ☑ Words ☐ Case ☑ Regex ☐ N-Grams   **Cluster Size**

parents   Advanced   Min. 2   Max. 2

Start   Stop   Sort   **Min. Freq. Min. Range**

Sort by ☐ Invert Order   **Search Term Position**   1   1

Sort by Freq   ☑ On Left   ☐ On Right

Clone Results

Total No.
1
Files Processed

Appendix 9: Selected "Clusters" of HK1 – "government"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK1 antconc.txt

Concordance | Concordance Plot | File View | Clusters/N-Grams | Collocates | Word List | Keyword List

Total No. of Cluster Types 148   Total No. of Cluster Tokens   372

Rank	Freq	Range	Cluster
1	35	1	government has
2	33	1	government should
3	33	1	government's
4	21	1	government to
5	17	1	government is
6	13	1	government and
7	13	1	government must
8	7	1	government does
9	6	1	government for
10	5	1	government departments
11	5	1	government will
12	4	1	government needs
13	4	1	government officials
14	3	1	government could
15	3	1	government figures
16	3	1	government guidelines

Search Term ✓ Words ☐ Case ☐ Regex ☐ N-Grams   Cluster Size

government   Advanced   Min. 2   Max. 2

Start   Stop   Sort   Min. Freq. Min. Range

Sort by ☐ Invert Order   Search Term Position   1   1

Sort by Freq ⌄   ✓ On Left ☐ On Right

Clone Results

Total No.
1
Files Processed

Appendix 10: Selected "Clusters" of HK1 – "pregnant"

Appendix 11: Selected "Collocates" of HK1 – "internet"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK1 antconc.txt

Concordanc | Concordance Pl | File Vie | Clusters/N-Gram | Collocate | Word Lis | Keyword Lis

Total No. of Collocate Types: 724   **Total No. of Collocate Tokens:** 1920

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
56	5	2	3	5.04620	way
57	5	1	4	2.81057	this
58	5	3	2	3.79420	so
59	5	2	3	7.22781	pornography
60	5	4	1	6.80400	photos
61	5	2	3	3.71808	per
62	5	4	1	9.12593	obscenity
63	5	2	3	6.24551	media
64	5	4	1	7.15909	indecent
65	5	0	5	2.26005	i
66	5	1	4	4.89886	however
67	5	1	4	3.51927	had
68	5	4	1	2.77800	at
69	5	4	1	2.69662	about
70	4	2	2	5.72427	youngsters
71	4	4	0	6.56299	using
72	4	1	3	3.77559	up

Search Term ☑ Words ☐ Case ☐ Regex   **Window Span** ☐ Same

Internet   [Advanced]   From... 6L To... 6R

[Start] [Stop] [Sort]   **Min. Collocate Frequency**

Sort by ☐ Invert Order   1

Sort by Freq   [Clone Results]

Total No.
1
Files Processed

Appendix 12: Selected "Concordance" of HK1 – "gay"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK1 antconc.txt

| Concordance | Concordance Plot | File View | Clusters/N-Grams | Collocates | Word List | Keyword List |

Concordance Hits 67

Hit	KWIC	File
40	prevalence among Hong Kong gay men is 2 per cent, about 20 times that of	HK1 ar
40	he ruling will encourage young gay men to seek proper advice and health care:	HK1 ar
41	es asking awkward questions. " Gay men were asked, 'Oh my God, you're 40	HK1 ar
41	l 2 per cent of 500 Hong Kong gay men were tested HIV positive by the Aids	HK1 ar
42	stice Michael Hartmann, young gay men will now be free to express their	HK1 ar
43	n or woman, married or single, gay or straight or even bisexual and transgender. Non	HK1 ar
44	by the centre, Aids groups and gay organisations to deal with the rising HIV prevale	HK1 ar
45	s first social services centre for gay people. Kenneth Cheung Kam-hung, the group's	HK1 ar
46	any cultural commentators and gay people. "Not only is her writing good, but	HK1 ar
47	nents are very thorough. Many gay people read her columns, and some post the	HK1 ar
48	oups on the internet," says one gay rights activist. Leung agrees: "Her writing is si	HK1 ar
49	y seeking their position on the gay rights agenda. The Tongzhi Coalition, representin	HK1 ar
50	e's questions than those of the gay rights group. Except giving a "not direct respons	HK1 ar
51	tes sympathetic to its cause A gay rights group pledged yesterday to mobilise at lea	HK1 ar
52	ety for Truth and Light, an anti- gay rights group, won the contract from the Education	HK1 ar
53	ndidates' stand on gays sought Gay rights groups yesterday unveiled an election stra	HK1 ar
54	e. MARJORIE BUTENG, Macau Gay rights In western countries, homosexuality has be	HK1 ar
55	their responses to a survey on gay rights issues. Meanwhile, the Hong Kong Alliance	HK1 ar
56	began distributing condoms in gay saunas and bars and offered HIV testing in	HK1 ar
57	s were not targeted only at the gay sector in Hong Kong - which the government puts	HK1 ar
63	rvices were not gay-friendly or gay-sensitive." She recalled doctors and nurses askin	HK1 ar
63	to the centre to talk about HIV, gay sex and other issues. He said there was	HK1 ar
63	d that the offence of underage gay sex, taken in the context of the legislation	HK1 ar
64	ure Society, the first registered gay student organisation - at the Chinese University	HK1 ar
64	to deal with problems faced by gay students, but said it was the job of	HK1 ar
65	er school had tried to separate gay students by putting them in different classes, sh	HK1 ar
65	a result, many students turn to gay support groups, such as Rainbow of Hong Kong,	HK1 ar
66	g their secrets to their parents. Gay teachers have to lead secret lives, fearful they	HK1 ar
66	vative group known for its anti- gay views commissioned to educate teachers on how to	HK1 ar
67	pecially on HIV-related topics. " Gay youngsters do not have enough information about H	HK1 ar

Search Term ☑ Words ☐ Case ☐ Regex   Search Window Size

gay   Advanced   50

Start   Stop   Sort   Show Every Nth Row 1

Kwic Sort

☑ Level 1 1R   ☑ Level 2 2R   ☑ Level 3 3R   Clone Results

Total No.
1
Files Processed

Appendix 13: Selected "Collocates" and "Concordance" of HK1 – "gay"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK1 antconc.txt

Concordance | Concordance Pl | File Vie | Clusters/N-Gram | Collocate | Word Lis | Keyword Lis

Total No. of Collocate Types: 367   Total No. of Collocate Tokens: 804

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	39	25	14	3.51985	the
2	33	8	25	4.27826	and
3	21	1	20	8.64480	men
4	20	7	13	4.01385	in
5	18	12	6	3.38513	of
6	16	12	4	8.13557	hiv
7	15	9	6	2.88144	to
8	12	0	12	11.29688	bisexual
9	11	10	1	4.05686	for
10	10	1	9	7.76438	rights
11	10	2	8	5.10142	kong
12	10	2	8	5.07965	hong
13	10	10	0	7.69145	among
14	9	5	4	5.45797	or
15	9	8	1	4.22669	on
16	9	1	8	8.10423	groups
17	8	5	3	5.54485	were

Search Term ✓ Words ☐ Case ☐ Regex   Window Span ☐ Same

gay   [Advanced]   From... 6L To... 6R

[Start] [Stop] [Sort]   Min. Collocate Frequency

Sort by ☐ Invert Order   1

Sort by Freq   [Clone Results]

Total No.
1
Files Processed

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK1 antconc.txt

Concordance | Concordance Pl | File Vie | Clusters/N-Gram | Collocate | Word Lis | Keyword Lis

Concordance Hits   14

Hit	KWIC	File
1	e the prevalence of HIV/Aids among gay and bisexual men, concern grou	HK1 antconc.tx
2	fight the spread of HIV among gay and bisexual men in the developing	HK1 antconc.tx
3	005, the number of HIV cases among gay and bisexual men had been	HK1 antconc.tx
4	ll give an update on HIV clustering among gay and bisexual men. The disc	HK1 antconc.tx
5	centre to talk about HIV, gay sex and other issues. He said there	HK1 antconc.tx
6	se in the number of HIV-infected gay and bisexual men within five years. "	HK1 antconc.tx
7	ong's first cluster of HIV infections among the local gay community - 20 m	HK1 antconc.tx
8	ken place. 2pc of gay men in Hong Kong now HIV positive, figures	HK1 antconc.tx
9	of 500 Hong Kong gay men were tested HIV positive by the Aids	HK1 antconc.tx
10	estimated that the HIV prevalence among gay and bisexual men is just	HK1 antconc.tx
11	e reporting system." HIV prevalence among gay and bisexual men is 3.1 p	HK1 antconc.tx
12	ures found that the HIV prevalence among Hong Kong gay men is 2 per	HK1 antconc.tx
13	hools, especially on HIV-related topics. "Gay youngsters do not have enou	HK1 antconc.tx
14	ibuting condoms in gay saunas and bars and offered HIV testing in	HK1 antconc.tx

Search Term ✓ Words ☐ Case ☐ Regex   Search Window Size

gay   [Advanced]   50

[Start] [Stop] [Sort] Show Every Nth Row 1

Kwic Sort
✓ Level 1 1R ✓ Level 2 2R ✓ Level 3 3R   [Clone Results]

Total No.
1
Files Processed

Appendix 14: Selected "Word List" of HK2

School

Rank	Freq	Word
62	216	school
69	200	schools
79	178	students
132/485	91/26	university/universities
125	95	teachers
From "Concordance"	55	secondary school(s)
338	36	student
From "Concordance"	22	primary school(s)
736	18	teacher
From "Concordance"	3	kindergarten(s)

Family

Rank	Freq	Word
50	255	children
72	191	parents
109	113	mother
157	75	families
332	36	father
343	35	daughter
384	32	mothers

Government

Rank	Freq	Word
78	178	government
167	71	police
215	56	law
234	51	legal
292	40	rights
347	35	illegal
478	26	policy

AIDS

Rank	Freq	Word

| 207 | 57 | aids |
| 237 | 50 | hiv |

Pregnancy

Rank	Freq	Word
163	73	pregnancy
201	60	pregnant
279	42	abortion
300	39	pregnancies
327	26	abortions

Abuse

Rank	Freq	Word
183	64	abuse
306	38	bullying
449	27	assault

Sexuality

Rank	Freq	Word
231	52	sexuality
233	51	gender
240	50	lgbt
251	48	gay

Pornography

Rank	Freq	Word
174	69	porn
318	37	internet
352	35	pornography
727	18	pornographic

Religion

Rank	Freq	Word
555	23	religious

Appendix 15: Selected "Clusters" of HK2 – "parents"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK2 antconc.txt

Concordanc | Concordance Pl | File Vie | Clusters/N-Gram | Collocate | Word Li: | Keyword Li:

Total No. of Cluster Types 108   **Total No. of Cluster Tokens** 191

Rank	Freq	Range	Cluster
1	15	1	parents and
2	14	1	parents are
3	8	1	parents to
4	8	1	parents were
5	7	1	parents may
6	7	1	parents should
7	6	1	parents who
8	4	1	parents do
9	4	1	parents must
10	4	1	parents or
11	4	1	parents, teachers
12	3	1	parents on
13	3	1	parents still
14	2	1	parents can
15	2	1	parents equipped
16	2	1	parents have

Search Term ☑ Words ☐ Case ☐ Regex ☐ N-Grams   **Cluster Size**

parents   Advanced   Min. 2   Max. 2

Start   Stop   Sort   **Min. Freq.** **Min. Range**

Sort by ☐ Invert Order   **Search Term Position**   1   1

Sort by Freq   ☑ On Left ☐ On Right   Clone Results

Total No.
1
Files Processed

Appendix 16: Selected "Clusters" of HK2 – "government"

Rank	Freq	Range	Cluster
1	17	1	government has
2	15	1	government should
3	9	1	government's
4	8	1	government is
5	7	1	government and
6	6	1	government must
7	5	1	government to
8	5	1	government's
9	3	1	government figures
10	3	1	government for
11	3	1	government hill
12	3	1	government needs
13	2	1	government announced
14	2	1	government can
15	2	1	government could
16	2	1	government had

Appendix 17: Selected "Clusters" of HK2 – "abuse"

Rank	Freq	Range	Cluster
1	19	1	child abuse
2	16	1	sexual abuse
3	8	1	sex abuse
4	2	1	and abuse
5	2	1	of abuse
6	2	1	such abuse
7	2	1	the abuse
8	1	1	abandonment, abuse
9	1	1	an abuse
10	1	1	andsubstance abuse
11	1	1	animal abuse
12	1	1	drug abuse
13	1	1	ever abuse
14	1	1	from abuse
15	1	1	malnutrition, abuse

Appendix 18: Selected "Clusters" of HK2 – "lgbt"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
HK2 antconc.txt

Concordanc | Concordance Pl | File Vie | Clusters/N-Gram | Collocate | Word Lis | Keyword Lis

Total No. of Cluster Types 24   **Total No. of Cluster Tokens** 50

Rank	Freq	Range	Cluster
1	12	1	lgbt people
2	6	1	lgbt students
3	5	1	lgbt issues
4	3	1	lgbt community
5	2	1	lgbt sex
6	2	1	lgbt teenagers
7	2	1	lgbt youth
8	2	1	lgbt, they
9	1	1	lgbt and
10	1	1	lgbt civil
11	1	1	lgbt couples
12	1	1	lgbt events
13	1	1	lgbt group
14	1	1	lgbt identity
15	1	1	lgbt marriage
16	1	1	lgbt person
17	1	1	lgbt rights
18	1	1	lgbt sector
19	1	1	lgbt student
20	1	1	lgbt support
21	1	1	lgbt too
22	1	1	lgbt youths
23	1	1	lgbt) community
24	1	1	lgbt. gay

Search Term ☑ Words ☐ Case ☐ Regex ☐ N-Grams   **Cluster Size**

lgbt   [Advanced]   Min. 2   Max. 2

[Start] [Stop] [Sort]   **Min. Freq.** **Min. Range**

Sort by ☐ Invert Order   **Search Term Position**   1   1

Sort by Freq ⌄   ☑ On Left ☐ On Right

[Clone Results]

Total No.
1
Files Processed

Appendix 19: Selected "Word List" of S1

School

Rank	Freq	Word
66	359	schools
79	305	school
108	221	students
152	151	teachers
223	95	student
332	66	teacher
From "Concordance"	52	secondary school(s)
421	51	university
From "Concordance"	27	primary school(s)
From "Concordance"	3	kindergarten(s)

Family

Rank	Freq	Word
40	585	parents
45	513	children
87	266	family
115	198	child
226	93	mother
464	46	families
564	39	father
645	33	daughter
646	33	daughters
656	33	parenthood
737	29	mothers
864	25	parental
930	23	father

Government

Rank	Freq	Word
142	165	ministry
222	95	government
244	88	moe
260	82	approach

Rank	Freq	Word
412	52	minister

STD

Rank	Freq	Word
72	348	sexually
141	165	aids
148	158	hiv
204	102	transmitted
268	80	diseases
366	59	infections
408	52	disease
594	37	infection

Abortion

Rank	Freq	Word
155	148	abortion
180	129	condoms
205	101	contraception
229	92	condom
240	88	abortions
256	84	pregnancy
264	81	pregnant
286	76	pregnancies
487	44	contraceptives

Abstinence

Rank	Freq	Word
137	170	abstinence
873	27	virginity

Religion

Rank	Freq	Word
181	129	religious
507	43	religion
624	35	muslim
730	29	christian

Sexuality

Rank	Freq	Word
100	239	sexuality
198	104	homosexuality
489	44	gay
636	34	homosexual

Medicine

Rank	Freq	Word
310	70	medical
451	47	counselling
462	46	counsellors
474	45	emotional
524	41	consultant
733	29	doctors
790	27	hospital
867	25	psychiatrist

Abuse

Rank	Freq	Word
283	77	abuse
647	33	death

Internet

Rank	Freq	Word
183	127	internet
216	97	online
235	90	media
550	40	pornography
657	33	porn

Appendix 20: Selected "Clusters" of S1 – "ministry"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
S1 antconc.txt

| Concordanc | Concordance Plc | File Vie | Clusters/N-Gram | Collocate | Word Lis | Keyword Lis |

Total No. of Cluster Types 139   Total No. of Cluster Tokens 330

Rank	Freq	Range	Cluster
1	71	1	ministry of
2	36	1	ministry of education
3	20	1	ministry of community
4	15	1	ministry's
5	11	1	ministry of health
6	8	1	ministry said
7	6	1	ministry has
8	6	1	ministry will
9	6	1	ministry would
10	4	1	ministry's sex
11	3	1	ministry and
12	3	1	ministry said yesterday
13	2	1	ministry about
14	2	1	ministry about the
15	2	1	ministry consulted
16	2	1	ministry consulted major
17	2	1	ministry had
18	2	1	ministry is
19	2	1	ministry of information
20	2	1	ministry on
21	2	1	ministry vet
22	2	1	ministry video
23	2	1	ministry video clip

Search Term ☑ Words ☐ Case ☐ Regex ☐ N-Grams   Cluster Size

ministry   Advanced   Min. 2

Start   Stop   Sort   Min. Freq.   Min. R

Sort by ☐ Invert Order   Search Term Position   1

Sort by Freq   ☑ On Left ☐ On Right

Clone Results

Total No.
1
Files Processed

Appendix 21: Selected "Concordance" of S1 – "transmitted"

```
●●●                          Concordance Results 3:
Concordance Hits    102
Hit      KWIC
71    sg The number of sexually   transmitted infections among teenagers last year l
72    red topics such as sexually  transmitted infections and the consequences of pr
73    ncy, abortion and sexually   transmitted infections, as well as the anecdotal ev
74    en diagnosed with sexually   transmitted infections at the DSC Clinic in Kelanta
75    ording to the main sexually  transmitted infections clinic run by the governmen
76    he Department of Sexually-  Transmitted Infections Control (DSC) clinic, told T
77    ncidence of STIs (sexually   transmitted infections)/HIV among youths, becaus
78    ation on sexuality; sexually  transmitted infections; HIV and contraceptives; ho
79    rom 283 cases of sexually    transmitted infections in 2002, it hit 657 in the fir
80    es have found that sexually  transmitted infections like gonorrhoea as well as a
81    ellors, contracting sexually  transmitted infections or getting pregnant. The Sir
82    ontraceptives and sexually   transmitted infections, so that teenagers can make
83    ved a sharp rise in sexually  transmitted infections (STI) among teenage girls. I
84    eed to acquire on sexually   transmitted infections (STI), if such diseases are t
85    n issue THE rise in sexually  transmitted infections (STI) among teenagers calls
86    rming to read that sexually  transmitted infections (STI) are increasing at a fur
87    of HIV and other sexually-  transmitted infections (STI). When used correctly
88    and genital warts. Sexually  transmitted infections (STIs) have been on the rise
89    e in the number of sexually  transmitted infections (STIs) and HIV cases. Last y
90    teenagers getting sexually   transmitted infections (STIs) and HIV has risen in
91    and Aids to other sexually   transmitted infections (STIs), to contraception as
92    ate information on sexually  transmitted infections (STIs) and HIV, for example
93    information about sexually   transmitted infections (STIs)? Teens need to know
94    h found out about sexually   transmitted infections (STIs). That was when a frie
95    re, the number of sexually   transmitted infections (STIs) among teenagers las
96    of youngsters with sexually  transmitted infections (STIs) has almost tripled in
97    ising incidence of sexually  transmitted infections (STIs) in Britain and the Ne
98    of teenagers with sexually-  transmitted infections (STIs) to more than double.
99    partner is free of sexually   transmitted infections (STIs). Alicia said: 'You don
100   me the victims of sexually   transmitted infections, there really is no-one else
101   d pregnancies and sexually   transmitted infections. We wholeheartedly agree v
102   n of HIV and other sexually  transmitted infections'. We acknowledge that cond
```

Appendix 22: Selected "Clusters" of S1 – "abuse"

AntConc 3.5.8 (Macintosh OS X) 2019

Clusters/N-Grams tab

Total No. of Cluster Types 87   Total No. of Cluster Tokens 154

Rank	Freq	Range	Cluster
1	28	1	sexual abuse
2	10	1	child abuse
3	9	1	of sexual abuse
4	6	1	sex abuse
5	6	1	the abuse
6	5	1	of abuse
7	4	1	child sexual abuse
8	3	1	child sex abuse
9	3	1	the sexual abuse
10	2	1	drug abuse
11	2	1	on child abuse
12	1	1	abortion, rape, abuse
13	1	1	about the abuse

Search Term ✓ Words ☐ Case ☐ Regex ☐ N-Grams   Cluster Size

abuse   Advanced   Min. 2   Max. 3

Start   Stop   Sort   Min. Freq. Min. Range

Sort by ☐ Invert Order   Search Term Position   1   1

Sort by Freq   ☐ On Left ✓ On Right

Clone Results

Corpus Files: S1 antconc.txt

Total No. 1
Files Processed

Appendix 23: Selected "Collocates" of S1 – "contraception"

	Collocates Results 1	

Total No. of Collocate Types: 419 **Total No. of Collocate Tokens:** 1010

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
13	12	4	8	7.13021	abortion
14	11	7	4	6.87429	use
15	11	9	2	3.91607	not
16	11	5	6	4.07715	as
17	10	3	7	3.81807	with
18	9	4	5	5.60270	teens
19	8	4	4	3.80196	have
20	8	3	5	4.87206	also
21	7	7	0	6.56206	teach
22	7	1	6	2.83499	it
23	7	3	4	6.15267	abstinence
24	6	1	5	3.22984	they
25	6	4	2	3.52109	their
26	6	2	4	8.13021	stds
27	6	3	3	2.94842	s
28	6	4	2	9.33967	methods
29	6	2	4	5.17476	may
30	6	2	4	7.01774	diseases
31	6	3	3	2.99315	are
32	5	0	5	3.79355	will
33	5	2	3	3.61515	we
34	5	1	4	6.40421	transmitted
35	5	4	1	6.58478	teaching
36	5	4	1	6.79123	since
37	5	1	4	5.34871	sexually
38	5	3	2	4.58879	schools
39	5	2	3	4.89672	our
40	5	4	1	5.53747	information

Appendix 24: Selected "Clusters" of S1 – "homosexual"

AntConc 3.5.8 (Macintosh OS X) 2019

| Concordance | Concordance Plot | File View | Clusters/N-Grams | Collocates | Word List | Keyword List |

Total No. of Cluster Types 25   Total No. of Cluster Tokens 34

Rank	Freq	Range	Cluster
1	6	1	homosexual acts
2	2	1	homosexual agenda
3	2	1	homosexual lifestyle
4	2	1	homosexual people
5	2	1	homosexual sex
6	1	1	homosexual activist
7	1	1	homosexual and
8	1	1	homosexual behaviour
9	1	1	homosexual direction
10	1	1	homosexual family
11	1	1	homosexual feelings
12	1	1	homosexual issues
13	1	1	homosexual lifestyles
14	1	1	homosexual or
15	1	1	homosexual orientation
16	1	1	homosexual tendencies
17	1	1	homosexual were
18	1	1	homosexual women

Search Term ☑ Words ☐ Case ☐ Regex ☐ N-Grams   Cluster Size

homosexual   [Advanced]   Min. 2   Max. 2

[Start] [Stop] [Sort]   Min. Freq. Min. Range

Sort by ☐ Invert Order   Search Term Position   1   1

Sort by Freq   ☑ On Left ☐ On Right

[Clone Results]

Corpus Files
S1 antconc.txt

Total No.
1
Files Processed

Appendix 25: Selected "Collocates" of S1 – "internet"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
S1 antconc.txt

| | Concordance | Concordance Plot | File View | Clusters/N-Grams | Collocates | Word List | Keyword List |

Total No. of Collocate Types: 492   Total No. of Collocate Tokens: 1270

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	134	108	26	4.47630	the
2	54	23	31	3.98467	and
3	35	30	5	5.17414	on
4	31	23	8	3.35191	of
5	25	13	12	2.68871	to
6	21	9	12	4.13795	for
7	20	11	9	3.90696	sex
8	17	12	5	6.97254	information
9	15	14	1	4.78038	from
10	13	3	10	4.01484	they
11	13	2	11	3.02862	is
12	12	9	3	3.75063	with
13	11	6	5	4.06508	their
14	11	4	7	2.34693	in

Search Term ☑ Words ☐ Case ☐ Regex   **Window Span** ☐ Same

internet   Advanced   From... 5L   To... 5R

Start   Stop   Sort   **Min. Collocate Frequency**

Sort by ☐ Invert Order   1

Sort by Freq   Clone Results

Total No.
1
Files Processed

Appendix 26: Selected "Clusters" of S1 – "porn"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
S1 antconc.txt

| Concordanc | Concordance Plt | File Vie | Clusters/N-Gram | Collocate | Word List | Keyword List |

Total No. of Cluster Types   17   Total No. of Cluster Tokens   33

Rank	Freq	Range	Cluster
1	8	1	porn sites
2	3	1	porn is
3	3	1	porn on
4	3	1	porn stars
5	2	1	porn but
6	2	1	porn vcds
7	2	1	porn videos
8	1	1	porn before
9	1	1	porn gives
10	1	1	porn pictures
11	1	1	porn prohibiter
12	1	1	porn stuff
13	1	1	porn though

Search Term ☑ Words ☐ Case ☐ Regex ☐ N-Grams   Cluster Size
porn   Advanced   Min. 2   Max. 2
Start   Stop   Sort   Min. Freq. Min. Range
Sort by ☐ Invert Order   Search Term Position   1   1
Sort by Freq ▾   ☑ On Left ☐ On Right
Clone Results

Total No.
1
Files Processed

Appendix 27: Selected "Word List" of S2

School

Rank	Freq	Word
75	184	school
79	174	schools
89	156	students
144/544	87/24	university/universities
227	58	student
250	53	teachers
458	28	college
468	28	teacher
From "Concordance"	18	secondary school(s)
From "Concordance"	16	primary school(s)
From "Concordance"	8	kindergarten(s)

Family

Rank	Freq	Word
36	391	children
43	328	parents
78	176	family
111	115	home
115	111	child
133	98	mother
259	51	son
264	50	father
308	32	families
399	33	daughter
448	29	parent
545	24	wife

Government

Rank	Freq	Word
214	60	ministry
252	52	government
258	51	moe
440	30	minister

Rank	Freq	Word
487	27	policy

Abuse

Rank	Freq	Word
229	57	abuse
394	34	suicide
499	26	harassment
574	22	abused

STI

Rank	Freq	Word
146	86	sexually
270	49	contraception
396	34	transmitted
621	21	infections

Pregnancy and abortion

Rank	Freq	Word
270	49	contraception
379	39	pregnancy
389	34	pregnant
464	28	pregnancies
647	20	abortion

Abstinence

Rank	Freq	Word
371	35	abstinence

Religion

Rank	Freq	Word
288	46	religious

Sexuality

Rank	Freq	Word
73	185	sexuality
253	37	gender
387	34	homosexuality

| 418 | 32 | gay |

Internet

Rank	Freq	Word
125	104	porn
215	60	pornography
237	56	internet
268	50	media

Appendix 28: Selected "Clusters" of S2 – "moe"

AntConc 3.5.8 (Macintosh OS X) 2019

Corpus Files
S2 antconc.txt

| Concordanc | Concordance Plc | File Vie | Clusters/N-Gram | Collocate | Word Lis | Keyword Lis |

Total No. of Cluster Types 40   Total No. of Cluster Tokens 51

Rank	Freq	Range	Cluster
1	5	1	moe's
2	3	1	moe to
3	2	1	moe and
4	2	1	moe has
5	2	1	moe must
6	2	1	moe programme
7	2	1	moe) is
8	1	1	moe "audits
9	1	1	moe but
10	1	1	moe for
11	1	1	moe kindergartens
12	1	1	moe lifts
13	1	1	moe on
14	1	1	moe provides
15	1	1	moe recognises
16	1	1	moe requirements
17	1	1	moe review
18	1	1	moe said
19	1	1	moe says
20	1	1	moe should

Search Term ☑ Words ☐ Case ☐ Regex ☐ N-Grams   Cluster Size

moe   Advanced   Min. 2   Max. 2

Start   Stop   Sort   Min. Freq. Min. Range

Sort by ☐ Invert Order   Search Term Position   1   1

Sort by Freq   ☑ On Left ☐ On Right

Clone Results

Total No.
1
Files Processed

Appendix 29: Selected "Clusters" of S2 – "abuse"

Appendix 30: Selected "Clusters" of S2 – "gender"

AntConc 3.5.8 (Macintosh OS X) 2019

Rank	Freq	Range	Cluster
1	6	1	gender inequalities
2	3	1	gender differences
3	3	1	gender discrimination
4	3	1	gender equality
5	3	1	gender stereotypes
6	3	1	gender-based
7	1	1	gender as
8	1	1	gender begins
9	1	1	gender identity
10	1	1	gender in
11	1	1	gender inequality
12	1	1	gender issues
13	1	1	gender minorities

Total No. of Cluster Types 22   Total No. of Cluster Tokens 37

Appendix 31: Selected "Collocates" of S2 – "internet"

AntConc 3.5.8 (Macintosh OS X) 2019

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	44	39	5	4.0394C	the
2	27	17	10	3.92815	to
3	21	7	14	3.83417	and
4	13	0	13	7.85231	porn
5	13	12	1	3.26158	of
6	11	5	6	5.48837	from
7	9	8	1	9.32179	access
8	8	2	6	5.00996	or
9	8	7	1	4.22843	on
10	8	5	3	2.79094	a
11	7	2	5	4.3536C	their
12	7	4	3	5.4649C	can
13	5	1	4	4.57061	more
14	5	1	4	3.41268	it

Total No. of Collocate Types: 272   Total No. of Collocate Tokens: 560

Corpus Files: S2 antconc.txt

Search Term ✓ Words ☐ Case ☐ Regex: internet   Window Span ☐ Same   From... 5L   To...

Sort by ☐ Invert Order: Sort by Freq   Min. Collocate Frequency: 1

Total No. 1   Files Processed

Appendix 32: "Keyword List" of C2 with C1 as the Reference Corpus

		Keyword List Results 2		
Keyword Types: 65		**Keyword Tokens:** 4411	**Search Hits:** 0	
Rank	**Freq**	**Keyness (LL4)**	**Effect (DICE)**	**Keyword**
1	97	+ 149.28	0.0046	侵害
2	731	+ 122.7	0.0334	性
3	979	+ 122.24	0.0441	教育
4	67	+ 102.35	0.0032	幼儿
5	256	+ 88.99	0.012	家长
6	83	+ 80.72	0.0039	安全
7	55	+ 80.22	0.0026	案件
8	63	+ 65.89	0.003	幼儿园
9	52	+ 64.26	0.0024	子女
10	60	+ 63.58	0.0028	英国
11	32	+ 55.98	0.0015	猥亵
12	84	+ 51.59	0.004	保护
13	23	+ 46.01	0.0011	改革
14	29	+ 45.02	0.0014	玫
15	20	+ 40.01	0.0009	性侵
16	19	+ 38.01	0.0009	枸杞
17	22	+ 36.7	0.001	隐私
18	173	+ 35.18	0.0081	教师
19	17	+ 34.01	0.0008	青爱
20	24	+ 31.93	0.0011	性学
21	19	+ 30.99	0.0009	彭晓辉
22	51	+ 30.02	0.0024	未成年人
23	49	+ 28.92	0.0023	进行性
24	14	+ 28.01	0.0007	胡萍
25	49	+ 27.58	0.0023	专业
26	28	+ 27.41	0.0013	色情
27	13	+ 26.01	0.0006	小屋
28	24	+ 25.94	0.0011	防艾
29	95	+ 25.54	0.0045	月
30	28	+ 25.21	0.0013	性别
31	61	+ 25.04	0.0029	日
32	12	+ 24.01	0.0006	两会
33	12	+ 24.01	0.0006	义务教育
34	12	+ 24.01	0.0006	全国政协

Keyword Types: 65   Keyword Tokens: 4411   Search Hits: 0

Rank	Freq	Keyness (LL4)	Effect (DICE)	Keyword
32	12	+ 24.01	0.0006	两会
33	12	+ 24.01	0.0006	义务教育
34	12	+ 24.01	0.0006	全国政协
35	27	+ 23.72	0.0013	初中生
36	24	+ 23.49	0.0011	认知
37	15	+ 23.44	0.0007	手机
38	35	+ 22.69	0.0016	校园
39	20	+ 22.05	0.0009	管理
40	11	+ 22	0.0005	也就是说
41	11	+ 22	0.0005	张玫玫说
42	11	+ 22	0.0005	熊丙奇
43	23	+ 21.95	0.0011	性教育
44	14	+ 21.58	0.0007	网友
45	18	+ 21.54	0.0008	小学生
46	18	+ 21.54	0.0008	防范
47	79	- 128.84	0.0037	我
48	22	- 46.27	0.001	大学生
49	4	- 45.15	0.0002	心理健康
50	93	- 41.55	0.0043	他们
51	20	- 38.97	0.0009	女孩
52	5	- 37.48	0.0002	怀孕
53	60	- 33.55	0.0028	他
54	7	- 33.5	0.0003	中学生
55	188	- 31.86	0.0087	有
56	51	- 29.82	0.0024	心理
57	47	- 27.61	0.0022	她
58	69	- 25.99	0.0032	人
59	8	- 25.17	0.0004	性侵犯
60	69	- 24.44	0.0032	我们
61	11	- 23.76	0.0005	同学
62	3	- 23.27	0.0001	成熟
63	5	- 23.09	0.0002	少女
64	28	- 22.52	0.0013	又
65	62	- 21.54	0.0029	们

Appendix 33: "Keyword List" of HK2 with HK1 as the Reference Corpus

			Keyword List Results 3		
Keyword Types: 62			**Keyword Tokens:** 5691	**Search Hits:** 0	
Rank	Freq	Keyness (LL4)	Effect (DICE)	Keyword	
1	302	+ 151.86	0.006	says	
2	59	+ 128.4	0.0012	vr	
3	50	+ 108.81	0.001	lgbt	
4	38	+ 74.22	0.0008	bullying	
5	34	+ 73.99	0.0007	eyres	
6	69	+ 65.59	0.0014	porn	
7	22	+ 47.87	0.0004	x	
8	63	+ 39.37	0.0013	court	
9	18	+ 39.17	0.0004	zines	
10	23	+ 37.75	0.0005	y	
11	808	+ 37.34	0.0159	s	
12	17	+ 36.99	0.0003	zine	
13	16	+ 34.82	0.0003	klein	
14	205	+ 33.5	0.0041	women	
15	27	+ 32.39	0.0005	marwah	
16	14	+ 30.46	0.0003	judiciary	
17	14	+ 30.46	0.0003	rmb	
18	137	+ 30.3	0.0027	city	
19	51	+ 30.04	0.001	gender	
20	18	+ 27.81	0.0004	erectile	
21	21	+ 27	0.0004	tobacco	
22	19	+ 26.28	0.0004	intimacy	
23	12	+ 26.11	0.0002	flynn	
24	12	+ 26.11	0.0002	zeising	
25	33	+ 26.06	0.0007	products	
26	282	+ 24.51	0.0056	her	
27	26	+ 24.07	0.0005	suicide	
28	11	+ 23.94	0.0002	pathfinders	
29	11	+ 23.94	0.0002	possibilities	
30	14	+ 23.94	0.0003	rice	
31	16	+ 23.9	0.0003	glass	
32	19	+ 23.38	0.0004	judges	
33	77	+ 22.98	0.0015	mainland	
34	17	+ 22.55	0.0003	convention	

Keyword List Results 3

Keyword Types: 62   Keyword Tokens: 5691   Search Hits: 0

Rank	Freq	Keyness (LL4)	Effect (DICE)	Keyword
30	14	+ 23.94	0.0003	rice
31	16	+ 23.9	0.0003	glass
32	19	+ 23.38	0.0004	judges
33	77	+ 22.98	0.0015	mainland
34	17	+ 22.55	0.0003	convention
35	21	+ 22.02	0.0004	expo
36	15	+ 21.97	0.0003	transgender
37	13	+ 21.91	0.0003	sticky
38	10	+ 21.76	0.0002	helper
39	22	+ 21.57	0.0004	jones
40	24	+ 20.95	0.0005	foreign
41	6	- 118.62	0.0001	ms
42	20	- 41.93	0.0004	dr
43	443	- 41.19	0.0087	said
44	178	- 39.13	0.0035	students
45	57	- 37.74	0.0011	aids
46	231	- 37	0.0046	should
47	27	- 32.8	0.0005	mr
48	46	- 29.86	0.0009	however
49	10	- 28.27	0.0002	ng
50	1	- 27.96	0	obscene
51	451	- 26.79	0.0089	education
52	5	- 24.93	0.0001	bags
53	4	- 24.65	0.0001	photos
54	10	- 23.54	0.0002	road
55	803	- 23.44	0.0156	sex
56	581	- 23.13	0.0114	be
57	5	- 22.3	0.0001	catholic
58	17	- 22.18	0.0003	english
59	37	- 21.67	0.0007	internet
60	3	- 21.06	0.0001	web
61	1	- 21.03	0	findings
62	95	- 20.79	0.0019	teachers

Appendix 34: "Keyword List" of S2 with S1 as the Reference Corpus

Keyword List Results 4

Keyword Types: 83   Keyword Tokens: 5874   Search Hits: 0

Rank	Freq	Keyness (LL4)	Effect (DICE)	Keyword
1	53	+ 104.73	0.001	zen
2	54	+ 97.65	0.001	comedy
3	104	+ 85	0.002	porn
4	53	+ 84.13	0.001	nus
5	36	+ 71.14	0.0007	nlb
6	503	+ 52.87	0.0096	her
7	33	+ 51.74	0.0006	maids
8	32	+ 49.88	0.0006	misconduct
9	24	+ 47.42	0.0005	chiat
10	102	+ 47.15	0.002	report
11	596	+ 46.27	0.0114	she
12	32	+ 45.55	0.0006	ed
13	22	+ 43.47	0.0004	wellness
14	21	+ 41.49	0.0004	lek
15	63	+ 41.19	0.0012	science
16	87	+ 37.62	0.0017	university
17	19	+ 37.54	0.0004	maid
18	25	+ 37	0.0005	facebook
19	29	+ 36.65	0.0006	photo
20	602	+ 36.53	0.0115	he
21	22	+ 36.18	0.0004	ngos
22	60	+ 34.56	0.0012	single
23	27	+ 33.23	0.0005	employers
24	20	+ 32.41	0.0004	titles
25	358	+ 31.92	0.0069	his
26	28	+ 31.91	0.0005	conversations
27	143	+ 31.78	0.0028	him
28	22	+ 31.57	0.0004	repeal
29	26	+ 31.54	0.0005	joo
30	24	+ 31.38	0.0005	moved
31	19	+ 30.53	0.0004	mosque
32	93	+ 30.27	0.0018	lim
33	21	+ 29.77	0.0004	cedaw
34	15	+ 29.64	0.0003	vaccinated
35	61	+ 27.18	0.0012	board
36	17	+ 26.8	0.0003	assault
37	42	+ 26.45	0.0008	mental
38	26	+ 26.08	0.0005	harassment
39	13	+ 25.69	0.0003	cov
40	24	+ 25.42	0.0005	addiction
41	24	+ 25.42	0.0005	universities
42	16	+ 24.94	0.0003	disciplinary
43	18	+ 24.43	0.0003	coalition
44	18	+ 24.43	0.0003	cyber

Keyword Types:	83	**Keyword Tokens:**	5874	**Search Hits:** 0

Rank	Freq	Keyness (LL4)	Effect (DICE)	Keyword
40	24	+ 25.42	0.0005	addiction
41	24	+ 25.42	0.0005	universities
42	16	+ 24.94	0.0003	disciplinary
43	18	+ 24.43	0.0003	coalition
44	18	+ 24.43	0.0003	cyber
45	12	+ 23.71	0.0002	tit
46	44	+ 23.42	0.0008	books
47	37	+ 23.09	0.0007	co
48	19	+ 22.81	0.0004	males
49	22	+ 22.25	0.0004	academic
50	22	+ 22.25	0.0004	data
51	35	+ 22.04	0.0007	section
52	11	+ 21.73	0.0002	dylan
53	11	+ 21.73	0.0002	instagram
54	11	+ 21.73	0.0002	pow
55	14	+ 21.25	0.0003	healthcare
56	14	+ 21.25	0.0003	shelves
57	60	+ 21.22	0.0012	pornography
58	16	+ 20.92	0.0003	ying
59	1	- 143.52	0	aids
60	7	- 103.12	0.0001	hiv
61	56	- 92.37	0.0011	teens
62	2	- 66.76	0	radio
63	778	- 64.2	0.0147	sex
64	210	- 56.53	0.004	you
65	20	- 54.77	0.0004	abortion
66	16	- 51.11	0.0003	condoms
67	6	- 49.22	0.0001	youths
68	7	- 48.97	0.0001	condom
69	68	- 41.8	0.0013	your
70	35	- 40.16	0.0007	abstinence
71	480	- 37.4	0.0091	i
72	1	- 36.93	0	net
73	7	- 35.12	0.0001	exco
74	4	- 32.28	0.0001	marital
75	2	- 31.88	0	malay
76	1	- 29.84	0	infected
77	16	- 24.3	0.0003	abortions
78	1	- 23.7	0	workshop
79	61	- 23.43	0.0012	values
80	21	- 22.43	0.0004	teen
81	16	- 21.36	0.0003	message
82	85	- 21.03	0.0016	programme
83	18	- 20.97	0.0003	active