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## **Evaluation of Sex Education for Adolescents in Hong Kong**

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### **ABSTRACT**

Although Guidelines on Sex Education in Schools was released in 1997, adolescents have perceived the sex education as useless while the teachers have negative comments on their roles in the implementation of sex education. Apart from the different perceptions among the adolescents and teachers, the effectiveness of the current sex education in Hong Kong is questionable. It may be attributed to the teachers' attitudes, background; manpower; lack of training for the teachers; traditional teaching method; depthless topic coverage; and the school environment. It is critical that the government, school administrators, teachers, social workers and health professionals should be cooperating with each other to provide a comprehensive sex education for the adolescents. The government should support the schools financially and provide a clear direction to them by the policies, together with the encouragement for adoption of liberal and comprehensive approaches. The schools should focus on the implementation of sex education, include changing the traditional lecturing method; attempting to provide the sex education on the internet; strengthening the training of the teachers; involving the health professionals and covering comprehensive knowledge and practical skills with a logical sequence in sex education.

**KEYWORDS:** Sex Education, Adolescents, Effectiveness, Challenges, IMB Model

## 1 INTRODUCTION

The increasing trend of premarital sex and adolescents becoming more liberal towards sexual attitudes have demanded for the long-term quality sex education (Shek, Ma, & Sun, 2011). Sex education is a critical element for the development of adolescents, but its significance obviously has been underestimated. It is a complex subject to be integrated into the school curriculum. Not only sex education is not a compulsory subject in primary and secondary schools, but is also reflected as useless, boring and ineffective. Hence there is a difficulty in raising the awareness of the adolescents, and they cannot acquire the knowledge of the sex education. Moreover, the situation contributes to an increase of poor sexual outcomes, such as an increase in unwanted pregnancy or unlawful sexual intercourse. The key stakeholders, including the government, school administrators, teachers, social workers and health professionals, should cooperate with each other to improve sex education for the adolescents during their development.

The objectives of this study include: (i) to evaluate the effectiveness and the challenges of the current sex education for adolescents in Hong Kong, (ii) to illustrate the importance of sex education in the adolescence, (iii) to discuss the possible consequences of improper sex education for adolescents, (iv) to review the parents, teachers and adolescents' perception towards the current sex education strategies and (v) to suggest improvements in dealing with challenges of the current sex education.

This study is a literature review which includes the secondary data related to the current sex education in Hong Kong. The local reports and the statistics are gathered from government websites, such as Department of Health, Constitutional and Mainland Affairs Bureau and Education Bureau. Other local reviews mainly include the views of students, parents and teachers on sex education, as well as the effectiveness, challenges and improvements in sex education. Review on other countries supplements the views and improvements of sex education in Hong Kong.

## 2 IMPORTANCE OF SEX EDUCATION IN ADOLESCENCE

Adolescence is a developmental stage of physical growth and sexual maturation. Tang (2009) found that the two main sources of receiving information on sex among adolescents are television and the school. Similarly, Hui (2006) reported that the major sources of information about sexual knowledge are from friends and school. Therefore the school is an important source of delivering sex-related information to the students. If the sex education is inadequate in the schools, it will result in poor sexual outcomes, such as the increase in the incidence of sexually transmitted infections (STIs), sexual harassment, sexual offenses, teen pregnancy, or abortion.

Adolescents are easily engaged in earlier sexual activity because of social, academic and family problems. They may also participate in risky sexual behaviours, such as having sex with strangers or having multiple partners. Without adequate sex education, it may lead to adolescents' reliance on consumption of pornography information on the internet and this will result in problematic sexual behaviours (Shek, & Ma, 2012). Sex education, therefore, is significant from the beginning of the puberty. An effective sex education can promote healthy sexual development and reduce the negative health outcomes of sexual behaviours (Lindberg, Zimet, & Boonstra, 2016). In addition to sex knowledge and sex behaviours, the adolescents will cultivate a positive attitude towards safer sex, and are prepared for establishing an intimate relationship with their partner based on correct values and attitudes (Department of Health, 2012). If sex education is efficaciously transmitting the serious messages to the adolescents, it can influence them on the issues of the contraception, partner selection and reproductive health outcomes (Lindberg, & Zimet, 2011).

### 3 CURRENT SEX EDUCATION FOR ADOLESCENTS

#### 3.1 Guidelines on Sex education (1997)

According to the Education Department (1997), the Guidelines on Sex Education in Schools emphasize on understanding sex and the responsibilities in relationships to reach a wonderful life. The guidelines serve as an instruction for the schools to help the students to comprehensively understand the sex knowledge and sex behaviours; explore the sex attitudes, the concepts of marriage and family to better their judgments and communication skills; while establishing a correct value and educate them to be responsible. As can see from the Figure 1, it shows that major topics of the suggested curriculum framework in the Guidelines on Sex Education in Schools issued in 1997.

<b>Human Development</b> Human sexuality Reproductive system and physiology Puberty Self-image and self-concept Sexual identity and orientation Emotions	<b>Marriage and Family</b> Meaning of family Interdependence of family members and intergenerational relationships Family conflicts and resolution Changing patterns of family Coping with changes in the family Factors to consider in starting a family Marriage and lifetime commitments Parenting
<b>Health and Behaviour</b> Handling sexual drives Body privacy Sexual habits and behaviours Sexually transmitted diseases Contraception Unwanted pregnancy Body care	<b>Society and Culture</b> Societal and cultural influence of sex Gender role Sex and mass media Sex and the law Sex, morality and ethics
<b>Interpersonal Relationships</b> Basic values Personal skills Friendship Dating, love and infatuation Sexual harassment, abuse and violence	

Figure 1 Major topics of the suggested curriculum framework in the Guidelines on Sex education (1997)

#### 3.2 Sex education within the schools

According to Constitutional and Mainland Affairs Bureau (2005), the current sex education covers from pre-primary to senior secondary levels. The sex education in school adopts a cross-curricular approach which integrates the topics of sex education into different subjects in primary level and secondary level, which can be referred to Table 1. Furthermore, Educational videos are provided by the government in the lessons of these subjects (Holgate, Evans, & Yuen, 2006). Computer Literacy and Computer and Information Technology were the two subjects incorporated into sex education subsequently due to the consideration of the impact of the internet (Education Bureau, 2008). As a non-curriculum approach, Tang (1999) mentioned that the schools also use the form-teacher periods, assemblies, moral and civil

education periods for sex education, as well as to arrange the extra-curricular activities to promote sex education.

Table 1. Coverage of the sex education topics in the subjects in school

	Chinese	English	General Studies	Integrated Science	Integrated Science (revised)	Biology	Human Biology	Social Studies	Home economics	Religious studies/ethics	Liberal Studies
Human sexuality								√			
Reproductive system and physiology			√	√	√	√	√	√	√		
Puberty			√	√	√	√	√	√	√		√
Self-image and self-concept	√	√	√		√			√		√	√
Sexual identity and orientation								√			
Emotions		√	√					√			√
Handling sexual drives					√			√			√
Body privacy											
Sexual habits and behaviour			√					√			√
Sexually transmitted diseases			√		√		√	√		√	
Contraception					√	√	√		√		√
Unwanted pregnancy					√					√	√
Body care			√		√	√	√	√	√		
Basic values	√	√	√					√		√	
Personal skills	√	√	√					√		√	√
Friendship	√	√	√					√		√	√
Dating, love and infatuation		√						√		√	

	Chinese	English	General Studies	Integrated Science	Integrated Science (revised)	Biology	Human Biology	Social Studies	Home economics	Religious studies/ethics	Liberal Studies
Sexual harassment, abuse and violence			√					√			
Incest											
Meaning of family	√	√	√					√		√	
Independence of family members and intergenerational relationships	√		√					√		√	√
Family conflicts and resolution								√		√	√
Changing patterns of family								√			√
Coping with changes in the family								√		√	√
Factors to consider in starting a family								√	√	√	√
Marriage and lifetime commitments								√		√	√
Parenting				√	√	√	√	√		√	√
Social and cultural influences of sex										√	
Gender role	√		√					√			
Sex and mass media								√		√	√
Sex and the law											√
Sex, morality and ethics										√	

### 3.3 Teacher training and resource support

The former Education and Manpower Bureau (EMB) had organized seminars, workshops, and courses for the teachers who taught sex education in either primary or secondary schools (Constitutional and Mainland Affairs Bureau, 2005). In fact, the EMB had also provided the teaching materials in sex education, such as teaching kits and web-based resources (Constitutional and Mainland Affairs Bureau, 2005). These education animation resources, learning, and teaching materials are still being used nowadays. The Education Bureau (EDB) also regularly arranges the teacher professional development programmes, targeted principals and teachers, provided by the experienced agencies, experts, and teachers. The courses include theme-based seminars covering different topics and sharing sessions of teachers' experiences in promoting sex education (Education Bureau, 2008).

### 3.4 Partnership with government departments and non-government organizations

Sex education programmes for the adolescents outside the schools are mainly provided by the Student Health Services of the Department of Health, non-government organizations and youth services welfare organizations, including Mothers' choice and The Family Planning Association of Hong Kong (FPAHK) (Tam, 2012). The organizations provide the

materials free of charge, such as manuals, books, and pamphlets (Holgate, Evans, & Yuen, 2006). Several tertiary institutions also offer the learning opportunities for adolescents, such as the Positive Adolescent Training through Holistic Social Programmes (PATHS) project jointly provided by the Chinese University of Hong Kong, the Social Welfare Department and EDB (Education Bureau, 2008). In this programme, the teachers, social workers, and allied professionals educate the students with different aspects related to sex education and the design is based on positive youth development constructs. Examples are shown in Tables 2 and 3 (Shek, & Wu, 2016). Furthermore, the Red Ribbon Centre collaborated with FPAHK to provide a Life skills-based education (LSBE) in the 2014/15 school term, and one component of LSBE was to teach students about HIV/AIDS and its prevention, and how to use condoms.

Table 2. Examples of original teaching units on sex, body image, and love

Unit Number	Unit Name	Unit Aim	Learning Targets
CC 1.2	Cyber Love?	To apply rational, creative and critical thinking skills in daily life	1. To apply rational and critical thinking to the issue of "making Net friends" 2. To apply creative thinking to the issue of "making Net friends"
PN 2.3	Is It Trendy to Be Slim?	To identify the incentives for complying with social norms and the disincentives of violating those norms	To develop the ability to identify the incentives and the disincentives of following social norms in controversial situations
BO 3.1	Modern Love Stories	To understand qualities of a healthy love relationship	1. To examine one's attitude toward a love relationship 2. To identify the essential elements of love
BO 3.2	What Is Freedom of Love?	To construct the proper attitude toward love relationships	1. To differentiate the proper and improper attitudes that appear during the initial stage of love relationships 2. To generalize the do's and don'ts of dating

BO, bonding; CC, cognitive competence; PN, prosocial norms

Table 3. Examples of secondary 1 teaching units on sex and love in the special teaching units

Unit number	Unit name	Unit aim	Learning targets
SX 1.1	Golden Youth	To understand and to learn how to go through the physical and psychological changes of adolescence	1. To understand that adolescent development varies from person to person, and that we should not make comparisons or ridicule others for how they are changing 2. To understand what leads to these changes and learn to face them positively
SX 1.2	Close Relationships?	To understand that opposite-sex and same-sex friendships require different attitudes and behaviors	1. To understand that excessive intimacy with the opposite sex might lead to misunderstandings 2. To learn about appropriate physical boundaries for getting along with the opposite sex
SX 1.3	Sex and Love	To understand the meaning of sex and love	1. To understand the definition of sex and how it is related to everyday living 2. To learn to respect and consider other people's feelings before deciding sexual behavior 3. To understand the consequences and responsibilities after sexual behavior
SX 1.4	Sex and Peer Pressure	To understand how friends affect our decision-making and behavior	1. To know how peer pressure affects our decisions and behavior 2. To think about the motives and attitudes before we face sexual behavior

## 4 PERCEPTIONS TOWARDS SEX EDUCATION

### 4.1 Adolescents' perceptions

Hui (2006) summarized that students have negative perceptions towards the current sex education relating to its content and adequacy, and that the students thought that the school is an appropriate venue for implementing sex education and thus more sex education should be taught in school. Tang (1999) indicated the students described sex education being boring in the classroom. Games, PowerPoint slides, and videos are more interesting than the sexual knowledge in textbooks. Seminars of sex education are too long and lacking attraction. More practical issues should be discussed. Lo (2011) also found that the adolescents think that the sex education in school is boring and useless, keep repeating the things already mentioned and they are even not allowed to discuss their views. For improvement, the students hope the doctors, nurses, relevant associations or committees can be invited to the sex education programmes in schools (Tang, 1999).

## 4.2 Parents' views

In the older generation, sex was a taboo in the Chinese society. Parents consider sex education will adversely influence the children to adopting a liberal mind towards sex (Tang, 2009). On the contrary, parents in South America usually believe that teachers are trustworthy educators with correct information and skills on the topics of sex education, which should be provided earlier (Jerves et al., 2014). Hence, it is suggested that parents should not be closed-minded because of their misconception of sex education causing the adolescents to become sexually active.

## 4.3 Teachers' attitudes

Teachers generally have negative comments on attitudes towards the implementation of sex education and there are inconsistent attitudes among the teachers (Hui, 2006). Fok (2005) believes that different staff in a school have different views toward sex education. Some teachers would only focus on their students' academic achievement and some are unwilling to teach sex education for fear that students may be encouraged to attempt the sexual relationship. Furthermore, sex education is a taboo in the Chinese culture, and teachers are uncomfortable or embarrassed to talk about any topics related to sex (Tang, 1999).

# 5 EFFECTIVENESS OF CURRENT SEX EDUCATION

The current sex education in Hong Kong undoubtedly contributes to a certain level of sex knowledge and concepts among the students. In terms of achievement, Ip, et al. (2001) have found that the adolescents actually have positive attitudes towards the concepts of family and a significant number of adolescents use birth control. However, they further explained that the adolescent's family value may partially be associated with the Confucian and Taoist traditions, which are related to procreation and social order, instead of associating with the sex education.

Nevertheless, several studies and reports have shown that there is still room for improvement in sex education for adolescents. A study on unmarried youth aged 18 to 27 years has found that these young people are familiar with the sex knowledge but have limited knowledge about contraception or condom use (Yip et al., 2013). It could be a result of the "improper" sex education in schools during adolescence. Ip, Chau, Chang, and Lui (2001) found that the students are lack of sexual knowledge, particularly related to the pregnancy and sexual activities. This indicates that sex education in schools may not equip students with comprehensive sex knowledge. Therefore, it is questionable whether sex education in Hong Kong is comprehensively delivered to the adolescents. Enhancement should be developed to strengthen their sex knowledge and positive attitudes.

A significant number of the adolescents have sexual intercourse involuntarily. Some of them may feel helpless and guilty. This is detrimental to their physical and psychological health. It can be interpreted that the adolescents have poor negotiation skills in a relationship, caused by the ineffective sex education (Wong, Lee, & Tsang, 2004). Moreover, the topic of birth control covered in sex education may not be effective to allow for the understanding by the adolescents. The number of cases of pregnant teenage girls seeking help increased from 133 in 2007 to 207 in 2009. It is doubtful if the topic of pregnancy is adequate, and it is possible that exaggerating pregnancy as a threat or fear, instead of having a proper education on the correct values, is presented (Lo, 2011).

Furthermore, the current sex education may not prevent the unfavourable health outcomes. According to the Department of Health (2002, 2014), the cumulative number of people aged 10 to 19 years with HIV infection from 1984 to 2001 was 33, and this figure to 2013 was 75. This means that over the further twelve years from 2001 to 2013, the number of



reported HIV cases in adolescents has been steadily increased and was more than doubled. This phenomenon may be associated with the limited effectiveness of the current sex education programme. In fact, Davis, Noel, Chan, and Wing (1998) demonstrated that over 80% of the adolescents in Hong Kong did not voluntarily discuss HIV and AIDS with their teachers in schools or with family members. This situation remains the same nowadays and it is detrimental to the sexual health of adolescents.

## **6 CHALLENGES OF CURRENT SEX EDUCATION**

Regarding the Guidelines on Sex Education in Secondary Schools issued in 1986, Tong (1997) found that difficulties in teaching sex education in schools, including the lack of teaching time, lack of trained teachers, lack of professional advice, teachers' attitudes, and inadequate materials and resources. These difficulties are mainly related to the implementation of the sex education in school. There were no changes although the guidelines on sex education in Schools were issued in 1997. In 2008, the Moral and Civic Education curriculum framework was revised. After that, no significant changes have been made to sex education guidelines or other frameworks for teaching sex education. Fok (2005) has found that the major problems in implementing the sex education in schools are associated with the training of teachers, who are not willing or uncomfortable to teach sex education, and inadequate resources and teaching materials. In addition, sex education is not part of the formal education in the school curriculum. It is optional for the students as an extracurricular activity, although guidelines are set up (Tam, 2012; Lo, 2011).

### **6.1 Topics coverage in sex education lacks depth**

An effective sex education should cover a wide range of topics, with in-depth knowledge, and practical skills. Topics such as sex orientation, marriage and family life, birth control, sex law, and ethics are rarely discussed in sex education (Fok, 2005). It is also found that deviant sexual behaviours, such as prostitution, sexual harassment, anus intercourse, sexual abuse and violence, sexual identity and orientation are rarely included (Hui, 2006). Students have insufficient knowledge in marriage, sexual activity, birth control and pregnancy because the scope of current sex education is not wide or deep enough for the adolescents (Ip, Chau, Chang, & Lui, 2001). As a result, it will lead to unsafe sexual intercourse among the adolescents. According to Lo (2011), the topics related to sexual intercourse, contraception, abortion, and homosexuality are seldom discussed in sex education because the schools have adopted the abstinence-only approaches.

### **6.2 Different attitudes, background of teachers and insufficient teachers**

Perceptions and attitudes towards teaching sex education among teachers have led to their unwillingness, and feeling uncomfortable, or opposition to teaching sex education, thus affecting the implementation. The difficulties can also be related to their diverse religious beliefs and personal background (Bilinga, & Mabula, 2014). Furthermore, the shortage of teachers who are responsible for implementing the sex education is significant. Most of the schools have fewer than 5 teachers involving the administration and planning of sex education programmes (Fok, 2005).

### **6.3 Training and teaching methods**

A major factor attributing to the ineffective sex education is the inadequate training in the teachers. Teachers, in fact, do not have comprehensive training in the teaching the sex education. Only a small number have received the training of 20 hours of sex education, and some have not even received any training at all (Fok, 2005). Actually, most of the secondary school teachers mainly specialize in their own subjects. As sex education is not included as a compulsory subject in the school curriculum, it may not be essential for them to know about the sex knowledge and methodology of teaching sex education. Tang (1999) also noted that

while the teachers are lack of training, they are given a responsibility, of which they are not qualified.

Another problem is related to the teaching method. Sex education is usually provided to the students by teachers. An informational approach is usually adopted in the schools of Hong Kong, in which the educational resources and information are provided to the students by the teachers. This is a one-sided delivery of the information mainly by lectures. In fact, lectures are the main mode of teaching sex education, followed by case analysis, discussion, value clarification (Fok, 2005). It is limited to classroom teaching with the presentation slides and the group-based activities (Kwan, et al., 2014). As the teacher is the major role of providing sex education, their monotonous lectures are perceived as boring and unattractive. Students cannot express their opinion in the class or they are embarrassed to raise it due to the traditional Chinese culture. As a result, sex education is inadequate to shape the adolescents in a value-oriented attitude for their own health. It is also difficult to assist the adolescents to establish the correct values about sex, leading to poor sexual outcomes (Zaitsev, Zaitsev, and Khaptanova, 2003). Therefore, other approaches can be designed to strengthen the delivery of sex education and to supplement classroom learning instead of only the lectures and the presentation slides.

#### **6.4 School environment**

The school environment, in particularly the culture, will influence the perceptions and behaviours of the teachers and students (Hui, 2006). Although the Chinese society is not open to the discussion of sex, it is still an important issue that should be delivered to the adolescents. Moreover, the school culture in religious schools, such as the Catholic schools, may not have a suitable atmosphere for both the teachers and students. For example, Catholic schools may educate the students in preventing them from having pre-marital sex by reason of the fear of God's punishment, but this is neither the correct reason nor a good explanation. Furthermore, sexual engagement is not related to the negative results of the adolescent's life (Lo, 2011).

### **7 RECOMMENDATIONS**

The role of government, school administrators, teachers, social workers and health professionals are important in providing effective sex education, and the collaboration among them is beneficial in the development of a quality and practical sex education programme for the adolescents.

The Government has a vital role in building and coordination of a well-developed sex education with application-based curriculum for the students. The Government should consider comprehensiveness in the development of sex education policy and provide financial support for the programme. The role of school administrators is to formulate the tailor-made strategies to teach the sex education in schools according to the Guidelines on Sex Education in Schools and the relevant reference, to allocate the resources for the arrangement of the workforce, and to monitor and review regularly on the implementation of the sex education.

A taskforce of sex education in schools should be established to plan and implement sex education strategies. They are responsible for the coordination among the teachers, making sex education easier by arranging the relevant organisations to provide different sex education programmes, preparing effective teaching materials in sex education and helping the teachers with difficulties. Teachers play the most important role in providing the sex education as they are educating the students directly. Generally, they are expected to give lessons of sex education in school by different subjects or to lead the students to learn sex education outside the classrooms. Moreover, they are the ones to teach the students with

correct values and equip them with a critical mind for sex-related issues instead of relying on information approaches.

Social workers have a role to support the students by providing counselling, and helping the students with professional guidance and advice. They should communicate with the student individually or in small groups. Furthermore, health professionals have an important influence on sex education as they are familiar with reproductive health and have the ability to teach the students the practical skills in the prevention of risky sexual behaviours. The roles of each stakeholder are closely linked to each other.

## **7.1 Support of the Government**

### **7.1.1 Financial support**

The funding from the government is important to the teachers and community campaigns. The teachers are recognized with a low effectiveness of delivering of sex education to the students because of different views on sex education, negative attitudes towards teaching the sex education, and the different experience in teaching sex education. To help the teachers to develop a correct value and attitude, and to equip them with experience when teaching sex education, funding from the government is indirectly contributed to this development. On the other hand, sex education programmes within a school or outside the school should also be supported by the government.

For examples, FPAHK is one of a major voluntary organization that provides different sex education programmes, subsidised by the government. In fact, FPAHK currently provides three major types of sex education programmes for adolescents, including FPAHK Activity & Resource Centre Guided Tour Programme, School Sexuality Education Integrated Program and The Hong Kong Jockey Club Community Project Grant - Community Sexuality Education Program. These three programmes employ different approaches to provide sex education inside or outside the school, such as workshops, guided tours, talks, roving exhibitions or game booths. However, the frequency should be increased and the approaches should be improved to increase the opportunity for the adolescents to absorb the knowledge. Therefore, the financial support from the government enhances the sex education campaigns provided by the related organizations. Moreover, the support of the government is important in the long-term development of the sex education.

### **7.1.2 Mandatory sex education**

As a responsible stakeholder and policy maker in sex education for the society, the Government should develop a comprehensive sex education policy for the adolescents. According to Red Ribbon Centre of the Department of Health (2014), a significant barrier in providing HIV/AIDS or sex education is a lack of documented policy, indicated by school principals. In other words, the Government has not set a clear direction for the schools to follow in providing an effective sex education, although the frameworks and guidelines are already provided to schools for teaching the sex education. In view of this, and as sex education is currently not a compulsory subject in the school curriculum, a policy for mandatory implementation of the sex education in primary and secondary schools should be established, with a stipulated and fixed numbers of lessons to conduct formal sex education for the students (Lo, 2009). Then, it can nurture adolescents with positive values and attitudes, and being able to develop a critical mind in dealing with the issues related to sex.

### **7.1.3 Encouragement of liberal and comprehensive approach**

Sex education is not, and should not be, restricted to issues related to reproductive physiology, marriage and family. The understanding of oneself, the relationship with others and the inculcation of human values are important to the new generation. The Guidelines of

Sex Education in Schools should be updated to reflect the needs of the society, and to encourage the schools to adopt a liberal and comprehensive approach, especially for the religious schools, which tend to be conservative, and take on an abstinence approach, avoiding the sensitive topics. Such an approach will delay the students' sexual activities, because the students are not taught the information they need to know, and it is detrimental when they have to deal with sexual problems practically. Moreover, it would be difficult to provide a healthy environment for the students to learn about the sex education. Therefore, a liberal and comprehensive approach should be "forced" in the implementation of sex education in all schools.

## 7.2 Information, Motivation and Behavioural Skills model

The Information, Motivation and Behavioural Skills (IMB) model is a model adopted by the Government of Canadian for the Canadian Guidelines for Sexual Health (Public Health Agency of Canada, 2003; World Health Organization, 2003). Public Health Agency of Canada (2003) states that, "The IMB model is well supported by research demonstrating its efficacy as the foundation for behaviourally effective sexual health promotion interventions". Their research supports that the IMB model is able to reduce the sexual risks of the diverse populations, such as young adult, low-income women and minority youth in a high school setting. Using this model in different behavioural intervention does not only reduce risky behaviours but also prevents negative outcomes by enhancing the students' sexual health. Therefore, it can be applied in the implementation of sex education.

According to Figure 2, the three critical elements in IMB model are information, motivation and behavioural skills. Information is an initial prerequisite for performing health behaviours. It includes information of health behaviours, myths and heuristics that facilitates the decision to perform the health behaviours (Chang, Choi, Kim, Song, 2014). A person well informed of sexual health information, but without motivation, will not act correctly. The person will need one of the three forms of motivation, including emotional motivation, personal motivation and social motivation. Emotional motivation is a personal and emotional response to sex and particular sexual health-related behaviours. Personal motivation is a person's attitudes and beliefs about sex, particularly sexual health-related behaviours. Social motivation is a personal belief to sex and sexual health-related behaviours regarding perceived social support or social norm (Public Health Agency of Canada, 2003).

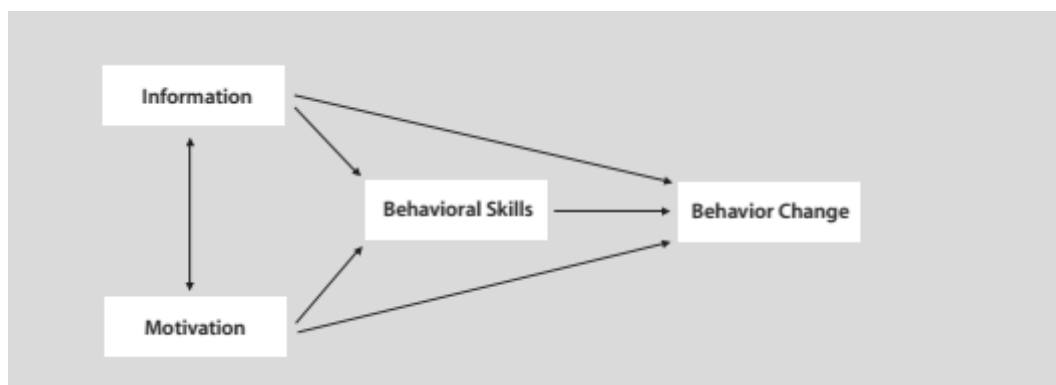


Figure 2 Information, Motivation, and Behavioural skills (IMB) model

Behavioural change consists of two elements, such as the practical skills for performing the behaviours and the self-efficacy to perform (Public Health Agency of Canada, 2003). The three elements information, motivation and behavioural skills have an explicit relationship. Information and motivation affect each other and then have the impact on behavioural skills independently. Ultimately, the behavioural skills will contribute to the behaviour change. On the other hand, information and motivation can also directly influence the behaviour change.

### **7.2.1 Information**

To provide quality sex education and to contribute to a positive sexual health, the information provided to the students should be evidence-based, relevant, easy to understand, practical, adaptable, culturally competent and socially inclusive (Public Health Agency of Canada, 2003). It can be enhanced by covering comprehensive sex-related topics with a logical sequence, so as to provide the students with the common issues they may face. Teachers, social workers and other health professionals can share the information with the students, and let them discuss the correct sexual health behaviours, so that students can think deeply about the different sexual issues, helping to reduce their sexual risks.

### **7.2.2 Motivation**

To influence the emotional and personal motivation, change to teaching method, training of the teachers and health professionals, and web-based sex education are essential. Social motivation depends on an environment which is supportive and liberal to allow for discussion of different sexual issues, such as sexual orientations and STIs. Politicians, community leaders and health professionals are also important to construct a supportive environment for motivating the students to acquire the relevant behavioural skills. For example, several prominent politicians and community leaders support the LGBT rights in Hong Kong. They stand for the legislation of Sexual Orientation Discrimination Ordinance and participate in the Hong Kong Pride Parade.

However, members of pro-establishment camp are generally conservative to this social issue or even opposing the legislation of same-sex marriage. Consequently, the social norm becomes more conservative and it will be detrimental to the discussion and learning of the different sexual topics in the community. On another front, a track and field athlete has posted her case of sexual harassment on social media under the “#MeToo” movement”, which is regarded a social motivation for the public reflection on the issue. Through the different methods to motivate the adolescents, healthy sexual behaviours and values can be achieved.

### **7.2.3 Behavioural Skills**

Behavioural skills can be improved by the change in teaching method for sex education, such as learning outside the classroom, coverage of comprehensive topics related to practical skills for sexual health, including preventions of STIs, HIV and unintended pregnancy, and invitation of health professionals to conduct the sex education in schools. After learning the practical skills of performing the correct sexual health behaviours, the students will have the ability to do it successfully.

## **7.3 Implementation of sex education**

### **7.3.1 Teaching method**

Lo (2009) suggests the adoption of an active and interactive approach to sex education, such as discussion, role playing, game playing, debating or presentation in the class. The Government and school administrators should consider the improvements in teaching method, more importantly, with innovation. The Committee on Psychosocial Aspects of Child and Family Health and Committee on Adolescence (2001) have suggested that sex education should provide the practical skills rather than the knowledge, and that role playing and interactive discussion are good in delivering sex education. Meanwhile, a learner-centred approach is more effective in implementing sex education as the student-adolescents are able to develop their own principles and views of the sexual matters and to generate responsible decisions (Holgate, Evans, and Yuen, 2006). UNESCO (2018) also recommends that the participatory and learner-centred teaching method should be adopted for sex education to actively involve the adolescents for learning the knowledge, attitudes and skills. For examples, group reflection, anonymous question boxes or using the information and

communications technology effectively will strengthen the interaction between the educators and the learners. By doing so, students can be motivated in learning sex education, and they can also improve their communication and negotiation skills in a relationship.

### **7.3.2 Comprehensive coverage of the topics**

Comprehensive sexuality education should be delivered to the students (Lo, 2009). It should be designed either by the Governments or created by the schools themselves. The content should not only cover topics that are not discussed frequently or adequately but different skills for the life path, including sexual value clarification, sexual skills, sexual negotiation skills, behavioural skills and self-protective skills. It is far more practical for the adolescents to deal with real-life problems in their stage of personal development. An emphasis on safe sex practices will assist the adolescents to evaluate sexual risks and this may contribute to the motivation of changing their sexual behaviours (Ho, 2004). To achieve this goal, topics should cover STIs, such as HIV, Genital herpes, Gonorrhoea, etc., and should be delivered in a logical sequence, focusing on exploring values, attitudes and norms about sex first. Knowledge, attitudes and skills for developing healthy lifestyles and the prevention of risky behaviours should be taught afterwards to strengthen the effectiveness of sex education (UNESCO, 2018).

### **7.3.3 Training of the teachers**

Teachers are the most important key stakeholders in the education of the young generation, promoting the importance of sex knowledge and skills to students. The Government should assist the teachers to adopt a consistent and correct attitude through seminars, workshops, and discussions that provide an opportunity of training for the teachers. It is also essential for teachers to understand how to communicate with adolescents by counselling or group discussions (Ho, 2004). With continuing training programmes, more and more teachers are well-equipped to teach sex education and can be responsible for planning the sex education strategies within the schools. However, such training may not help to alter the school environment, particularly in the religious schools because of the deep-rooted concepts.

### **7.3.4 Health professionals in sex education**

School administrators can invite different health professionals to the sex education programmes. Capable and motivated educators should be selected for implementation of sex education in schools or non-formal settings (UNESCO, 2018). Adolescents believe that capable educators should be knowledgeable, professional, trustworthy and respectful, therefore, health professionals are suitable for teaching the sex education. Health professionals play a role different from teachers. They are in a position to equip the students with reproductive health knowledge and practical skills for preventing the risky sexual behaviour and to empower them to determine their own healthy sexual behaviour. Physiology of sexual intercourse and information of contraceptive choices can be taught to the adolescents before they are initiating sex while the consequences should be emphasized to the adolescents, who are already engaging in sexual intercourse.

General practitioners and family doctors can provide counselling, consultation, diagnosis and treatment for the adolescents in need (Kluge, 2006). They can also be managing the emotional and puberty change issues, and let the adolescents perceive and understand the high-risk sexual behaviours (Wong, Lee, Tsang, & Lynn, 2006). Besides, it has been found that academic medical centres providing sex education in the curriculum can increase the knowledge among adolescents, who will consider delaying their sexual activity (Sulak, Herbelin, Fix, and Kuehl, 2006).

School nurses are also comfortable to discuss the topics of sex education, and able to facilitate the reflection of the students, as teachers. It has been found that there are significant and sustained changes in the attitudes, beliefs and efficacy among the students who are taught by the school nurses (Borawski et al., 2015). Overall, health professionals are generally familiar with the health knowledge, which can facilitate the teaching of specific reproductive health topics and help the skill building, thereby influencing the sexual health behaviours among the students.

### **7.3.5 Enhancing web-based sex education programmes**

Inadequate sex knowledge is commonly caused by inadequate access to the sex-related information (Ip, Chau, Change, and Lui (2001). Internet and mobile applications become more important in the adolescent's daily life. The Government should design effective web-based sex education programmes with online information for sex education. This may contribute to healthy sexual development if it is delivered correctly and efficiently. The Education Bureau (2008) have paid attention to the effects of internet information on adolescents and have incorporated more subjects in schools for sex education, such as Computer Literacy, Computer and Information Technology. Actually, more sex education programmes can be delivered in a virtual learning method. For example, a game called Making Smart Choices, which is developed by FPAHK and the University of Hong Kong, provides different scenarios for the adolescents. The game is embedded with important messages of sex education. The game is interactive, informative and applicable, and thus this type of web game is useful in sex education for the adolescents (Kwan, et al., 2014).

However, web-based sex education programme alone cannot contribute to adolescents' positive attitudes and values towards sex. A blended mode with both face-to-face sessions and web-based platform should be adopted (Tang, 2009). Important messages of sex education can be uploaded on the internet first, and the information can be reinforced by the teachers later on in the classroom. Moreover, the web-based sex education can potentially serve as a tool for certain topics which the teachers are not comfortable to teach. Simon and Daneback (2013) found the students are interested in the online sex education for HIV/STIs, pregnancy/childbirth, sex acts/behaviour or contraception and protection.

## **8 CONCLUSION**

It is criticized that the current sex education cannot be effectively delivered to the students although guidelines provide a framework to the school. In fact, the government has integrated sex education into different subjects in primary and secondary schools, provided training and resource support to the schools to provide the sex education programmes to the adolescents. However, adolescents perceive sex education a boring and useless lesson in school, but their sex knowledge is limited, particularly about the sexual intercourse and its protection as reported by government researches and statistics. Meanwhile the teachers are unwilling and uncomfortable to teach sex education. These factors have reflected the poorly constructed delivery of sex education. Although the guidelines on sex education in schools were issued in 1997, no significant changes have been made to achieve better delivery.

Sex education delivery is now facing the challenges of insufficient human resources, lacking depth of topics, inadequate training and unattractive teaching methods, and traditional school environment. It is really important for the Government, school administrators, teachers, social workers and health professionals to discuss the further improvements on the implementation of sex education. To solve the difficulties in delivering the sex education, designers of the sex education within the Government should consider mandatory sex education while encouraging the schools to adopt a liberal and comprehensive approach, and by providing the financial resources to the schools. The schools should take account of the methodology, alternative channels, enhancing the teachers' attitudes and performance on

providing sex education, and cover the comprehensive knowledge and skills with a logical sequence. As a result, effective sex education strategies can potentially reduce the poor health outcomes and facilitate healthy sexual development which is beneficial to the growth and development of adolescents.



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