INFORMATION LITERACY SKILLS: HONG KONG PRIMARY TEACHERS' PERCEPTIONS OF THE ROLE OF THE TEACHER LIBRARIAN

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Thesis submitted to the University of Nottingham for the degree of Doctor of Education (Lifelong Education)

APRIL 2018

ABSTRACT

The thesis reviewed the changes to the role of teacher librarians and the implications of this for primary teachers. The study sought to explore the teachers' views about information literacy skills, who should teach them and the role of the teacher librarian.

This study took a mix-methods approach, i.e. quantitative and qualitative research, in which self-report data were collected through a questionnaire to classroom teachers followed by individual face to face interview with six questionnaire respondents.

The findings of the study were that teachers associate information literacy skills with information technology skills. Though they said they understand information literacy skills, their understanding of information literacy skills was discrete and not systematic compared with the definition of information literacy skills in the literature. They agreed that information literacy skills were important and they have the responsibility to teach student such skills. They agreed that they have further professional development needs in terms of information literacy skills. Teachers who started teaching before 1998 reported some changes in teaching and learning made by the presence of the teacher librarian. They agreed with the provision of the teacher librarian post though they were not aware of the legislated role of the teacher librarian. They thought that awareness of the role of the teacher librarian and information literacy skills and the ability to develop students' information literacy skills would help them utilize the skills of the teacher librarian.

The findings have highlighted the implications for teacher education to train teacher information literacy skills, raise teachers' awareness of the role of the teacher librarian especially in Cooperative Planning and Teaching with teachers to equip student information literacy skills. For serving teachers, piloting the role of the teacher librarian, Cooperative Planning and Teaching and flexible library timetable are necessary to facilitate implementation of the legislated role of the teacher librarian.

ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to all the people who have encouraged, helped and supported me during the course of my study.

First of all, I would like to thank my supervisors, Dr. Anne Convery, Dr. Gary Mills and Dr Jane Medwell for their guidance, comments and advice. They are always patient in listening to me and reading my drafts to understand my needs and took me a step forward from where I was. They have also helped me in experiencing and understanding how a research is to be conducted.

I would especially thank all the school principals who delivered the questionnaires to the teacher participants for responding to my questionnaire survey. Great thanks to Fanny Chan Fung Yee and Jacqueline Shek Kam Lin who helped in piloting the research and communicating interviewees. Heartfelt thanks to all the questionnaire and interview participants for their time and effort providing invaluable data to my research.

I am most grateful to my family for their tolerance of my absence in various gatherings during the years of my study. At the same time they helped me with preparing the postal paid envelopes and the questionnaires to be sent to schools.

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LIST OF ABBREVIATIONS

Abbreviations	expression
AM	Assistant Master/Mistress
APSM	Assistant Primary School Master/Mistress
CM	Certificate Master/Mistress
ED	Education Department
EDB	Education Bureau (formerly known as Education Department)
HKSAR	Hong Kong Special Administration Region
KLA	Subjects under the 8 Key Learning Areas: Chinese Language Education, English Language Education, Mathematics Education, Science Education, Technology Education, Personal, Social and Humanities Education, Arts Education and Physical Education (Education Bureau of HKSAR, 2015).
SAM	Senior Assistant Master/Mistress
SLASA	School Library Association of South Australia

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Introduction to the research area

This first section is about information need and programs run by the teacher librarians in school libraries in the information age. Advances in computers and information technology mean that the world is now experiencing the 'Age of Information' (Heilprin, 1989). According to Todd 1996, the amount of information available is growing rapidly at an exponential rate. Production, processing and use of information have become one of the most important human activities. It could be argued that the world economy is changing from one based on manufacturing to one based on information (Ontario Ministry of Education and Training, 1995) and the major unit of exchange has shifted from goods to information or knowledge. Since 1995 when this claim was made, the situation clearly has not yet come to an end. We are still going through changes in economic structures and people still need the necessary skills to operate in the modern day economy.

> "*Knowledge is information from every available source, analysed and targeted to needs. The skills for doing this are what we mean by information literacy*" (Latham, 1998, p.1).

Extracts from Doyle's (1993) and McKenzie's (1998) work defined information literacy as the six skills of formulating need based questions; identifying and locating all possible sources of information effectively; evaluating and organizing information for application; combining new information with the existing knowledge to create new knowledge; making informed decisions; and using information in problem solving.

This traditional definition of information literacy is challenged by innovative collaborative technologies such as social media environments and online communities. Information literacy is redefined as metaliteracy which integrates emerging technologies and unifies multiple literacy types where producing and sharing information in participatory digital environment are emphasized (Mackey, 2011). Information literacy is at the core of lifelong learning (American Association of School Librarians, 1998). Todd (1996) pointed out that the terms lifelong learning, independent learning, autonomous learning, individual learning and self-directed learning overlap each other. Information literacy skills and their relations with lifelong learning skills will be discussed further in the literature review chapter. To ensure the employability of workers, the government must provide citizens with the necessary education and training to ensure that they know about and are able to use information literacy skills (Latham, 1998). Nowadays, young internet users often appear to be uncritical when seeking information online (Shenton and Dixon, 2003). They tend to trust the top results yielded by search engines without asking why the results received high rankings (Julien and Barker, 2009). These unskilled and unsuccessful internet users are reluctant to give up time and undertake training to become efficient and effective users forcing the library to collaborate with academic staff to ensure the training to be included in the curriculum (Chapman, 2002). Librarians can teach student information literacy by creating genuine research topics, putting Googling into a research context, teaching online searching and discouraging plagiarism by personalizing assignments that track the information collecting process (Laverty,

2007). There is the positive effect of teacher-librarian collaboration on students' motivation of learning information literacy (Small, Zakaria and El-Figuigui, 2004).In the information age, the mission of the programs run by the teacher librarians in school libraries is to ensure that students and staff are effective users of ideas and information. These programs should be centered on information literacy that are designed around active and relevant learning where the skills learnt can be used in daily life (American Association of School Librarians, 1998). Although there have been changes in society, education and technology since 1998, the information age still exists nowadays and training users to be information literate continues to be one of the goals of school library programmes. The empirical research reported in this thesis is situated in Hong Kong because it is my location and area of interest. The government there has, since 1998, provided each primary school with a school library and a teacher librarian to manage the library. This is an unusual development which requires scrutiny and investigation of the role of the teacher librarian. School library programmes in the information age will also be discussed further in the literature review chapter, but firstly the background to the role of the teacher librarian will be discussed.

Provision of the teacher librarians and their roles in Hong Kong

In Hong Kong schools, Chinese and English Extensive Reading Schemes had been

implemented by phases by the Education Department. Since 1997 when the sovereignty was returned to China, in order to enhance the biliterate and trilingual abilities of students, these two schemes had been extended gradually to cover Primary 1 to Secondary 5 (Education Bureau, 2012).School libraries and teacher librarians have been provided by the government for primary schools since 1998. Such provision was to "enhance the library services and to coordinate the implementation of the Chinese and English Extensive Reading Schemes in primary schools" (Education Department, 1998, n.p.). One of the ten duties in the duty list in the Appointment of Teacher-Librarians in Primary Schools (Education Department, 1998) was to support the implementation of the Chinese and English Extensive Reading Schemes. The rest of the duties, among others, were managing the library and coordinating the efforts of teaching staff in planning and organizing library programmes to support and enrich the school curriculum. It did not mention meeting the information needs of students in this new and ever-changing information age by equipping them with information literacy skills. It was not until 2001, the duty of the teacher librarian to "enhance students' self-learning ability and attitude in project learning" (Education Department, 2001, p.2) was legislated. 'Project learning' (Curriculum Development Council, HKSAR, 2001b) was one of the four key tasks in the education reform in Hong Kong since 2001. In 2002, Curriculum Development Council, Education Department of HKSAR(2001a)stressed the need to develop student independent learning skills in the education reform document when they set out seven learning goals that Hong Kong students should be able to achieve in ten years' time. Independent learning skills were

the fifth goal. In 2010, independent learning was reiterated together with lifelong learning by the Education Bureau (formerly known as Education Department), HKSAR, in the Consultation Document on the Information Technology for Quality Education (Education Bureau, 2010).

What the newly established teacher librarian in Hong Kong primary schools should and can do is new to all. In May 2000, A Pilot Scheme on Collaboration and Learning: Role of the Teacher Librarian, was jointly organized by the Education Department and District Teacher Network, Hong Kong Primary Education Research Association (Education Department, 2000; District Teacher Network, 2000). A team involving the principal or the vice-principal, one to two subject teachers and the teacher librarian from each school, was invited to participate in the pilot project in order to gain an understanding of the value of Cooperative Planning and Teaching (CPT) between subject teachers and the teacher librarian. A video recording of this pilot project and the practices that were developed was produced, but follow-up sessions and new resources have not happened and have not been produced. Since the initial establishment of the role of the teacher librarian, there has been no work to find out whether teachers understand the role.

The goal of this thesis is to investigate Hong Kong primary teachers' perceptions of the role of the teacher librarian in terms of the goals of such libraries in this information age. In order to understand primary teachers' perceptions of the role of the

teacher librarian in Hong Kong schools, it is necessary to outline briefly the education system within which teachers' perceptions develop. Examining this background would allow us to explore further teachers' perceptions of information literacy and their responsibility for equipping students with information literacy skills in cooperation with the teacher librarian.

The context of the Hong Kong education system

In the Hong Kong education system, to be eligible for participation in primary schools, the child must reach the age of five years eight months when s/he is enrolled in primary one (Education Bureau, 2015c).The government provides nine years' free and universal primary and junior secondary education to all children attending public sector schools. In the 2014/15 school year, there are 571 primary schools, 509 secondary day schools and 61 special schools (Education Bureau, 2015a). The development of the role of the teacher librarian will now be explained in the following sections.

The legislated teacher librarian role in 1998

When the teacher librarian was first provided to every primary school in 1998, Letter LIB48C/122/82 Appointment of Teacher-Librarians in Primary Schools was sent to

school supervisors informing schools of

> *"the appointment of an additional Certificate Master/Mistress to undertake the duties of a teacher librarian. In order to enhance the library services and to coordinate the implementation of the Chinese and English Extensive Reading Schemes in primary schools, each whole day government and aided primary school and each bi-sessional government and aided primary school with 12 classes or more will be provided by phases with one additional Certificate Master/Mistress……The service of a teacher librarian will be counted as teaching experience for promotion purpose…… the candidate should have a minimum of two years' teaching experience and is required to complete a one-year part-time day-release training course…… Heads of schools are expected to release their newly-recruited teacher-librarians for this training course. A teacher-librarian is required to perform the following duties:-*
>
> *(a)managing the central library;*
>
> *(b)coordinating the management of class libraries;*
>
> *(c)selecting, acquiring, processing, maintaining and circulating library books and other resource materials for the central library and the class libraries;*
>
> *(d)supporting the implementation of the Chinese and English Extensive Reading Schemes;*
>
> *(e)coordinating the efforts of teaching staff in planning and organizing library programmes to support and enrich the school curriculum;*
>
> *(f)planning and developing reading programmes in consultation with subject teachers;*
>
> *(g)coordinating the conducting of library periods to equip pupils with basic library skills;*
>
> *(h)serving on committees related to the acquisition and use of the library resources;*
>
> *(i)advising the School Head and other teachers on matters concerning the central library and the class libraries; and*
>
> *(j)any other appropriate duties as required by the Head of School"*(Education Department, 1998, n.p.).

This last item blurred the full/part-time status of the teacher librarian as the principal might require him/her to do unlimited jobs. Principals and teachers do not see any instructional contribution from the teacher librarians (Henri J., Hay L. and Oberg D., 2002) if they are not assigned teaching duties.

The legislated teacher librarian role in 2001

Three years later in 2001, the EDB Circular No. 30/2001 Provision of Teacher-Librarians in Aided Primary Schools (Education Department, 2001) was circulated among Supervisors/Heads of aided primary ordinary schools, aided primary special and government primary schools and primary schools under the Direct Subsidy Scheme, announcing that full implementation of providing an additional Certificate Master/Mistress (CM) teaching post in aided primary ordinary schools for undertaking the duties of a teacher-librarian was effective from 1 September 2001. The provision aimed to support school library services and to co-ordinate reading schemes. "The Chinese and English Extensive Reading Schemes" in the aim stipulated in the letter of 1998 had been updated as "all sorts of reading schemes". An aided primary ordinary school meeting one of the following conditions was entitled to such provision -

> *"• each whole-day primary school with three or more ordinary classes*
> *• each bi-sessional primary school with 12 or more ordinary classes*
> *• two bi-sessional primary schools housed in the same premises with a total of 12 or more ordinary classes (i.e. the number of a.m. ordinary classes plus the number of p.m. ordinary classes)*" (Education Department, 2001, p.1).

Schools were requested to note that this post was a regular post in addition to the normal teaching establishment of a school. To be appointed as a teacher-librarian, a teacher should have at least two years' teaching experience and preferably the relevant professional qualification in librarianship (Education Department, 2001). Here the pre-service professional qualification in librarianship was highlighted. Upon

recruitment, s/he was required, where appropriate, to complete a part-time day-release training course or other professional training course organised by the Education Department (Education Department, 2001). Here, the length of a one year's training course stated in the letter in 1998 was not mentioned and the Education Department as the organizer of the professional training course was added. The School Management Committee upon the provision of an additional teacher to undertake the duties of a teacher-librarian, might deploy a teacher at the AM/PSM rank (Education Department, 2001), which was higher than the CM rank stated in the letter in 1998, to fill the teacher-librarian post. In the role statement, the central library and class libraries had been combined to school library. Supporting and developing resource-based learning and teaching activities of the school curriculum in collaboration with teachers; coordinating library related activities to stimulate students' interest in reading and enhance students' self-learning ability and attitude in project learning; developing and managing reading and learning materials and supporting the school on the development of curriculum, teaching and learning resources were added (Education Department, 2001). Students' self-learning ability was first stressed here, but it was confined to equipping students with such skills in project learning. 'Project learning' (Curriculum Development Council, 2001b) was one of the four key tasks recommended to help students develop independent learning capabilities through Key Learning Areas and across Key Learning Areas in the education reform since 2001.

The evolving nature of the teacher librarian's work

The legislated teacher librarian role in 2002

In 2002, the role of the teacher librarian was further elaborated in the curriculum reform document under two areas. Firstly, in reading to learn (Education Bureau, 2002), teacher librarians had to assist students to use the library in ways that are conducive to learning to learn. They had to work collaboratively with teachers in planning, teaching and promoting the use of a wide range of information sources in students' learning and teachers' teaching. They also had to ensure the availability and accessibility of quality library resources and teaching aids, for example, providing library resources according to the latest curriculum development in Key Learning Areas. They needed to improve the library service in schools, such as by extending the opening hours, where appropriate, to serve reading and learning purposes, keeping abreast of the latest developments in curriculum and technology and facilitating the development of information literacy within the school. Developing information literacy was first suggested here. Secondly, in Quality Learning and Teaching Resources and School Library Development - Bringing about Effective Learning(Education Bureau, 2002), the teacher librarian had four key roles in addition to managing the school library. The first role was a reading resource and programme coordinator who coordinated and managed reading materials and curriculum-related resources to support the development of reading and of learning through reading. The second role was an information and media specialist who developed students'

information skills and attitudes in using information from all formats and contexts appropriately and ethically. The difference between the information skills here and the information literacy skills which is the key area in this research will be further discussed in the literature review chapter. The third role was a teaching partner who supported the studies in Key Learning Areas, teaching and assessment. The fourth role was a curriculum facilitator who worked with teachers to identify student needs, required curriculum content, appropriate information resources to develop school-based curriculum strategies such as project learning and "life-wide" learning activities.

The most recent legislated teacher librarian role

An examination of the School Administration Guide for the 2014/15 school year (Education Bureau, 2015b), showed that the following teacher librarian's roles had been deleted as compared with the role description in 2001: developing and managing reading and learning materials; supporting school on the development of curriculum, teaching and learning resources; accomplishing any other appropriate duties as required by the head of school. The original role description in 2001

> *"coordinating library periods and other related activities to stimulate students' interest in reading and enhance students' self-learning ability and attitude in project learning"*(Education Department, 2001, p.2)

was revised to

> *"-coordinating library periods (not subject teaching) and other related*

> *activities to develop students' interest in reading as well as their information skills and attitudes in using information derived from all formats and contexts appropriately and ethically;*
> *- enhancing students' self-learning ability and **positive** attitudes in **life-long learning (e.g. in project learning)**"* (Education Bureau (formerly known as Education Department), 2015, p.35).

with changes shown in bold letters. "Not subject teaching" was highlighted in brackets. "their information skills and attitudes in using information derived from all formats and contexts appropriately and ethically" and "life-long learning" were added.

It demonstrated that the government is continuously revising the role of the teacher librarian according to particular needs. Personally, as a teacher librarian and part-time tutor of the Diploma in Teacher Librarianship to train newly appointed teacher librarians at the same time, I am not aware of these recent changes, which makes me wonder how many teachers are aware of these changes.

Interpretation of the legislated teacher librarian role

Although the role of the teacher librarian is legislated in Hong Kong, the interpretation of this varies in different schools across the world. Their duties, in different countries, range from the circulation of library materials to the set of information services that integrate school library resources into effective classroom learning activities (McDougald and Bowie, 1997). One of the key ways of determining what the role of the teacher librarian looks like in Hong Kong is to consider the teaching workload issues that face teacher librarians in Hong Kong. From the school year 2003/04 to 2007/08, the Library Section, Education Bureau, Hong Kong government (2009) had

collected data about the overall teaching workload, including the teaching of library lessons, of teacher librarians. Questionnaires were completed by the teacher librarian of each school at the beginning of each school year and sent back to the Library Section of the Education Department. The job ranking and highest academic qualification of teacher librarians had also been collected. Most (19 – 26%) of the teacher librarians had to teach 11-20 lessons per week in addition to managing the school library in primary schools. The number of teaching lessons per week ranged from zero to 31, showing a great variety of deployment models (Library Section, The Education Department, HKSAR, China, 2009).

In June to July 2007, the Hong Kong Professional Teachers' Union carried out a survey on the comprehensive working situations of teacher librarians in Hong Kong. 386 questionnaires were collected, which amounted to one third of the total numbers of primary and secondary schools in Hong Kong (Hong Kong Professional Teachers' Union, 2007). The library related work and the subject teaching work out of the total work load were examined to find out whether the teacher librarian can fully concentrate on library related work in different kinds of schools. Employment models and types of staff responsible for the library work other than the teacher librarian were also examined among others. The percentage of library related work out of total work ranged from a quarter to more than three quarters. Similarly, the percentage of subject teaching out of total work ranged from a quarter to more than three quarters. It shows a wide variety of deployment models. I will refer to the findings of the above surveys

later in the discussion chapter in the light of my own findings from my own research.

Personal reflections

I believe it is possible that the letter and circular listing the legislated role of the teacher librarian may never have been read by the teachers. It is possible that the school supervisors, administrators, principals and middle management teachers and those who were interested in the post had read them when they recruited teachers to fulfill or apply for such a post. Teachers may recognize the role of the teacher librarian by reading the performances and work accomplished by their colleagues who were serving teacher librarians. Serving teacher librarians may be interested in the promotion details in these official lines when they intend to apply for promotion. These official documents may also be referred to when teacher librarians find that their existing working conditions and part-time status are not in line with these official guidelines.

In-service training and professional development of teacher librarians

Year after year, the government continues to fund in-service teacher librarianship training for newly appointed teacher librarians (Curriculum Development Institute,

HKSAR, 2015) who, based on the surveys above, then work as ordinary subject teachers when they go back to school after such training. The huge gap between the latest global professional development trends in teacher librarianship introduced in the training courses of teacher librarians and the actual practices in participants' schools have been a source of frustration for me ever since I have been involved in all the above including being an ordinary subject teacher, a newly appointed teacher librarian in 1998 and in another school in 2008, a participant in the pilot scheme in 2000 and a part-time tutor of the Diploma in Teacher Librarianship in the University of Hong Kong, School of Professional and Continuing Education, which is totally funded by the government (Curriculum Development Institute, HKSAR, 2015). Each year, newly appointed teacher librarians are sent by school principals to the course to undertake job-related training. According to the Curriculum Development Institute, HKSAR (2015) on successful completion of the two-year training, the Diploma in Teacher Librarianship is awarded.

Summary

This chapter began with the discussion of the definition of information literacy skills, the need to develop student information literacy skills and the programmes run by the teacher librarian in collaboration with classroom teachers in schools to develop student information literacy skills. It went on to discuss the background of the government provision of the teacher librarian and the roles of the teacher librarian in

Hong Kong primary schools since 1998. The legislated teacher librarian role documents were carefully studied. It was found that such provision aimed to enhance the implementation of the Chinese and English Extensive Reading Schemes aiming at the biliterate and trilingual abilities of students since the sovereignty was returned to China in 1997. Information literacy skills were not mentioned when such a post was first established in 1998, until later in 2001, 2002 and 2010 onwards along with the gradually developing need for information literacy skills. At the same time, teachers were not informed about the role of their new teacher librarian colleague except that a Pilot Scheme on Collaboration and Learning Role of the Teacher Librarian was organized in 2000. No follow up measures were administered afterwards. In order to learn more about the teacher librarian role and how much teachers knew about the teacher librarian role, the data collected by the government from 2003 to 2008 about the teaching workload of the teacher librarian and the survey on the working situations of teacher librarians in Hong Kong conducted by the Hong Kong Professional Teachers' Union in 2007 were examined. As programs run by the teacher librarian in collaboration with classroom teachers were crucial to develop student information literacy skills, it was worth examining teachers' perceptions of the teacher librarian role. Being a part-time tutor of the professional training course for newly appointed teacher librarians and a teacher librarian at the same time brought me greater clarity and understandings of the problem. I need to know what teachers think or how they perceive this role and this need has driven me to carry out this piece of research. It is worth exploring what other people have written about information literacy and the role

of the teacher librarian at a broader and more specific context in the literature review in chapter two.

The scope of this research

The title of this research is “Information literacy skills: Hong Kong primary teachers’ perceptions of the role of the teacher librarian”. There are two main areas to be researched. Firstly information literacy will include:

1. A literature review of the definition of information literacy skills.
2. An exploration of Hong Kong primary teachers’ perceptions of information literacy skills.
3. An exploration of Hong Kong primary teachers’ perceptions of the importance of information literacy skills.
4. An exploration of Hong Kong primary teachers’ perceptions of their responsibility and ability to teach information literacy skills.

The second area is the role of the teacher librarian under which are:

1. The latest global role of the teacher librarian.
2. The legislated role of the teacher librarian by Hong Kong government and its development.
3. The implementation of the legislated role of the teacher librarian in Hong Kong primary schools.

4. Hong Kong primary teachers' perceptions of the role of the teacher librarian in relation to information literacy skills.

Having discussed the research problem and its context, I now move on to discuss the literature review in relation to this research.

Introduction

This chapter reviews a body of literature that relates to the overarching themes of this thesis. There are three main areas covered by this review, and these are: the changing nature of information literacy skills; the role of the teacher librarian, including an international comparison with Australia; and the choice of the constructivist approach as an appropriate theoretical framework for this study.

Firstly, the section on the changing nature of information literacy skills examines literature that relates to globalization and the growth of the knowledge society in order to position information literacy in its wider context. Here, the emergence of the information age, its impact on human survival skills and the need to develop information literacy skills are discussed. This is followed by a discussion of the definition of information literacy and its relationship with information technology and information skills. The relationship between information literacy and lifelong learning, independent learning, autonomous learning, individual learning and self-directed learning is also discussed. These skills are highlighted in the Hong Kong education reform recently. As time goes by, there is the need to examine the increasing complex nature of information literacy, the technological nature of information literacy, the use of information literacy skills by young people aged five to twenty and the challenge of

finding credible information especially for children and adolescent. Secondly, the teacher librarian role in relationship to information literacy and previous research in the field, together with an international comparison between Hong Kong and Australia is presented. Recent research on the role of teacher librarian in Hong Kong has also been provided. The chapter continues with a review of the interrelated ideas leading to the better use of school libraries in the information age, E-library and the importance of teaching student information literacy skills, the importance of teachers' beliefs, teachers' relationship with other colleagues, Cooperative Planning and Teaching (CPT), institutional responsibility and the approaches to meet student information literacy needs in this digital age, the teaching of higher order information literacy skills through teacher-librarian collaboration, flexible library timetable and school library programme in the information age. Finally, Constructivism and the constructivist approach to learning are proposed as the theoretical framework for this study and a rationale for this choice is then explored.

The changing nature of information literacy skills

Globalization and the growth of the knowledge society

In this section of the literature review, the term 'globalisation' is explored in relation to the growth of the knowledge society, in order to position information literacy in its

wider context, before examining the definitions of the term found in the literature.

The emergence of the information age

"The amount of printed information doubles every 72 days…. In the last 30 years, more information has been produced than in the previous 5,000 years." (Todd and Thomas, 2003, p.28) Information is stored in a variety of formats. They are as ordinary as books, as interactive as multimedia packages, and as different as the literary classic and the personal homepage (American Association of School Librarians, 1998). They range from print, film, radio, television and the internet to other electronic sources (Latham, 1998). The format of information continuously changes. The ability to adapt to shifting formats in order to access, evaluate, process, use, produce and share information is critical (Mackey and Jacobson, 2011).

The impact of the information age on human survival skills

The information explosion has dramatically changed the knowledge and abilities people will need to live productively (American Association of School Librarians, 1998). These include such key aspects as the need to be able to find information to solve problems or to achieve personal satisfaction (Doyle, 1993). People need to be

able to evaluate and verify the credibility of information (Latham, 1998). They must become skillful consumers to assimilate information and use it accordingly. There is and will be a need to produce information to thrive personally and economically (American Association of School Librarians, 1989). All these skills are needed in order to participate in the social and democratic activities of an information society (Association of College and Research Libraries of American Library Association, 1998). Morgan (2005) claimed that globalization involves the pursuing of capitalism. Capitalism development in the information age demands workers with the information, skills, motivation, and responsibility to make decisions necessary for innovation, quality improvement, and rapid response to change. Work requires knowledge workers who provide and operate their own knowledge to work out how existing knowledge can best be applied to create results (Brown and Hesketh, 2004). Increasing concern is directed to realizing how people can effectively process and take advantage of the ever increasing amount of information (Todd, 1996) which continues to be the case in this information age.

> "*Workers require a diversity of skills to respond to more complex and changing tasks. Job security no longer means staying in the same job or with the same employer*" (Latham, 1998, p.1).

Who is going to and how to train people information literacy skills become a question in the information age. I am going to explore teachers' perception of their responsibility for doing so. Employees need information literacy skills to prosper nowadays which is discussed below.

The need to develop information literacy skills

Information literacy contributes to personal empowerment and freedom to learn. National government must provide their citizens the education and information literacy skills to enable them to reach their full potential so that if they lose employment, they have the necessary skills to be offered new jobs. Employability means a lifetime commitment to vocational learning. It has been claimed that the government should ensure equity access of lifelong learning, information literacy and information technologies to prevent division between the information rich and poor (Latham, 1998). This implies a need for the education system in Hong Kong to put in place the necessary procedures to train student information literacy skills which is the aim of my study. I am going to discuss the definition of information literacy in details.

Information Literacy

The definition of information literacy

Information literacy is the main focus of this research. It is thus of great importance to clarify what it means. One of the earliest definitions of information literacy was found

in 1989, with four components namely: being able to recognize when information is needed; locate, evaluate, and use the needed information effectively(Association of College and Research Libraries of American Library Association, 1989).

In 1993, Doyle added more skills and stated in more detail the desired abilities of an information-literate person as: formulates need based questions; identifies and locates all possible sources of information including computer-based and other technologies; develops effective search strategies; evaluates and organizes information for practical application; combines new information with the existing knowledge; makes decision based on credible and full information and uses information to solve problems.

In practice, McKenzie (1998) insisted that information literacy is built upon three components enabling learners to make up their own minds. Firstly, they can discover relevant and reliable information using navigation, sorting, sifting and selecting skills. Secondly, they can translate numbers, text and visual data into knowledge, insight and understanding. Learners are able to digest the data and convert it into charts or other forms which show relationships and help resolve issues and questions. Lastly, they can create new insights and fresh knowledge which is completely different from rehashing others' ideas and plagiarizing.

All the above are the characteristics of knowledge workers with the necessary skills, creativity, responsibility, adaptability and ethical awareness I mentioned previously in

the section “The impact of information age on human survival skills”. I combine Doyle’s and McKenzie’s definition of information literacy to include six skills of formulating need based questions; identifying and locating all possible sources of information effectively; evaluating and organizing information for application; combining new information with the existing knowledge to create new knowledge; making informed decision and using information in problem solving.

Information literacy is also considered as an attitude and mindset. Association of College and Research Libraries of American Library Association (1989) affirmed the characteristics of information literacy as the power for making informed decision effectively, knowing what opportunities exist to participate fully in a democratic society. Colorado Educational Media Association (1994) claimed that information literacy students are aware of their information needs. They actively deal with the world of ideas. They have confidence to solve problems. They are aware of relevant information. They use technology tools for accessing information and communication. They work smoothly when there are multiple answers as well as when there are no answers. They complete work to high standards and create quality products. They are flexible, adaptable and can function independently and in groups. This is probably an optimistic view of student capability. As I will discuss later, the research evidence on student competence in these areas has not always supported such an optimistic view.

I combine Association of College and Research Libraries of American Library

Association's and Colorado Educational Media Association's information literacy characteristics to include the following attitude and mindset: to actively deal with ideas; be confident to solve problems; work smoothly whether there are more than one answers or none; complete work to high standards and create quality products; be flexible and adaptable; function independently and in groups and aware of opportunities. Information literacy has always been compared with information technology and information skills in daily teaching in Hong Kong. I am going to discuss the differences between them.

The relationship between information literacy, information technology and information skills

This research aims at exploring Hong Kong primary teachers' perceptions of information literacy in relation to the teacher librarian role. It is necessary to look at the range of similar concepts, their overlaps and discrepancies, in order to clarify and focus this research. Information technology for interactive learning is also one of the four key tasks in Hong Kong education reform (Curriculum Development Council, Education Department, HKSAR, 2001b) Information technology and information literacy have always been taken as similar in education settings. There is a need to distinguish information literacy from information technology so that the research area of this study will not be misunderstood.

Colorado Educational Media Association (1994) and Bruce (1995) argued that information literacy is the ability to use information technology tools for information retrieval and communication. They consider information technology as the tool enabling people to retrieve information for further analysis, evaluation and application. Analysing, evaluating and applying information are the characteristics of information literacy. This clarification of the relationship between information literacy and information technology is important in my research, as people are often faced with the dilemma to choose between information literacy and information technology.

In 2002, the Hong Kong Government legislated that one of the four roles of the teacher librarian is that besides planning and managing the daily operations of the school library, teacher librarians are information and media specialists who develop students' information skills and attitudes in using information from all formats and contexts appropriately and ethically. The information skills mentioned here look similar to information literacy. The aim of this research is to collect Hong Kong primary teachers' perceptions of information literacy in relation to the role of the teacher librarian. Information literacy is the theoretical background for this research. The relation between information literacy and information skills needs to be clarified. Carey (1998) pointed out that information skills are an indispensable component of information literacy as he positioned information skills in the middle of a continuum after library skills and in front of information literacy. He referred information skills

to problem solving tactics. According to Carey (1998), in information skills lessons, teachers teach "library skills in processes by which students are guided in their solution of information problems" (Carey, 1998 p.5). He referred information literacy to problem solving cognitive strategies. In information literacy lessons, teachers create "learning environments/problem scenarios and cooperative group structures in which the natural outgrowth of curiosity is the collaborative construction among students of effective problem solving strategies (facilitated as needed with library skills and techniques such as modeling, coaching and scaffolding)" (Carey, 1998 p.5).

Having examined the definitions of the term information literacy as used by academics and writers in the field and its relation with information technology and information skills, I shall now move on to explore how information literacy relates to independent learning and lifelong learning as these terms repeatedly appear in the roles of the teacher librarian and education documents.

The relationship between information literacy, lifelong learning, independent learning, autonomous learning, individual learning and self-directed learning

Information literacy, lifelong learning, independent learning, autonomous learning individual learning and self-directed learning were the terminology used in the Hong Kong education reform. They appeared at different times of the reform process

drawing peoples' different attention. Different stakeholders in the education system focus their effort on different terminology individually. One of them is information literacy which is the main discussion of this research. It is necessary to clarify the relationship between all these terms and the meanings underpinning them.

In 1997, the Sub-committee Education, the Board of Education, Hong Kong, recommended individual learning to be promoted in implementation of the curriculum. The Curriculum Development Council, Education Department, HKSAR (2001a) set out seven learning goals that Hong Kong students should be able to achieve in ten years' time. Independent learning skills were the fifth goal. In 2010, independent learning was reiterated together with lifelong learning by Education Bureau, HKSAR, in Consultation Document on the Information Technology for Quality Education. Recently, the Guiding Principles for Quality Textbooks (Education Bureau, HKSAR, 2014) stated that textbooks are students' self-directed learning materials for preparation and revision purposes besides being the teaching materials for teachers.

Todd (1996) studied the characteristics of independent learning, autonomous learning, lifelong learning, individual learning and self-directed learning and suggested that all these overlap each other. They all refer to two dimensions of learning. The first dimension is the learning that continues beyond the time of formal schooling. This kind of learning had been connected to information literacy by Bruce (1995)that information literacy is one of the attributes of lifelong learners which undergraduate

and postgraduate courses aim to cultivate. This is how we equip them with an indispensable mindset to face daily life problems. Goethe (1961, cited in Todd, 1996, p.3) claimed that people need to unlearn and relearn every five years in order to upgrade themselves in the information age. “Crucially, contemporary societies involve work roles that are subject to change; jobs for life are a thing of the past and lifelong learning implies continually developing oneself into new and varying positions”(Antonacopolou et al., 2005, cited in Costley, Elliot and Gibbs, 2010, p.2).American Association of School Librarians(1998)agreed later by saying that information literacy is the core of lifelong learning. What has to be learnt keeps on changing. People need to learn, unlearn and relearn to cope with the ever changing world. Such skills have to be obtained as early as schooling and reinforced as time goes by. Candy (1998) joined them by arguing that professional knowledge in many fields is growing so rapidly that no one can be sure that their earliest education will prepare them adequately for a lifetime of practice. So the most important characteristics for any professional will be motivation and eagerness to keep learning. Schools cannot teach them all they will need to know. There is too much information and sometimes it is too specialized. This echoed Cohen’s (1995) statement that the best way is to teach them how to manage the information. The second dimension is the personal qualities and characteristics of the learners. The American Association of School Librarians (1998) developed The Nine Information Literacy Standards for Student Learning. Standard four to six related to independent learning which says that the student who is an independent learner is information literate.

It is crucial to understand the position of information literacy in education in this study about Hong Kong primary teacher's perceptions of the role of the teacher librarian because what a school thinks about its library is a measure of what it feels about education (US Commissioner of Education, (undated), cited in Fisher, 2000, p.16) (See appendix G). This arouses my interest to look at the different approaches with regard to information literacy in different schools in Hong Kong. The following discussion connects information literacy with education which is the main context in this study.

The aim of education is to train independent learners. At the first global conference on lifelong learning in Rome 1994, it was affirmed that education must aim for personal responsibility for learning (Stewart and Ball, 1995). Students need to access, evaluate and use information to solve problems which resemble daily life. This relevant learning is defined as the active building of knowledge through dynamic interaction with information and experience. Students construct ideas from the information they encounter and create products that express that idea effectively (American Association of School Librarians, 1998). The construction of knowledge is discussed later in this chapter.

The increasingly complex nature of information literacy

With the rapid and continuous renewal of technology, the media in which information is stored, managed, presented and used continuously being updated. Information literacy skills also need to be continuously updated. The following statements evidenced the increasingly complex nature of information literacy. Information literacy has been defined by different people in various ways since it was coined by Zurkowski in 1974 (Pinto et al., 2010). The Society of College National and University Libraries (SCONUL) (2011)developed the Seven Pillars of Information Literacy model where they use "information literate" with reference to the American Library Association's 1989 statement: "*To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information*" (Association of College and Research Libraries of American Library Association, 1989). This definition was adapted in the Australian and New Zealand Information Literacy Framework (Bundy 2004). Further definitions had expanded and broadened the scope to "*address issues or problems at hand that face individuals, communities, and nations"* (Thompson, 2003) ethically (CILIP, 2004). These skills have been further broken down into specific skills related to teaching and learning within the curriculum, in the USA and Australia (AASL &AECT, 1998 and Bundy, 2004).

Education today allows children to think independently and develop the ability for

life-long learning (Massis 2011).It has been argued that students should also be able to increase their problems solving ability (Heider, 2009), to collaborate (Engstrom and Jewett, 2005) and to learn independently. Independent learning is one of the characteristics of information literacy as I explained in the section “The relationship between information literacy, lifelong learning, independent learning, autonomous learning, individual learning and self-directed learning” These needs encourage educators to look for new ways to teach such skills. These needs are also required in the education reform of Hong Kong. Information literacy has been considered as a set of skills to include all the above as I explained in the section “The definition of information literacy”. The significance of information literacy skills has been connected to academic performance (Chang et al., 2012; Miriam, Metzger, Flanagin, Markov, Grossman and Bulger, 2015) and in the work place (Majid et al., 2011). New ways to teach information literacy skills are also required in Hong Kong which is the aim of this research.

HM Inspectorate of Education, in Scotland, and Ofsted and the DfES, in England, have been increasingly aware of the role of the school library in supporting learning (HMIE, 2005; DfES, 2004). Besides reader development, developing information literacy is a major role for the school librarian. According to Williams and Wavell(2006)they need an understanding of how teachers support information literacy in the classroom in order to develop student information literacy. Between 2004 and 2005, the Society for Educational Studies funded a study to investigate secondary

school subject teachers' description of their students' information literacy. 31 teachers from nine schools in Aberdeen, Scotland participated in two rounds of group discussions which were recorded and transcribed. These formed the data for qualitative analysis using a phenomenographic approach to establish a structure of conceptions of students' information literacy. Below are the six teachers' conceptions of student information literacy with some overlaps (Williams and Wavell, 2006):

1. Finding information conceptions focused on finding information particularly facts, using technology and the school library. Students need to be able to navigate sources of information, such as websites, the library and books. Library skills referred to using the catalogue, navigating the shelves and using contents and index pages to locate specific information. Students were perceived as having difficulties finding answers within the text or seeking information from worksheets or in exams.
2. Linguistic understanding conception referred to comprehension of textual or verbal information, including instructions for a particular activity similar to reading literacy, listening skills and basic understanding which relies to an extent on general knowledge and prior experiences in similar activities.
3. Making meaning conception was about the ability to make sense of information from different sources and formats and make connections between new information and the specific subject which required the skills of summarizing, synthesizing, interpreting and decision-making. Teachers agreed that students' ICT skills are developing and they are becoming more technically accomplished.

But students often lack the skills to intellectually process information in the specific curricular tasks.

4. Skills conception referred to the range of skills required to handle information effectively such as traditional library and information skills including practical searching skills, evaluating and reflecting skills, the skills to listen to and read an instruction, paraphrase, integrate, reorganize, pick out key ideas, summarize, synthesize, write coherent answers, appreciate bias and skim read. Sometimes skills were identified as cognitive skills students found problematic encountered in different curriculum tasks.
5. Critical awareness of source conception focused on the need to evaluate sources, recognize bias, determine the quality of the information and check the authority of a website.
6. Independent learning conception agreed that being information literate would result in independent learning. This conception implied the ability to confidently and independently select and apply relevant skills when working with information and rely less on teacher input. Teachers perceived information literacy as promoting confidence, ownership and positive attitude to learning and finally independence. With students' ability to find and extract information from resources with the minimum support or wasted time and effort, more scope for further development of activities in relation to subject outcomes was allowed.

Williams and Wavell (2006) stated that teachers thought that it was apparent that information literacy was difficult to isolate from the learning and teaching

environment. It was difficult to develop with tight curriculum schedules. Teachers felt that some students have the ability to see connections and develop information literacy quite naturally while others did not. This study explored subject teachers' description of their students' information literacy. It informs my research to explore Hong Kong teachers' own perception of information literacy. It may also be useful to ask Hong Kong teachers to describe their students' information literacy performance.

In this knowledge society, large amount of information that reaches us has not been filtered, uncertain in quality, is anonymous and appears in multiple formats (CAUL, 2002).. The set of new competences to manage information in the knowledge society are inseparable from lifelong learning (Bundy, 2004; Markauskaite, 2006; National Forum of Information Literacy, 2005). It can be argued that people need to have the continuous ability of updating and acquisition of new literacies required in each moment (MajóiCrúzate and Marqués, 2002; Markauskaite, 2006). The traditional definitions of information literacy are insufficient for the astonishing rise of social media and collaborative online communities. In response to emerging technologies, new literacies such as media literacy, digital literacy, visual literacy and cyber literacy share and go specifically deeper into one or more aspects of information literacy of determine, access, evaluate, incorporate, understand, produce, share and use information (Mackey and Jacobson,2011). It is a series of specific competences containing four different dimensions (Conde et al., 2011):

1. Information Search: The ability to use all types of information sources and to be

familiarized with specific strategies for information search.

2. Information Selection: The specific knowledge on the main characteristics (authors, institutions, typologies...) of the field of the information being searched, and the ability to select the most appropriate information according to one's interests.
3. Information Processing: The understanding, analysis and synthesis of information, together with the control of certain tools of information management.
4. Communication and Popularization of Information: The skills related to information posting through various channels, in different registers and suitability of audience.

The main discussion of my research is information literacy. It is of great importance that the continuously updated and newly defined meanings of information literacy apply and always be referred to what it means in my research.

The technological nature of information literacy

The technology for storing, organizing and accessing the ever growing wave of information has been developing enormously. Technology is a source of the challenges faced in the information age. It is a catalyst for crystallizing the importance of information literacy for learning and civic life (Hinchliffe, 2003). Technology became an enabler in information literacy in two ways: technology as an instructional tool (Umbach, 1998) and as an instructional object (Umbac, 1998; Eisenkraft, 2010).

Topaloglu and Tekkanat (2015) agreed by insisting that in line with the rapid developments in information and technology, using technologies to get the information changing and growing is a must. People need to know how to access information, utilize it for their needs and to keep abreast with the developing technology. Information is meaningful, interrelated and organized data originally kept in an individual's mind and shared with others via media where it is saved (Sagsan, 2008, cited in Topaloglu and Tekkanat, 2015, p.574). Information is also a prerequisite for the creation of new information and knowledge facilitating socio-economic development by creating qualified work force. People need to possess the basic skills for using resources, information and technology; maintaining interpersonal relationships and conducting analysis (Kurbanoglu, 2011, cited in Topaloglu and Tekkanat, 2015, p.575). The literacy in the information process can be defined as the abilities to make social messages through visual images or written words (Mackey and Jacobson, 2011). It is generally understood that information environment includes technology and that lifelong learning skills prepare individuals to adapt to these changes (Mackey and Jacobson, 2011). People need to renew their knowledge all the time, adapt to changes, follow new trends, build new knowledge and to be a conscious consumer of knowledge. Technologies have facilitated people's learning and adaptation to social life. Those who can make use of information technologies are ahead of others (Topaloglu and Tekkanat, 2015). These are powerful ideas, although it should be noted that the evidence underpinning them consists purely of questionnaire surveys, in the case of Topaloglu and Tekkanat (2015), of students in one country only.

This does not mean that this evidence is incorrect, but it does lack the more detailed nuances which might have emerged from a more in-depth, qualitative dimension to the study.

There was also the idea of network literacy related to computing technology referred to information retrieval, assessment and use in a networked environment (Savolainen, 2002). Over the time, "literacy" has been expanded to include media literacy (Buckingham, 2007; Stein and Prewett, 2009) with the effects of the media in everyday life.

The fast renewing technology forces people to continuously learn and relearn to manipulate technology to survive. In Hong Kong, Technology Education became a Key Learning Area in 2000 (Education Bureau, HKSAR, 2013) to prepare students to be valuable human capital amidst the rapidly emerging technologies. School administrators in Hong Kong assign Information Technology teachers to develop student information technology skills. At the same time, the main role of the teacher librarian is to develop student information literacy skills as stated in the section of "The teacher librarian role in relationship to information literacy" later in this chapter. Technology emerges as a component in information literacy implies that teacher librarians are also responsible for developing student information technology skills. This concept is significant as the discussion of this research centers around the teacher librarian role in relation to information literacy.

The use of information literacy skills by young people aged five to twenty

My study is about the need to teach primary student information literacy skills and whether it is the responsibility of the subject teacher or the teacher librarian to teach such skills. The nature of information literacy skills has been developing. They have become technologically oriented and are becoming important in education and workplace. The use of information literacy skills by young people aged five to twenty reflects such technological and complex development. Understanding how young people use information literacy skills recently helps to analyse the need to teach primary students information literacy skills and the institutional approaches and responsibility to teach them.

Finding credible information is challenging especially for children and adolescent

According to Miriam et al. (2015) and Dunn (2002), young people are increasingly turning to the Internet to find information than to traditional media and information sources. Miriam et al.'s (2015) research demonstrates shortcomings in young people's online information literacy in terms of consumption behaviors. Given the abundance of information options available today, finding credible information is a complex and challenging task especially for children and adolescent. This study investigated five predictors of young people's success in online information evaluation encompassing

their awareness of credibility needs, their use of specific information evaluation practices and their accuracy in credibility assessment. 2,747 eleven to eighteen year-old Internet users took the survey online from home. The survey data was analysed to find out that young people's cognitive development, decision-making style, demographic background and online information literacy training on their information evaluation awareness, skills and practices have expected and surprising influences. Although young people were born in this digital world, they may lack the tools and capability critical to evaluate information effectively partly due to their limited development and life experience. Young Internet users were often uncritical when seeking information online as shown in Shenton and Dixon's (2003) study of 188 fourteen year old students from six schools from the town of Whitley Bay, England, who did not aware the need for scrutiny. They often attributed intent to authors superficially without considering possible bias. They usually trusted the top results yielded by search engines without asking why the results received high rankings (Julien and Barker, 2009). This was due to the mind perspective that early childhood children were unaware of others' thinking or the potential of different views of the same event (Kuhn, 2002). As they grew older and encountered schooling, assignments involving Internet research were found to correlate to credibility evaluation (Bulger, 2009). So the first predictor in Miriam et al.'s(2015) study hypothesized that age positively predicts young people's awareness and skill in evaluating the credibility of online information. The data collected predominantly supported this hypothesis. Older children used more analytic credibility evaluation strategies. They were more aware of

credibility as a potential problem of online information, and were less likely to believe the hoax sites compared to younger children. Livingstone, Haddon, Go¨rzig and O´lafsson (2011) studied 25,000 European children aged 9-16 and found that when using the Internet, young people's movement from engaging in basic activities to more creative interaction was related to their socioeconomic status. So the second predictor in Miriam et al.'s study hypothesized that socioeconomic status positively predicts adolescents' awareness and skill in evaluating the credibility of online information. The data did not support this hypothesis. Education and income had little impact on the credibility awareness and skill. Referring to prior research on the need for cognition, flexible thinking, faith in intuition and trust in others, the third predictor in Miriam et al.'s(2015) study hypothesized that the need for cognition and flexible thinking style positively predict young people's awareness and skill in evaluating the credibility of online information while faith in intuition and trust in others negatively predict so. The measure of credibility awareness and evaluation skill was facilitated by a hoax website embedded in the survey. Except believing the hoax websites, the need for cognition, flexible thinking and faith in intuition emerged as the strongest predictors of young people's awareness of credibility problems and information evaluation skill. Faith in intuition and trusting others led young people to be more trusting of online information. The fourth predictor in Miriam et al.'s(2015) study hypothesized that exposure to credibility evaluation training positively predicts adolescents' awareness and skill in evaluating the credibility of information. Results indicated that exposure to credibility evaluation training positively predicted the use

of analytical evaluation methods as expected. Interestingly, it was found that youth who reported having been exposed more to online credibility evaluation training were also more likely to believe the hoax sites which suggested that although such explicit training did appear to lead kids to do the right things to evaluate online information, doing so does not necessarily lead them to the right conclusions about digital information. The last predictor in Miriam et al.'s (2015) study hypothesized that academic performance positively predicts adolescents' awareness and skill in evaluating the credibility of online information. As predicted, academic performance was associated with children's heavier use of analytic credibility evaluation strategies. Miriam et al.'s (2015) study provides reference for online behavior of children and adolescent. Similar study to explore online behavior of primary students in Hong Kong might be useful while considering training student information literacy skills which is the aim of my study.

The role of the teacher librarian

The teacher librarian role in relationship to information literacy

The legislated role of the teacher librarian in Hong Kong since its establishment in 1998 had been discussed in the introduction chapter. What has been written about the role of the teacher librarians is discussed here.

American Association of School Librarians (1998) stated that the library media specialist (which means the teacher librarian in some countries), takes a leading role to foster information literacy and relevant learning among students and others in the learning community which facilitates the acquisition of knowledge and skills. In the teacher librarian role list, Fischer (undated) put training and supervising teachers as a personnel management role of the teacher librarian. Along with the ever increasing quantity of information thrown at students and school staff, information literacy practices will be even more important for our students. Educators and advocates of information literacy within school community and leaders of face-to-face or virtual in-service sessions for school staff will continue to be teacher librarian role (Herring, 2013).

Previous research about information literacy and the emerging role of the teacher librarian

In 1994, Hufton in British Columbia, Canada, studied whether teachers, teacher librarians and administrators all have the same vision of the role of the teacher librarian and school library resource centre. Respondents perceived the roles of the teacher-librarian as instruction, consultation and library management. Some teachers commented on the lack of Cooperative Planning and Teaching (CPT) between the

teachers and the teacher librarian that actually takes place. This study provides me with an idea of researching Hong Kong primary teachers' perceptions of the role of the teacher librarian.

Over the past three decades, there have been research studies to investigate the concept of principal support for school library programmes around the world. It was found that principal support was critical to the development of school libraries (Henri, Hay and Oberg, 2002). Most principals in Hong Kong are promoted from experienced teachers. Researching teachers in Hong Kong today helps understanding principal support to Hong Kong school library programmes tomorrow.

In 2002, Asselin and Doiron in Canada conducted an analysis of school library programmes and services in the preparation of pre-service teachers in Canadian universities, to identify the need and the ways the faculties of education prepare pre-service teachers for their role of developing information literate citizens. Lack of faculty awareness about school libraries in education and erosion of school library education in teacher education were found. Also, information literacy skills and teaching methods were not systemically developed in new teachers (Asselin and Doiron, 2002).This finding supports one of the main objectives of my study - to examine primary teachers' perceptions of information literacy skills and their role of training student information literacy skills.

UNESCO is paying more attention to developing information literate citizens. In 2004, a project for development of information literacy education through school libraries in Southeast Asia was approved for financial assistance under the special funds of the UNESCO's Information for All Programme. It examined the current state of information literacy education in Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand and Viet Nam to raise appropriate recommendations and implementation for deeper involvement of school libraries in developing information literate citizens (UNESCO Bangkok, 2006). This study using questionnaires as the only survey tool might have missed further details when accompanied by qualitative survey tools. However, it informed my study to understand Hong Kong primary teachers' perceptions of their responsibility to train student information literacy skills.

The Hong Kong government is examining the role of teacher librarian in terms of teaching and learning. In 2010, a research was commissioned by the Education Bureau, Hong Kong SAR Government to be carried out by the Faculty of Education at the University of Hong Kong, to study the "Roles of Teacher-librarian in Public Sector Schools" (Faculty of Education, the University of Hong Kong, 2010). The study aimed at acquiring useful information to improve strategies for curriculum development and identifying good models of utilizing teacher librarians in teaching and learning (Faculty of Education, the University of Hong Kong, 2010).Questionnaires as well as focus group discussion were used to collect data. I was then the teacher librarian of my school. The principal passed the set of

questionnaires to me to follow up. Subject teachers, school administrators and teacher librarians were also invited to participate so that the perceived and actual roles of teacher librarians were explored. It reminded me that teachers' perceptions of the role of the teacher librarian provide a different point of view which is the main idea of my study.

Recently, in October 2012, an International Comparative Study Between China, Hong Kong, Japan, South Korea, Taiwan was conducted to study the self-perceptions of school librarians regarding their roles, practices, professional training and collaborations with other classroom teachers. It was found that active participation in the curriculum was vital for earning supports and recognitions from both the principals and other classroom teachers (Lo, Chen, Dukic,Youn,Hirakue, Nakahima and Yang, 2014). Teachers look at teacher librarians from their own point of view. So my study aims at teachers' perceptions of the role of the teacher librarian.

Little research has been done to investigate teachers' perceptions of information literacy skills in relation to the role of the teacher librarian in Hong Kong primary schools. This research aims at collecting teachers' perceptions of information literacy skills and the role of the teacher librarian in Hong Kong primary schools.

Differences in the roles of teacher librarians

At the 61st Annual Conference of International Federation of Library Associations and Institutions (IFLA) Hannesdóttir (1995) pointed out that there have been differences in the roles of teacher librarians and the goals and objectives they have to fulfill. The differences reflect the educational system in each country, the training of teachers for primary schools and the training of librarians in the same countries. The differences are also represented by the use of terminology – "school librarian", "school library media specialist", "teacher librarian", "bibliotecaire documentaliste" found in the professional literature. When teacher librarians are defined as specialized teachers, teacher training is required. The training programme emphasizes the role of the library in cooperative planning and teaching where teacher librarians have an active role in classroom teaching. When teacher librarians are defined as specialized librarians, the basic training is an information specialist. The chief role is to provide the classroom teachers with information and sources required for classroom teaching. Emphasis is placed on extensive information provision for the whole school and the instructional role limited to information skills. When teacher librarianship is defined as a separate profession, professional training is separate from both librarianship and teaching but can be provided in library schools, teacher training institutions or separately. Their competencies need to be borrowed from both teaching and librarianship. Training programmes are developed in the view of a separate role which is distinctly different from the role of both teachers and librarians. A Working Group was formed by IFLA in 1982 to look at the educational requirements for teacher librarians. Dual

qualifications were listed by the Group as the optimal alternative. Professional training for either profession was three to four years. Dually qualified teacher librarians would then have six to eight years of education on the university level. It is therefore useful to compare the roles of teacher librarians between countries to find out the educational and instructional role focus of teacher librarians in one area or country in comparison with another.

School Library Association of South Australia (SLASA) (2008) highlighted the dual role of teacher librarians as both teachers and information specialists. They issued the "Teacher Librarian Role Statement" which can be adapted to suit the level of responsibility of the teacher librarian. When all the roles listed are fulfilled, the teacher librarian is at a leadership level. I would like to compare the roles stated by two Australian academic associations, SLASA (2008), ASLA and ALIA (1993), and Education Bureau (EDB), HKSAR (2002) government below.

Comparison of the teacher librarian role between Hong Kong and Australia to identify the area where teaching information literacy skills by the teacher librarian had been administered

Both in Australia and Hong Kong the term "teacher librarian" is used as the title for the teacher who is also the librarian in schools. A comparison of the teacher librarian role between these two areas helps to find out the educational and instructional role

focus of these two areas. As the role of the teacher librarian has been evolving since its establishment as discussed in chapter one under the section "The evolving nature of the teacher librarian's work", the educational and instructional role focus of Hong Kong in comparison with Australia provides some reference on Hong Kong's way forward. I was introduced to the role of the teacher librarian in Australia by my tutors in the University of Hong Kong during my study of Library Studies. I then shifted my job to the newly established teacher librarian in 1998. I was interested in the difference of the role of teacher librarian in Australia and Hong Kong. So I compared them. When teacher librarians play dual role as a teacher and an information specialist, they can teach student information literacy skills in class lessons across different subjects (School Library Association of South Australia (SLASA), 2008; ALIA, 2012 and Chang, et al., 2012). Below is the comparison of the teacher librarian role between Hong Kong and Australia to find out the area where teacher librarians play dual role which means that teaching information literacy skills by the teacher librarian had been put in place.

1. Teaching and Learning

In skills teaching, SLASA (2008) states that teacher librarians are responsible to train students to seek, critically evaluate, synthesize and present information which is teacher role. Both ASLA and ALIA (1993), and EDB, HKSAR (2002) state that teacher librarians are responsible for promoting the use of the information process as a framework for the development of information skills which is not teacher role.

In integration of skills into teaching, both SLASA and, ASLA and ALIA state that teacher librarians are responsible to integrate the necessary knowledge, skills and dispositions of the curriculum framework into teaching and learning programmes which is teacher role. EDB, HKSAR does not explicitly state so.

In assisting students in using resources, both SLASA and, ASLA and ALIA state that teacher librarians are responsible to assist students use a range of resources and technologies which is information specialist role. EDB, HKSAR states that teacher librarians are responsible to help students use the library in ways that are conducive to learning to learn. The skills of using different resources are not explicitly stated.

In collaborative teaching, both SLASA and, ASLA and ALIA state that teacher librarians are responsible to collaboratively plan and teach units of study with subject and classroom teachers to develop information literacy skills which are teacher role. EDB, HKSAR does not explicitly state so.

2. <u>Leadership</u>

In library policy, SLASA states that teacher librarians are responsible to set up and record library policies, develop goals and objectives and evaluate according to changing school needs which is manager role; ASLA and ALIA states that teacher librarians are responsible to create and foster library-related professional development

opportunities for staff, develop and implement strategies for evaluating the resource collection and for determining curriculum and student needs within the context of identified school priorities which are information specialist role and teacher role; EDB, HKSAR does not explicitly state so.

Only SLASA states that teacher librarians are responsible to maintain a high level of professional knowledge; illustrate practices that reflect current educational directions; operate as a member of the school administrator and / or curriculum team; take part in the continuous development of the school's Information and Communication Technology plan; assist in knowledge management processes, and highly recommend the need for students to be information literate which are teacher role and information specialist role.

3. <u>Curriculum involvement</u>

In curriculum developments, both SLASA and EDB, HKSAR state that teacher librarians are proactive and keep abreast of curriculum document and developments which is teacher role; ASLA and ALIA state that teacher librarians are responsible to interpret information systems and technologies to students and teachers in the context of curriculum programs which is information specialist role.

In school policies, both SLASA and, ASLA and ALIA state that teacher librarians are a partner in planning, implementing and assessing school policies relating to the

curriculum which is teacher role; EDB, HKSAR: Not explicitly stated.

In advocating information literacy, SLASA states that teacher librarians are responsible to advocate student information literacy across the curriculum which is information specialist role; ASLA and ALIA state that teacher librarians are responsible to raise staff awareness of the need for students to acquire information skills and of the importance of resource-based learning in developing these skills which is information specialist role. EDB, HKSAR does not explicitly state so. SLASA states that teacher librarians are responsible to work with teachers to establish a school-wide information skills continuum; cooperate with school administrators to incorporate Information and Communication Technology into the curriculum which are information specialist role and teacher role. EDB, HKSAR states that teacher librarians are responsible to work with teachers to identify student needs, required curriculum content, appropriate information resources to develop school-based curriculum strategies such as project learning and life-wide learning activities which are teaching partner role.

The roles stated by the academic associations are more concrete, profession and at the management, leadership and curriculum level which are indispensable and cannot be fulfilled by someone else.

Recent research on the role of teacher librarian in Hong Kong

The following studies provided the self description by Hong Kong teacher librarians on their role, job situation and job satisfaction. They give some background about the role of the teacher librarians in Hong Kong schools. Teacher librarians in Hong Kong thought that their professional roles are undervalued by being asked to teach ordinary subjects leaving them limited time and opportunities to teach information literacy in collaboration with subject teachers which they assumed to be their professional role. School administrators were not providing any guidelines on collaboration between subject teachers and teacher librarians to teach information literacy during project learning and inquiry learning although the government had been emphysizing developing student independent learning skills since the education reform in 2002.

In 2013, Warning, Chan, Ma, Chu and Wu explored the professional development and current work situation of teacher librarians in primary and secondary schools in Hong Kong by collecting data from 56 teacher librarians, 28 from the primary schools and 28 from secondary schools. Their study investigated and compared the educational roles of primary and secondary school teacher librarians in teaching subject courses, developing stakeholders' information literacy, collaborating with teachers and cultivating students' reading habits. It was found that relatively more secondary school teacher librarians had professional qualifications; secondary school teacher librarians spent on average more than one-quarter of their time teaching subject courses which

were non-library related, compared to primary school teacher librarians (15%), which they saw as restricting their ability to provide library services. Primary school teacher librarians spent more time on the preparation and delivery of library lessons than secondary school counterparts. Both primary and secondary teacher librarians spent less than 5% of their time collaborating with teachers; and that primary school teacher librarians appeared to have a more holistic approach to information literacy acquisition. The educational roles of teacher librarians were found to be shouldering the important tasks of developing information literacy and cultivating reading habits among students. They played a significant role in working with teaching staff on library collection development. Secondary school teacher librarians participated in the instruction of subject courses, which was not conventionally regarded as a role for them. It was a pity, however, that their potential contribution to collaborative teaching with subject teachers was still underestimated, if not ignored, by contemporary curriculum planners and educators.

Shu (2014) compared the educational role of school librarians in Hong Kong, Taiwan and mainland China in 2014. School librarians were invited to respond to questionnaires via e-mail, phone call or electronic questionnaires. Responses were designed as a 5 Likert-type scale: 1 refers to “Strong disagree”, 2 refers to “Disagree”, 3 refers to Neutral”, 4 refers to “Agree” and 5 refers to “Strongly agree”. 28 school librarians from Hong Kong, 15 from Taiwan and 14 from Mainland China responded. Findings showed that teacher librarians from all the three regions agreed that they had

contributed towards students' academic performance. Teacher librarians in Hong Kong and Taiwan were found to be more proactive than teacher librarians in Mainland China in supporting students' inquiry based learning in these four aspects: Holding library lessons to teach information literacy, collaborating with teachers, holding reading programs and library/reading committees to promote reading and having professional development opportunities by broadening their professional network and participating in related conference. It was also found that there was still some deficiency of the educational role of teacher librarians in Hong Kong. Instead of integrating the content of information literacy into subject courses, library lessons were still a prominent means to teach information literacy. Teacher librarians' educational role was undervalued resulted in a lack of time for teacher librarians to conduct their professional duties.

Teacher librarians from all the three regions tended to agree that contents originally covered in library lessons should be covered in subject courses. 4 Hong Kong teacher librarians stated that they can analyze students' need, develop students' search skills or provide information resources in the project learning process. Interestingly, teacher librarians also tended to retain independent library skills lessons as they showed a neutral or even negative attitude to reducing those lessons. A teacher librarian commented that students learn better when library courses are integrated with curriculum courses, whereas another teacher librarian noted the failure of teaching library lessons by a teacher. 84% of Hong Kong teacher librarians agreed that they had

taught students information literacy during independent library lessons (4.47±0.52). Hong Kong teacher librarians tended to disagree that they had helped educate other teachers about information literacy (2.84±0.99). They also tended to disagree that subject teaching was a part of their professional role (2.44±1.04) and they seemed to be neutral towards the facilitation of a moderate amount of subject teaching in helping carry out their role (3.08±0.91). 60% of Hong Kong teacher librarians needed to teach subject courses. They tended to agree that the level of subject teaching had restricted their professional role (3.56±1.00). Their role in subject teaching mismatched their work distribution. They did not have enough time to balance their work in teaching and coping with library related issues.

Hong Kong had conducted education reform in 2002 and inquiry process was emphasized to achieve the education aim of providing "*all students with essential life-long learning experiences*" (EDB, 2002). Hong Kong teacher librarians support students' inquiry process by infusing the content of information literacy into subject teaching where identifying information needs, identifying relevant information sources, formulating different search strategies, evaluating information and using information ethically are taught.

The teacher librarian role includes working with teachers and their relationship is discussed below.

Review of the interrelated ideas leading to the better use of school libraries in the information age

Teachers' relationship with other colleagues

In the publication of Education World published in 2011, the authors stated that our students need several persons to guide their education. They need the value added power of more than one brains working together for their good. Teachers cannot do it all on their own. No one can meet all the needs of all the students without help. Other professionals within the school have special strengths and talents to enhance the lessons. Getting to know each other better enables teachers to call on those different human resources within the school. For example, the librarian is a resource person that should always be consulted. When s/he knows what you are teaching, s/he will provide ideas and relevant resources (EducationWorld, 2011).

The authors of Education Union (2014) showed that teaching is becoming increasingly about working in teams. Teachers and support staff are increasingly working with other professionals in multi-agency teams. Teacher assistants, support and administrative staff have a unique role to play in the effective schooling (The Education Union, 2014). STF's Reference Committeeclaimed that there should be a

shared recognition that teaching staff (including principals) and non-teaching staff have individual employment history, education or training background, roles, skills, needs, and concern (STF's Reference Committee, 2005). Authors of this school of thinking stated that they should be able to provide invaluable support for teaching, so it is really important for teachers to understand their role, responsibilities and expectations in order to work with them (The Education Union, 2014; STF's Reference Committee, 2005).

There has been a remarkable increase in the number of teacher assistants in schools (STF's Reference Committee, 2005).Teaching staff need to maintain good relationships with non-teaching staff such as social workers, nurses and educational psychologists. This can be achieved by building knowledge and trust through training or working together, or inviting others to assist what the school is aiming at in areas The Education Union, 2014).

To cultivate and improve the daily working relationship between teaching and non-teaching staff in schools, they expect that their school administration will provide suitable and enough preparation time and planning opportunities. Since teachers have diverse administrative responsibilities, the special attention of principals regarding this must be highlighted. Teachers' perspectives and their classroom practice are discussed below.

The importance of teachers' beliefs

The knowledge about how and why teachers do the things they do in classrooms and how to help them make the best decisions for their students is important. In order to better understand the way teachers think about and approach instructional practices, Promoting Instructional Coherence Project in the Program for the Improvement Of Teaching and Learning (Marble, Finley and Ferguson, 2000) had worked for over a year with groups of teachers in five sites, exploring their perspectives, experiences, and understandings about teaching. They think that teachers' understandings of teaching and learning play a central role in helping teachers address student needs.

"Teachers' beliefs and practices are expected to be associated with their background characteristics, especially with their professional education" (OECD, 2009, p.113). Marble, Finley and Ferguson (2000) suggested that teachers make instructional decisions in a complex context including new policies, new ideas about learning, instruction and assessment. The multiplicity and variety of messages about enhancing classroom practice confounds the decision---making for teachers. Teachers interpret these messages in various ways depending on their experiences, perspectives, students, and school culture. They consider what they believe and perceive about learning, refine such perspectives by working together, reading, having new experiences and engaging in dialogue. Their new perspectives help them make instructional choices

about curriculum and assessment. Teachers' practice is based on their perspectives. There is only one teacher librarian in each school. Teachers' perceptions of the role of the teacher librarian have an impact on how they work with this colleague. The cooperative planning and teaching between teachers and the teacher librarian is discussed below.

E-library and the importance of teaching student information literacy skills

The following research studies highlight the updated role of the library and the significance of teaching student information literacy skills in the era of rapidly developing information environment. California State University had been engaged in a multi-phase assessment of information literacy skills to reflect its commitment to educate students to be information competent in this complex, information driven world (Dunn, 2002). Preliminary results demonstrated that during research, the information resource that students quickly and frequently thought of using was the internet or the computer. Other resources that students used included books, reference books, publication by organizations, people who might be experts or have firsthand knowledge and the results of one's own research in the real world. Most students turned first to computers to locate information in the Internet, web sites, databases and electronic books (Dunn, 2002) and emailed people that they thought might have relevant information. The use of print resources was decreased and fewer questions

were asked at the library reference desk. This highlighted the importance of web-based library reference services that provided real time, interactive reference assistance via the Internet. It also confirmed the need for imbedded, point-of-use instruction. Students liked the efficiency of the Internet because it offered a wide variety of information. They also liked the convenience and flexibility of the "virtual library" which allowed them to fit school work easily into demands on their time from family, friends and work. Some noted that they normally were able to do almost all of their research without leaving their bedrooms. By providing them remote access, university libraries had succeeded in giving students something they really valued. While searching for information, the key words selected were often broad and derived directly from the title of the assignment. The more years of college students had, the more able they were to suggest a variety of resources such as text-based, Internet, people and institutions, to meet their information needs. They were also more able to suggest more potentially useful resources and had a better idea of the content and context of the resources and of how they would fit into a research strategy. Students' skills and knowledge increased over the course of their college years. This supported the importance of teaching information competent skills.

Topaloglu and Tekkanat (2015) aimed to define the relationship between the information technology literacy levels and the information technologies usage level based on the data collected from 200 undergraduate students in Trakya University. Results showed that participants were most successful at the basic information

technology skills and information and internet skills. They were least successful in problem solving skills. There is no significant difference between analysis and development skills and the length of time the information technologies have been used which reminded us that analysis and development skills are not gained by experience but education.

Institutional responsibility and approaches to meet student information literacy needs in this digital age

The research by Williamson et al (2007) suggested that both the subject teacher and the teacher librarian have their unique role in meeting student information literacy need in this digital age. When information literacy is considered as institutional responsibility, administration policy can be put in place to make full use of the trained teacher librarian to train teachers and students information literacy skills. Institutional approaches facilitate the integration of information literacy skills into the curriculum which is the main discussion of my research.

Williamson et al., (2007) pointed out that the rapid growth of information communication technology together with the burgeoning availability of electronic sources via the Internet may change people's information seeking behavior. In order to understand how information literacy needs may also be changed in this digital age,

Williamson et al. (2007) examined the way access to electronic information affects the information needs of 15 research students in an Australian university. The 15 student are chosen from the Faculty of Information Technology at Monash University with the assumption that they are computer-literate and skillful users of electronic information who may not have been experienced effective methods of searching and evaluating information. Three information seeking and use areas were focused: information source use, knowing when to stop collecting information and managing the collected information. Fisher, Erdelez and McKechnie (2005, cited in Williamson et al., 2007, p.48) described information behavior as how people need, seek, manage, give and use information in various contexts. Information source use here relates to information seeking. The findings about information source use indicated that search engines such as Google were popular even though students have used the subscribed databases of their library because of their familiarity, speed and numerous relevant "hits". This result was in line with the study of U.S. tertiary students (Online Computer Library Center [OCLC], 2001). The nature of the documentary formats determines the relevance of the information. This was especially so when the latest research findings in the field was needed. Working papers or draft conference papers from an individual academic's personal Web page instead of book chapters, published journals, conference papers were chosen because the latter were too slow. The convenience of online sources made them become more favoured of over other sources raising the matter of their authority and reliability which students cared less. People such as the supervisor and academic staff were still crucial to students in the electronic age as

they provided framework, guidance and experience in research projects. These findings reflected George et al.'s (2006) study of the information-seeking behavior of 100 graduates at the Mellon Institute where people were found to be an influencing element. 14 computer science students reported the highest use of Google searches (93%). They cared least the quality of information. 20 humanities students searched Google least (50%). They were the most critical of the quality of the online information found. In Junni's (2007) study, psychology students used more journal articles than economics students, who, in turn, used more than mathematics students who relied on monographs and course literature. This implied that the Internet had not affected the availability of monographs or course literature. Both Barrett (2005) and George et al. (2006) found that people as sources of information are still crucial in the electronic age. The findings about knowing when to stop gathering information indicated that a majority did not know when to stop. Strategies students thought useful to help them determine when to stop collecting information included looking for repetition of information, supervisors' advice, starting the writing process, setting a completion date, having enough evidence to answer the research question, talking to other people to prevent reinventing the wheel and the deadline. Barrett (2005) also found that time constraints affected much on the decision on whether to concentrate on writing up the projects or to seek further information. The findings about managing the collected information indicated that more than half of the participants used software tools for information management including inputting short content summaries. This result was in line with the use of personal information software by

researchers cited by Bruce et al. (2004). But students were not always aware of the full functions of the software. Reliance of memory was still a main strategy to manage the information. Most students printed hard copies of the information obtained electronically to facilitate easier reading compared with reading on the screen. This was the reason for the need of managing both the electronic version and the physical version of the collected information. Williamson et al. (2007) concluded the above study by suggesting both librarians and supervisors help in all the three areas. Supervisors will help providing strategies for "knowing when to stop". Librarians need to know such issue and include necessary strategies such as those suggested by participants in this study in the information literacy instruction. Furthermore, librarians are trained to develop student information literacy skills including selection of information sources and the management of information. If information literacy was considered as an institutional responsibility, administration policy could be put in place to facilitate librarians to train students and academic staff the necessary skills. Institutional approaches were crucial for the expertise of the academic libraries to be used to promote information literacy. Williamson et al. (2007) agreed with Chapman (2002) that the reluctance of her participants to take training in electronic source use forces the library to collaborate with academic staff to ensure the training to be included in the curriculum and to promote the training by emphasizing the advantages and efficiencies obtained.

Higher order information literacy skills need to be taught through teacher-librarian collaboration

The following research studies about secondary students in Singapore imply that student information technology skills were more successful than information literacy skills. The reason was due to the lack of full time professionally trained teacher librarians and integration of information literacy skills into the school curriculum. Chang et al. (2012) developed a comprehensive overview of the information literacy context of Singapore. One of the foci was on the level of information skills of Singapore secondary students. In the Singapore education system, students in the top 10% of the national cohort are posted to the special stream in top-performing schools, while those in the next 50% are posted to the express stream in both top-performing and neighborhood schools. The subsequent 25% are posted to the normal academic stream. This study aimed to investigate the competencies of the students across streams and the order of information literacy skills they have acquired. 162 students from a normal academic school and 136 students from an express school were recruited as sample for this study. They were from Secondary 1 (13 years old) to Secondary 3 (15 years old). It was found that 86.24% of them had internet access at home contributed towards lower scores in information evaluation skills suggesting that students were less careful in judging the quality of information when considering online resources (Chang et al., 2012; Miriam et al., 2015). School libraries were mostly visited but the library resources were rarely used. This deprived them of the opportunities to learn information literacy skills from the librarians. When asked about

the people consulted across the different stages of the information process, friends were reported by the highest percentage of students for all tasks except information use, for which peers/classmates had the highest percentage. Of the big six information literacy skills, the best scored skill was task definition (mean score: 45.39%) and the least scored skill was synthesis (35.87%). Lower-order information literacy skills including task definition, information seeking strategy and location, and access, were possessed by more students than higher-order information literacy skills such as information use, synthesis and evaluation. It suggested more effort must be put into teaching higher order information literacy skills. Heinström's (2006) study showed that many students tend to decide the relevance of information based on the convenience in accessing. This study also found that students were weak at the following areas with scores ≤30%: seeking expert opinion; primary vs. secondary sources of information; organization of call numbers; OPAC; truncation; cross-comparison of content; fact, view, or opinion; authoritative information source; correct paraphrasing of ideas; citation style and journaling. Besides, students with better academic performance also had better information literacy skills. Laverty (2007) said that librarians can support student information literacy by creating genuine research topics, putting Googling in the research context, teaching online searching and discouraging plagiarism by personalizing assignments that track the information collecting process. In a study in community college libraries, Small, Zakaria and El-Figuigui (2004) argued that collaboration between librarians and professors is essential to the success of information literacy skills instruction. Training more teacher

librarians was another way out because good teacher librarians possess a detailed knowledge of educational pedagogy and a comprehensive understanding of school curriculum. They are also well-trained about information literacy theory and practice, which enable them to provide better information literacy instruction (ALIA, 2012). In Singapore, school libraries have long been underused and isolated from students' learning environment (Mokhtar and Majid, 2005). So, librarians have little contact with teachers and teaching objectives, except to locate books and reference materials, or babysit students who use the library (Manzo, 1997). In addition, it was found that Singapore school libraries did not have full-time professionally-trained librarians. The department heads of Information Technology were in charge of the school library, and more than three-fifths of them were without any professional library training (Majid et al., 2002). Singapore secondary schools should enhance the collaboration between teachers and school librarians, and promote the training of teacher librarian professionals to integrate information literacy into the school curriculum.

Conde et al. (2011) developed a diagnostic assessment of information literacy competence in more than 1000 Secondary Education students of 15 years old in the Spanish region of Castilla y León, belonging to 381 different state schools, to find out the existing contrast between the level of use of technologies (videogames, social networks…) and the level of information literacy of the students. The result on information literacy competences showed that the majority of students were able to create a text document (78.8 %) and to install and uninstall a program (71 %),while

only approximately a third (32.2 %) declared to be able to create a data-base. Students had high abilities when searching for information (91.8 %) and file downloading (77.5 %), they also declared to have a lower ability on publishing contents on the internet (36.9 %). It was found that information literacy is a nuclear integrative competence, not only in the technical use of ICTs, but also in the efficient management of information. Spanish students believed themselves experts in the use of ICTs, a fact that was actually turned into a lack of internalization of processes of correct management of information. Besides this, students declared that they should know more about information selection and popularization. Students showed a high use of computing tools, but had a low level of information competences.

Cooperative Planning and Teaching (CPT)

Recently, collaborative lesson preparation among teachers is developed in the education reform of Hong Kong (Curriculum Development Council, Education Department, HKSAR, 2001b). Henri (1990) argued that in the information society, what children learn at school has a very short life span because most of it is obsolescent when it is taught. Teachers cannot teach students all they need. They can teach them the ability to understand, analyse and apply information. Teachers also have to encourage students to be responsible for their own learning. Recently, emphasis has turned from the teacher as the transmitter of knowledge to the teacher as

facilitator of learning. Each student has his own learning style and each teacher has his own teaching style too. To get the best out of each student, class teachers may work with a range of colleagues and the students may be encouraged to work in small groups to incorporate peer tutoring techniques. Team teaching maximizes the learning of all students. Little's (1981, p.12-13) research showed that schools can be improved by

> "*Teachers engage in frequent, continuous and increasingly concrete and precise talk about teaching practice…… By such talk, teachers build up a shared language adequate to the complexity of teaching, capable of distinguishing one practice and its virtue from another*."

> *"Teachers and administrators plan, design, research, evaluate and prepare teaching materials together…… By joint work on materials, teachers and administrators share the considerable burden of development required by long-term improvement, confirm their emerging understanding of their approach, and make rising standards for their work attainable by them and by their students."*

Along with the emergence of the information society, the teacher librarian has become a special teacher who has special competence in planning effective learning such as resource based learning in collaboration with teacher colleagues. S/he is by nature and position a team person, cooperating with other teachers to enhance teaching and learning (Henri, 1990).

Henri (1990) claimed that Cooperative Planning and Teaching (CPT) is an instructional model in which the teacher librarian and the class teacher are equal partners in the instructional process. They share the responsibility for the planning,

implementing and evaluating of learning programmes that incorporate information literacy. Resource based enquiry approaches will be employed wherever suitable to maximize the contribution from the teacher librarian through the use of a wide range of learning resources, and the application of information skills.

> *"The role that each of the partners plays at any one time will vary. At times the partnership will entail little more than an exchange of ideas; at other times the input from both partners will be very detailed and time consuming and will result in a fully integrated unit of work. It is this latter type of cooperative planning and teaching that will result in the optimum use of the partners and is most likely to enhance student learning"* (Henri, 1990, p.10).

The Calgary Board of Education (undated, cited in Henri, 1990, p.11) has classified CPT into four types. Type 1 is defined as consultation leading to provision of resources. The teacher librarian provides resources upon request or suggests resources. The teacher asks for resources which may be taken to the classroom or responds to suggestions of suitable resources. Type 2 is defined as consultation leading to enhancement of classroom program. The teacher librarian tries to match resources to overall program needs and individual student needs. The teacher talks with the teacher librarian about classroom program needs. Type 3 is defined as cooperative planning leading to enhancement of the classroom program, and integration of the library program. The teacher librarian participates primarily in the planning and implementation of "library related" aspects of the unit. The teacher develops overall unit plan, plans with the teacher librarian in regard to specific aspects of the unit that will be implemented cooperatively. Type 4 is defined as cooperative planning leading to equally enhanced resource centre and classroom programs through cooperative

planning, teaching and evaluating. The teacher librarian plans, teaches and evaluates the entire unit in full partnership with the teacher. The teacher cooperatively plans, teaches and evaluates the unit with the teacher librarian.

It is vital as they work with teachers and administrators to develop and manage collections that include all formats and that support relevant, information-based learning. They aim to provide students with the opportunities and guidance to practice information literacy skills. Students will be trained as independent learners through the physical and intellectual manipulation of information. With the pivotal role for collaboration, the teacher librarian initiates efforts that are focused on meeting the learning needs of students, both inside and outside the library. They create links not only between the library programme and individual teachers but among all teachers to build a collaborative culture throughout the school community. Collaboration with the full range of school personnel to identify and solve information problems resembles the situation that students must take to thrive in the information age (American Association of School Librarians, 1998).

During CPT (Henri, 1990), the division of unit responsibilities of the teacher librarian should relate to process factors and information literacy. The information skills that are trained in a unit must be appropriate to the learners' need as it arises, in curriculum context, not scheduled at the beginning of the year, not just an extra item.

> *"When a decision is made to involve the teacher librarian in the assessment of student work, it makes sense to involve the teacher librarian in the assessment of*

> *the students and their use of information skills. It makes little sense simply to divide the students' work into two piles……The argument seems simple enough. Two heads must be better than one. Class teachers must benefit from the teacher librarian's knowledge about resources and information sources. After all, as Irving states, "The major problem faced by those for whom the information society will be the status quo is not that of acquiring information, but of rejecting the unnecessary and manipulating the essential"* (Henri, 1990, p.12).

Henri (1990) stated that class teachers may benefit from the teacher librarian's knowledge about resources, information sources and skills. They can benefit from getting a few trusted items and relevant information to the topic without going through unnecessary ones, if they have no time to read more than enough materials. To develop CPT, there is the ongoing need to educate the teaching staff to include a range of learning resources and instructional strategies in their daily teaching. This is the only possible way to do justice to the various effective learning styles developed. In schools where CPT has been effectively implemented, the staff shares a common vision and philosophies of education. They have built a full range of school policies which have been tested in the day to day teaching of the school (Henri, 1990).

Cooperative Planning and Teaching (CPT) in the big picture

Further to the discussion of information literacy in its wider context, I would like to depict the relations of different factors in CPT in a whole picture. Effective school instructional practice is determined by a number of critical factors. At the outer most

macro level is the global economy where output is mainly knowledge. The next inner level is the information society we are living in where the amount of information produced is staggering. Then within the society, being an education organization, the school depends upon shared values and concern to achieve the goal of preparing students as independent learners to cope with the information society. The principal plays the leadership role and provides guidance (Henri, 1990).

> *"the teacher librarian is a special teacher who like all other teachers should have an involvement in policy and curriculum development, instruction and the delivery of learning resources. In particular, the teacher librarian should not be tied to the school library resource centre. That is, the library is seen as a function, not a place"* (Henri, 1990, p.13).

The administrative aspects such as routine activities to maintain library services are often of a low level of difficulty which should be delegated to others. Management refers to the ability of a leader to get things done through other people. The teacher librarian's management function needs "people skills" to delegate routine tasks to the clerical assistant, to control noise in the library and to plan and teach with other teaching staff (Henri, 1990). CPT is facilitated by a flexible library timetable which is discussed below.

Flexible library timetable

Mills (1991) argued that to carry out CPT, administrative changes must be made in the use of the school library. The scheduled regular library visits by classes have to be

replaced by a flexible library timetable. Education today takes the students as the learners. The library accommodates the students' learning needs as they arises whether in small groups, as a class or individually. Its use is not determined by a schedule. Any policies that limit open access must be avoided.

Fisher (2000) strongly insisted that the library should be part of resource-based learning in schools instead of a manually enforced obligation. The flexible library timetable allows the following. Teachers will be able to decide the frequency and length of library time in need. Classes can be timetabled when the need arises in place of set "library lessons". Individuals, small groups and whole classes will have greater access to the library. Students will go to the library with the needs to solve problems making the library visit more motivated to learn and practice their locating skills. Individual students are able to seek immediate answers to the problems they encounter in the classroom. Small groups from different levels can share the same library space and time slot so long as the resources needed are different. The reference collection and audio visual resources will play their role as research tools which they should be.

> *"Lessons, activities, assignments on units of study will be planned co-operatively by the teacher and library staff by first checking to see the extent of relevant resources in the library. Teachers can share unit activities and resources more effectively and this save doubling up on preparation and time"* (Fisher, 2000, n.p.) (See appendix H).

Lessons will be customized to suit students and teacher requirements better than time restrictions. Literature and non-fiction books can play an active role in creative subjects such as Art and Writing. The library will be more involved in teaching how to learn. Library lessons mean school library programmes which are discussed below.

School library programmes in the information age

School library programmes have always been associated with information literacy and the role of the teacher librarian in the above literature. I would like to discuss school library programmes in the information age to illustrate this relationship. Below are the four objectives of school library programmes stated by American Association of School Librarians (1998):

1. To provide intellectual access to information through learning activities that are integrated into all content areas of the curriculum that help all students achieve information literacy by developing skills for selecting, retrieving, analyzing, evaluating, synthesizing, creating and communicating information in all formats.
2. To provide learning experiences that train students to be critical users and creators of information through comprehensive instruction related to communications media and technology.
3. To provide leadership, collaboration, and assistance to teachers in the use of instructional design principles when teaching application of information technology for learning.
4. To organize learning activities representing a multi-faceted experience, opinions, and social and cultural perspectives to support the concept that intellectual access to information are prerequisite to responsible citizenship in a democracy.

Constructivism and Constructivist approach to learning

In information literacy, knowledge is constructed as an end product. It is in line with constructivism discussed here to highlight the need of student centered education.

Constructivism asserts that knowledge is constructed. Learners should be provided didactic situations which allow participation in knowledge building. Knowledge can neither be transmitted nor be neutral. It is constructed and driven by a project. It lasted for as long as when used by its creators to organize reality (Glasersfeld, 1998). Knowledge cannot be directly transmitted from the source to the receiver. Students' efforts should be oriented at construction. The way of passing on knowledge should help students

> *"reflect on the processes, referents, and scope of their constructions and aid them in becoming acclimatized to the singular nature of the elements and activities from which other constructions ─ including those of a scholarly variety ─ are generated"* (Glasersfeld, 1998, p.8).

Everyone has something inside their mind. They have survived, tested and developed ways of coping. They can understand the gestures and words of their teacher only according to the experiment and operative abstractions which they have developed previously. It is impossible to get into someone else's mind. We can only read students' mind by useful assessments about what is occurring in their heads. Interest and sympathy are needed in order to develop one's own mental model of another person.

So, what the teachers say cannot be funneled into students' head which are all unique. Transmitting knowledge in this way is called passive learning in which teachers do not take students' thinking into account (Glasersfeld, 1998).

> *"If we repeatedly tell children that their solutions to problems are wrong, we should not be surprised that their enthusiasm for tasks involving numbers dries up. If, instead, we ask children, "How did you go about getting this answer? we discover that in many cases they are capable of seeing for themselves that something did go wrong. At that point, children become aware that it is they who are capable of constructing solutions to problems and that they themselves can decide whether something works or does not. This is the beginning of self-regulation, of a feeling of autonomy, and, as a result, the start of a potentially active learning process"* (Glasersfeld, 1998, p.28).

Epistemological reflection in action enables students to take charge of their learning process. Teaching strategies involving students becomes meaningful in terms of learning (Glasersfeld, 1998). Amerio (1991, cited in Glasersfeld, 1998, p.20) has stated that if thinking is reconstructing, a knowing subject eventually refuses existing reality, imagines alternatives and devises actions directed at change. In constructivism, the knowing subject is also an acting subject.

Summary

The different interpretations of the role of the teacher librarian attract local researches by the government, the University of Hong Kong and the teachers' union to investigate the roles of the teacher librarian in Hong Kong. Similar problems in adjacent areas such as China, Taiwan, Japan, Korea attracted an international joint

research project about the roles of teacher librarians in their schools. There is scarcely any research in Hong Kong investigating the perceptions of the teachers about information literacy in relation to the role of the teacher librarian. The knowledge of how teachers view information literacy, the extent to which teachers feel necessary to develop student information literacy skills and the way to do so in collaboration with the teacher librarian, provide the basis for planning and implementing this slice of the education reform. This research is designed to collect teachers' perceptions of information literacy skills in relation to the role of the teacher librarian. The research title and questions are discussed below.

The research title and questions

The title of this research is: Information literacy skills: Hong Kong primary teachers' perceptions of the role of the teacher librarian. The following questions are derived from the research title:

1. What are teachers' perceptions of information literacy skills?
2. What are teachers' perceptions of the role of the teacher librarian?
3. Who do teachers think are responsible for developing student information literacy skills?
4. Do teachers feel able to teach information literacy skills?

The methodology design to carry out this research is discussed in chapter three.

Introduction

This research asks “What are Hong Kong primary teachers’ perceptions of information literacy skills and the role of the teacher librarian?” To do this, I sent self-completed questionnaires to primary school teachers and did semi-structured face to face interviews with six teachers to gather data. This chapter will explain the method I have used and why I have chosen to do it in this fashion. This chapter will also discuss the ethical issues involved, sampling in the questionnaire survey, the collection and analysis of the data, and the limitations of the method.

Interpretivist research approach

I have chosen to take an interpretivist approach to this research and will explain this decision. Interpretivists emphasize the need for social action to be meaningful to actors and, therefore, that it needs to be interpreted from their point of view. (e.g. Hughes 1990 cited in Bryman, 2008,p.16). As the aim of this research is to gain access to primary teachers’ perception of the role of the teacher librarian, their reports of the way teachers interpret the social world around them and their related action is the primary focus of the research.

Ontological issues refer to whether social entities are objective entities external to social actors, or they are social constructions built from the perceptions and actions of social actors (Bryman, 2008). Objectivism holds an ontological position that social phenomena are external facts to human beings that are beyond their reach or influence. Positivists think that the reality is there and the researcher's job is to discover that reality (Guba & Lincoln, 1994, cited in Mertens, 2010, p.14). In contrast to these two positions, this research looks at the views of Hong Kong primary teachers' on information literacy skills and the role of the teacher librarian. I argue that this is a social reality as discussed in Literature Review under the title "Review of the interrelated ideas leading to the better use of school libraries in the information age" and its subtitle "Teachers' perspectives and their classroom practice". The degree teachers understand the use of the school libraries in the information age are reflected in their classroom practice and their collaboration with the teacher librarian.

Constructivism is an ontological position that views social phenomena as socially constructed through social interaction. Researchers' interpretations of the social world are constructions. They continuously provide a specific version of social reality. This research aims to interpret the existing social reality of the role of the teacher librarian through the self-reported views of the teachers involved with those librarians.

Interpretative theory generated during the research

Heidegger (1927/1962) (cited in Merterns, 2010, p.16) claimed that all meaning, including research findings, is fundamentally interpretive. The schools in which teachers work are the social context where teachers make sense of and act in**.** Moreover, in this study, there is a further level of interpretation when I interpret the interpretations collected from the research participants in terms of the concepts, theories and background literature of the research (Bryman, 2008) which is information literacy. Gaining access to teachers' perceptions of information literacy skills will provide insights into teachers' perception and may draw some implications from these. This level of interpretation provides the social reality concerning the impact of information literacy skills to teachers and students in Hong Kong in this information age.

Implication rather than theory generation

There is relationship between theory and research after the collection and analysis of the data referring to whether we are using a deductive or inductive theory. Some researchers call the relationship an approach. A deductive approach refers to hypothesis being deduced from a theoretical consideration and then tested by data collection. The results are then fed back to the original theory. This research adopts a deductive approach while collecting data by the questionnaire because the questions

have been structured bringing in some of the existing literature to bear in structuring what answers respondents can give me. There is a relationship between the answers to the questionnaire and the interview questions. For example, when creating questions for the face to face interview in this study, I based on the questionnaire survey results. In the questionnaire survey, the data showed that respondents agreed that teaching and learning have changed in certain ways since the presence of the teacher librarian in 1998. In order to understand how the changes had been brought about, I asked interview questions to collect examples of changes from the interviewees in the face to face interview. Another example was asking the interviewees their views of the ten role items of the teacher librarian legislated in 1998 and the four roles legislated in 2002which were difficult to collect in the questionnaire survey.

The reason for choosing a mixed method approach

According to Bryman (2008), quantitative approach emphasizes quantification in the collection and analysis of data which include a deductive relationship between theory and research aiming at testing of theories. Qualitative approach emphasizes meanings rather than quantification in the collection and analysis of data. Mixed method research approach combines quantitative and qualitative approach. This research takes a mixed method research approach by using both self-completed questionnaire survey which is largely quantitative and face to face interview which is qualitative to collect data.

There were 22,173 primary school teachers in the school year 2012-2013 (Education Bureau, HKSAR, 2013). To access the perceptions of such a large number of teachers, a questionnaire was the best technique, supplemented by a small number of face-to-face interviews (Gillham, 2000) instead of just interviewing people only. "*The pragmatic paradigm is the most recent addition as a philosophical base for some mixed methods research*" (Mertens, 2010, p.39). Pragmatists are free to study topics of their interests and of value to them, study them in ways that they think appropriate, and utilize the results to bring about positive consequences within their value system (Tashakkori and Teddlie, 1998, p.30 cited in Mertens, 2010, p.38). I am going to find out what teachers' views about teacher librarians in Hong Kong are. The data collected in the quantitative approach via questionnaires can be further expanded by the data collected in the qualitative approach via face to face interview. In an interpretive stance, mixed methods can be used to collect both qualitative data and quantitative data because these are the methods of getting the participants' interpretations of the world.

There are three approaches to mixed method research namely Triangulation, Facilitation and Complementarity (Bryman, 2008). This research takes the Complementarity Mixed Method where "*two research strategies are employed in order that different aspects of an investigation can be dovetailed*" (Bryman, 2008, p.607).Questionnaire and interview are used where the data collected from the

self-completion questionnaire and the interview complement each other. The quantitative data collection precedes the qualitative data collection. After analyzing the questionnaire data, interesting data were identified such as the changes reported in school practice since the establishment of the new post of the teacher librarian. Interview questions were then designed to ask interviewees for examples of such changes which could not be accessed in the questionnaires (Bryman, 2008). Similarly, there were several roles of the teacher librarian reported in the questionnaire. Further questions were asked in the interview to find out teachers' perceptions of each role.

However, questionnaires do have some limitations. For instance: "*Questionnaires are often completed hastily and carelessly*" (Gillham, 2000, p.9). You never know why the respondents choose such answer, or whether they are free to choose (Gillham, 2000). Questionnaire "*surveys rely on individuals' self-reports of their knowledge, attitudes, or behaviors*" (Mertens, 2010, p.173). The validity of the information depends on the honesty of the respondent. People are often cautious about putting things on paper especially personal data. So questionnaires data may be superficial (Gillham, 2000). There are advantages to doing interviews. Respondents may trust an interviewer more than a questionnaire. So interviews can gain in-depth and validity.

Teachers and teacher librarians' daily practice is a human activity which has several dimensions. Questionnaires alone are not adequate when dealing with a complex, real-world situation. Different methods have different strengths and weaknesses. A

range of methods can put together a more adequate picture (Gillham, 2000). In order to get a more adequate picture of teachers' views of information literacy skills and the role of the teacher librarian, both questionnaires and face to face interview are used.

Insider stance

This research has some characteristics of practitioner research such as being active, experience based, linking theory and practice, being illuminative, situated and reflective (Costley, Elliot and Gibbs, 2010). The aim was to discover and develop knowledge embedded in the practice of a teacher, a teacher librarian and a tutor for training teacher librarians as discussed in chapter one under the title "In-service training and professional development of teacher librarians". This was thus an insider research. My position inevitably influenced this research. My interest in doing this research, the way it was conducted and the research topic had been greatly affected by my working experience. The interpretation of the findings might be influenced by my point of view of a teacher, a teacher librarian and an instructor for training teacher librarians at the same time. The International Association of School Librarianship (IASL) of which I am a member and the teacher librarian market forces in Hong Kong may also have had a bearing on this research in the wider context.

I was in a unique position to study the teachers' perspectives of the role of the teacher librarian in depth and with special knowledge about it. Not only did I have my own

insider knowledge, but I had easy access to primary teachers and information that could further enhance this knowledge. I was in a prime position to investigate and suggest changes to utilizing the teacher librarian in schools. I could make challenges to the status quo from an informed perspective. I had an advantage when dealing with the complexity of teacher librarians' work situations because I had in-depth knowledge about it. "*This is vital when exploring a problem or issue in a detailed and thorough way*" (Costley, Elliot and Gibbs, 2010, p.2). I could understand the tensions between the specific role of the teacher librarian and the teachers' perspective of them in general.

During the data collection, careful attention was given to guard against insider bias and to ensure validity in the work (Murray and Lawrence, 2000, cited in Costley, Elliot and Gibbs, 2010, p.6) by excluding school samples where my teacher friends work to prevent their inputs in the case that their ideas might have been influenced by me.

Ethical issues

This was a study about peoples' professional opinions. It was important to conduct it ethically. I had passed through the university ethical approval system. The clearance in the consent form was attached here as Appendix C. An information sheet attached to the consent form was sent to participants to spell out the nature and purpose of the

research project (See Appendix E). This was to ensure they understand their involvement in it and agree to take part by signing the consent form and return to me. Participants were given the opportunity to withdraw from the research project at any stage and that this would not affect their status now or in the future. While information gained during the study might be published, they would not be identified and their personal results would remain confidential. The consent to the researcher was gained to share aggregated, anonymous findings from the research with the school principals. Participants understood that they might be asked to take part in additional face to face interviews, in case further detail was sought. In such occasions they would be audio-taped during the interview in order that an accurate transcription of their answers to the interview questions was obtained. They understood that data – including hard and electronic copies of transcripts – would be stored as Microsoft Word files with the researcher, the supervisor and the University of Nottingham only. Nobody was going to be able to be identified by their name or even by the close description of where they work, so that their privacy was protected. They would have access to the research report on request. They understood that they might contact the researcher or supervisor if they require further information about the research, and that they might contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if they wish to make a complaint relating to their involvement in the research.

During the second interview piloting, the respondent asked how the sound recording

would be treated which she and her husband would like to know. I repeated to her the statements below in the consent form she had signed:

I understand that I might be asked to take part in additional face to face interviews, in case further detail is sought. I will be audio-taped during the interview in order that an accurate transcription of my answers to the interview questions is obtained.

I understand that data – including hard and electronic copies of transcripts – will be stored as Microsoft Word files with the researcher, the supervisor and the University of Nottingham only. I will have access to the research report on request.

I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research.

Data collection

Quantitative data collection

Self–completion paper/online questionnaire

In order to get answers from primary teacher participants to the research question of teachers' perceptions of information literacy and the role of the teacher librarian by

questionnaire, I determined the questions to be asked based upon the key issues I have raised in my review of literature. Having established in my review of literature that the key issues were information literacy skills become important skills in this information age under the title “The impact of information age on human survival skills”, and these skills need to be trained as early as schooling under the title “The need to develop information literacy skills”, the role of the teacher librarian in training student such skills in collaboration with classroom teachers under the title “the role of the teacher librarian”, others especially primary teachers were unclear about the nature and responsibilities of the teacher librarian even though the roles were legislated in chapter one under the title “interpretation of the legislated teacher librarian role”, I sought to ask the limited number of questions to explore teachers’ views without asking too many questions so that teachers would not answer the questionnaire. I also determined the range of answers to be given (Gillham, 2000) according to the question type. The questionnaire was attached here as Appendix K.

Compound questions and jargon were avoided (Gillham, 2000). With Survey Monkey commercial website (Survey Monkey, 2016), online questionnaires could be designed to facilitate automatic data input by respondents who opted so. All replies were logged. The entire data set could be retrieved, analysed and displayed. The likelihood of errors in the processing of data could also be reduced. Some teachers who were not used to answering questionnaire online might simply want to fill out paper questionnaire. So the URL of the online questionnaire was emailed to participants who opted to answer

it online. Principals were asked to provide such email addresses and teachers' name of the target respondents. Below were the areas I wanted to ask about in the self-completed questionnaire:

1. Demographic information.
2. Hong Kong primary teachers' perceptions of the role of the teacher librarian.
3. Teachers views of the newly established post of the teacher librarian in each school since 1998.
4. Teacher librarians' practice within the school.
5. The role of the teacher librarian has been filled by people of different status ranging from part-time non-teaching clerical assistants to full-time teacher librarians. The impact of the above has on how teacher librarians are perceived and the roles that they can fulfill.
6. Hong Kong primary teachers' perceptions of information literacy skills.
7. Teachers' understanding of information literacy skills.
8. Teachers' perceptions of their ability to develop information literacy skills amongst their students.

The data collection tools ranged from short questions, multiple choice questions to open ended questions. There were four types of questions used according to the content to be asked. Firstly, demographic questions were used to ask about the personal characteristics of the respondents. Some of them served this research specifically (Mertens, 2010). For example, the year respondents started teaching was asked in order to group those who started teaching before 1998 together and then later,

asked them to compare school practice with and without the teacher librarian since the establishment of such post in 1998. Another example was to ask whether they are classroom teachers or teacher librarians and whether they had been teacher librarians in order to ensure that classroom-teachers' views only, not teacher librarians' views were collected. Other questions asked about their age range, sex and the subjects taught. These were mostly short questions. For subjects taught, closed formats questions were used in which the respondent chooses from a list of possible options (Mertens, 2010). The second type of questions was non-threatening behavioral questions (Mertens, 2010) which asked respondents about changes in school practice since the establishment of the teacher librarian and their perceived role of the teacher librarian. Again a list of potential changes and roles were provided for respondents to choose from. The disadvantage of closed questions was that the answers were decided by the researcher. This problem was partially addressed by adding an "other, please specify" option so that respondents could use their own words to express their answers.

The third type of questions is knowledge questions which asked how much respondents know about the implementation of the legislated roles of the teacher librarian in schools (Mertens, 2010). For example, they were asked who mainly taught students how to use information in an ethical and responsible way. They were asked to choose only one from the following: the teacher librarian, no one, another person and "I am not sure". If they chose another person, they needed to specify who the person

was. The advantage of using knowledge questions was that I could obtain information of the interpretation of respondents' expressed opinions. The disadvantage of using knowledge questions was that respondents might not have the presumed knowledge about various topics (Mertens, 2010). So it was important to avoid jargon (Gillham 2000).

The fourth type of questions was attitude questions. The perceptions of teachers were described in a statement. Teacher respondents indicated their level of agreement and disagreement. Five points Likert scale was used to get the extent of agreement of respondents to the statement. The advantage of limiting the rating scale to five was for respondents to remember all of them (Mertens, 2010). For example, Question 19 "Information literacy skills are necessary in the information age. Please show the extent of your agreement". The following choices were provided: strongly agree, agree, not sure, disagree and strongly disagree. Then teachers were asked to give reasons for their choices. Preston and Colman (2000) stated that respondents prefer multiple-category scales allowing them to express their feelings sufficiently. In practice, the middle option in the Likert scale is problematic (Kulas and Stachowski, 2009). Some responders may have a genuine, moderate stance on a statement, while others may lack any definite attitude, or feel inadequately informed to take a position (Kulas et al., 2008), or refuse to commit to a definitive response. Some choose this category simply because a more appropriate choice (such as I don't know, It depends, or I can't decide) is not provided. Based on a series of studies, Baka, Figgouand Triga

(2012) found that the midpoint is selected by two groups of participants: non-attitude participants and undecided participants. The reason for participants to choose the middle category was further examined by having them justify their responses. Four justifications were found: they lacked the knowledge or were indifferent (25%); they felt ambivalent (44%); they were arguing with aspects of the question (30%); or they were showing that they knew nothing about the issue (23%). These findings imply that participants may be expressing the midpoint in ways not expected by researchers. There was an additional disadvantage in a Confucian heritage cultural context where people tended not to seek conflict and tended to prefer to be seen to be positive which means disagree and strongly disagree was much less likely to be used. People would choose "not sure" in preference to "disagree". This would need to be considered in evaluating the results.

Piloting quantitative data collection

I needed the consent to participate in the research from the principal of each school before I could access the teachers. So school principals were contacted first. Three schools were picked by convenience sampling while piloting the questionnaire (Gillham, 2000). In the letter to the principal, I asked the principal of each school to deliver the questionnaire to four teachers. Altogether twelve teachers filled in my questionnaire.

Objectives

The objectives of the pilot work were to:

1. Determine the appropriateness of the following survey instruments and documents:

   The letter to principals (See Appendix I, J);

   The information sheets to the principals and class teachers who are not teacher-librarians (See Appendix E-H);

   The consent forms to be signed and sent back by the principals and participants(See Appendix C-D) and

   The bilingual questionnaire for piloting (See Appendix K).

2. Trial the logistics of the survey

Method, time and sample size

Four teachers from each of the three schools, one government school and two subsidized schools were invited for inclusion in the pilot study. The objectives of the pilot study were communicated to each principal and the following were handed over to them:

The letter to the principals;

The information sheet for the principals;

Four information sheets for the class teachers who are not teacher-librarians;

Five participant consent forms and

Four bilingual questionnaires.

The background, introduction and the URL of the questionnaire did not appear on the paper questionnaires. Principals were asked to email the names and email addresses of four participating teachers to me so that I could email the URL of the electronic questionnaire to the participants for answering online if they chose to do so.

Results and implications

Principals did not sign the consent forms nor did they email the researcher. They assigned intermediate teachers to identify participating teachers. So the hard copy questionnaires were given to four teachers who completed and returned to me. A total of twelve teachers of all subjects answered the questionnaire. All answered on paper. Only nine signed consent forms were received. Six of them were chased up by me after they had answered and mailed back the questionnaires to me. One teacher was willing to be interviewed in the future and provided her name and email address. It took fifteen minutes for me to transfer the data from one printed questionnaire manually into the bilingual online questionnaire to allow calculation works done by Survey Monkey. The participating teachers told me that the questionnaire was too lengthy and there was too much information to be read. As a result of these comments, the following changes were made.

Questions revised as a result of the pilot

Seven out of twelve respondents had chosen more than one answer in questions 10 to 15. They were considered as invalid. The online version guarded the responses to one

answer only but the printed version did not. There was difficulty controlling multiple responses on the printed version. So I had changed the words used in questions10 to 15 to clarify it as follows:

Original Q10

In your school, who works with the subject teachers to provide curriculum and extracurricular activity related reading resources?

☐The teacher librarian

☐ Another person

☐ No one

☐ I am not sure

If you have ticked “another person", please specify_____.

Revised Q10

In your school, who is mainly responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extracurricular activities? Please select only one option.

☐The teacher librarian

☐ Another person

☐ No one

☐ I am not sure

If you have ticked “another person", please specify_____.

Original Q11

In your school, who works with the subject teachers to design curriculum and Extracurricular activity related reading tasks? (The choices of answers are the same as Q10)

Revised Q11

In your school, who is mainly responsible for co-teaching with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extracurricular activity related reading materials for students? Please select only one option. (The choices of answers are the same as Q10)

Original Q12

In your school, who develops teachers' and students' information searching skills in the use of the school library collection? (The choices of answers are the same as Q10)

Revised Q12

In your school, who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection? Please select only one option. (The choices of answers are the same as Q10)

Original Q13

In your school, who evaluates the school library collection in terms of its relevancy to support the curriculum? (The choices of answers are the same as Q10)

Revised Q13

In your school, who is mainly responsible for planning cooperatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library? Please select only one option. (The choices of answers are the same as Q10)

Original Q14

In your school, who trains student librarians and library assistants to assist in managing the school library? (The choices of answers are the same as Q10)

Revised Q14

In your school, who mainly trains student librarians and library assistants to assist in managing the school library? Please select only one option. (The choices of answers are the same as Q10)

Original Q15

In your school, who teaches students how to use information in an ethical and responsible way? (The choices of answers are the same as Q10)

Revised Q15

In your school, who mainly teaches students how to use information in an ethical and responsible way? Please select only one option. (The choices of answers are the same as Q10)

Since the choices in question 9 are the stems of the questions 10 to 15, question 9 had also been revised accordingly as below:

Original Q9

Which of the following is the responsibility of the teacher librarian? Please choose the statements which apply to your school. You may choose more than one.

☐ 1. Work with subject teachers to provide curriculum and extracurricular activity related reading resources.

☐ 2. Work with subject teachers to promote curriculum and extracurricular activity related reading tasks.

☐ 3. Develop teachers' and students' information searching skills in the use of the school library collection.

☐ 4. Evaluate the school library collection in terms of relevancy to support the curriculum.

☐ 5. Train student librarians and library assistants to assist in managing the school library.

☐ 6. Teach students how to use information in an ethical and responsible way.

☐Other. Please specify_____.

Revised Q9

Which of the following is the responsibility of the teacher librarian? Please choose the statements which apply to your school. You may choose more than one.

☐ 1. Identifies, procures, manages and supplies reading materials for students relevant to the curriculum and extracurricular activities

☐ 2. Co-teaches with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extracurricular activity related reading materials for students

☐ 3. Develops teachers' and students' information searching skills and information literacy skills in the use of the school library collection

☐ 4. Plans cooperatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library

☐ 5. Train student librarians and library assistants to assist in managing the school library.

☐ 6. Teach students how to use information in an ethical and responsible way.

☐ Other. Please specify.

<u>The survey logistics needed revising</u>

As a result of the pilot above, I edited the questionnaire to a monolingual Chinese,

Guangdong Hua, full form characters and printed on both sides of the paper making it less lengthy. As teachers in Hong Kong teach and communicate in Guangdong Hua, in full form characters, it is reasonable to assume that this is their first language and they are functioning well in that level.

To give more information to each teacher, the information sheet with the background, introduction and the URL of the questionnaire were added as a cover letter (Bryman, 2008) at the beginning of the questionnaire so that participating teachers could always access and answer it online if they chose to do so. A mixed mode of both online and conventional hard copy questionnaires were administered to provide alternative ways of responding.

Some changes to the proposed administration of the questionnaire were made as a result of the pilot. There were 524 primary schools in 2011 (Information Services Department, Hong Kong SAR Government, 2012) when the research was conducted. Questionnaires were sent to every tenth schools, amounted up to 52 schools in the first batch of schools. I targeted the return of 40 answered questionnaires from respondents. If the targeted number of return was not reached, more batches of schools were sent with the questionnaires until 40 answered questionnaires were received.

A deadline within 2 to 3 weeks to return the questionnaire was stated so that participants would prioritize it over other tasks. In the final distribution, I used colour

paper for principals' documents so that they would not be mixed up with the teachers'. The letter to the principals was added to the top of the information sheet for principals to reduce the number of documents. A letter was used instead of emails because principals would not response to emails they thought were not important.

As a result of the pilot I revised the letter to principals, I deleted the part in the letter requesting the principal to provide the names and email addresses of four participating teachers. Hard copy questionnaires were sent to the principals to be distributed to the teachers. "Answering the questionnaire means that you are giving the consent to participate in the research" was added at the beginning of the questionnaire in case teachers were too busy to sign and mail back the participant consent form.

The data collected from the pilot questionnaire addressed the research questions and the subsidiary research questions. There were also the reports of the developments that have taken place in schools since the initial setting up of the post of the teacher librarian. I was interested and would like to know how these happen by asking the interviewees to provide examples or further elaborate in the face to face interview. Also, there were several roles of the teacher librarians reported by teachers. I was interested in teachers' perceptions of these roles, so further questions about the perceptions of these roles were asked in the face to face interview. Please refer to Appendix L for the Piloting Work Report of Quantitative Data Collection.

Quantitative data collection by questionnaires

This section will discuss the administration of the questionnaire. Hard copy questionnaires with a cover letter (See Appendix M) drawing prospective respondents' attention to the online option together with the necessary link were sent to principals for distributing to four teachers as respondents.

The first batch of questionnaires was sent to thirty seven schools, each with four questionnaires for teachers, on 2 May, closed on 22 May 2012. Twelve responses were received by post. One response was received online. On 5 May 2012, I received a letter from a principal with unsigned consent forms and unanswered questionnaires. The second batch of questionnaires was sent to fifty seven schools, each with four questionnaires for teachers, on 4 June, closed on 30 June 2012. Reminders to the first batch schools were sent on the same day. The names of the schools that have responded were not known. Therefore reminders were sent to all the schools in the previous batch (Gillham, 2000).Some schools received them on 12 June with the date recorded on the envelopes returned. The third batch of questionnaires was sent to fifty two schools on 9 October (dated 12 October), closed on 26 October 2012. Reminders to the second batch of schools were sent too. The date of the letters was adjusted to the approximate date when schools received them, not the date they were sent out to allow a few days for postal delivery. On 6 December 2012, I received four individual

questionnaires unanswered in individual envelopes. The way of sealing up the envelopes was the same showing that the principal did not distribute them to the teachers but just asked someone to mail back to me. Four questionnaires were sent to each of the 146 randomly chosen schools for the four teachers chosen by the principal to answer. Altogether 584 questionnaires were sent. I received 75 responses in total. The response rate was thus 12.8%. I loaded all the answers into Survey Monkey to produce descriptive reports. The data collected via the questionnaires were recorded in the Survey Summary (See Appendix N).

The questionnaires ended up with an invitation to volunteers for an interview. The questionnaire survey led to semi-structured interviews with a small number of those who had answered the questionnaire and expressed their willingness to be interviewed. From the result of the Piloting Work Report of Quantitative Data Collection, the need for further methods to collect more detail data was apparent. Interview questions were clearly explored, identified and developed. More importantly, a face-to-face interview illuminates what the questionnaire responses might mean (Gillham, 2000).

Qualitative Method

This section will consider the selection and conduction of the face to face interviews.

Drafting the face to face interview questions

In light of the Piloting Work Report of Quantitative Data Collection and the data collected via the questionnaires, interview questions were drafted to interview the questionnaire respondents who had expressed willingness to be interviewed to further discuss the role of the teacher librarian. Below were the eight topics of the interview questions:

The questionnaire survey summary showed that 94.6% respondents agreed that the government provided an additional teaching post for undertaking the duties of a teacher librarian in aided ordinary primary schools. So question one asked teachers how much they knew about the role of the teacher librarian in their schools and to describe it to their best knowledge spontaneously.

If the respondents could not describe the above, respondents were introduced the 2002 legislated four roles of the teacher librarian as discussed in chapter one under the title "The legislated teacher librarian role in 2002". The four roles were reading resource and programme coordinator, information and media specialist, teaching partner and curriculum facilitator. Respondents were asked to say something about the four roles in terms of the following hints. I listened to how the interviewee responded in order to decide on the appropriate or the next hint. Furthermore, the questionnaire survey reported that there were several roles of the teacher librarian and different people in schools were performing the duties of the teacher librarian. The following questions were asked to collect details in schools regarding the role of the teacher librarian:

1. Whether that was something that he/she was doing in their school.
2. Whether that should be solely the responsibility of the teacher librarian.
3. Their responses to it.
4. Whether that was a good use of the resources in schools to be supported by reasons.
5. Whether they thought that could be fulfilled by non-teaching clerical staff to be supported by reasons. If the answer was "Yes", I continued to ask the way these non-teaching clerical staff supported the curriculum.
6. Whether they liked the post of the teacher librarian to be used in different ways with specification.

For the role of the information and media specialist, the following hints were used to guide respondents as appropriate:

1. Whether they thought that they need a specialized teacher who teaches information literacy skills solely to be supported by reasons.
2. Who they thought had the responsibility for developing students' information literacy skills and attitudes in using information.
3. Whether that should be the teacher librarian in relation to another teacher who had the responsibility for information skills.
4. Whether that was the responsibility for all the teachers. If so, what the training requirement was needed for all the teachers for them to be able to do that.
5. Whether they thought that could be fulfilled by non-teaching clerical staff and to be supported by reasons. If the answer was "Yes", I continued to ask, "and you

are expecting them to be information specialists, how do they support the curriculum and classroom teaching?"

For interviewees who started teaching before 1998, they were asked to recall their memory of what they had seen when the teacher librarian post was first introduced to schools in 1998 in terms of:

1. Whether they could remember how that had been received in their school.
2. What they thought about it at that time regarding the 1998 legislated role items (a) to (j) by the government as discussed in chapter one under the title "Legislated teacher librarian role in 1998".
3. Whether they thought those were important.
4. Whether those represented good description of the role of the teacher librarian.
5. Whether there were additional points they would like to see in those job descriptions from items (a) to (j).

For interviewees who started teaching after 1998, they were asked about their responses to the role items (a) to (j), whether they thought those were important, whether those represented a good description of the role of the teacher librarian and whether there were additional points they would like to see in those job descriptions from items (a) to (j)

Respondents were asked whether the teacher librarian could do all the above roles, whether people should be appointed to the post of a teacher librarian on a full time or part time contract to be supported by reasons, whether they thought the role of the teacher librarian was unique and whether it would be possible for another person

within the school to fulfill the duties of that role to be supported by reasons.

I had the interviewees' completed questionnaire at hand for checking their answers to the questionnaire question number eight where they had reported different changes in teaching and learning in their school made by the presence of the teacher librarian since 1998. For each of the changes they had reported, they were asked to add further information to those changes and tell me why they thought that. The following were the changes:

1. learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library.
2. in project learning, students are guided to search for information from the school library to answer the project questions.
3. library lessons can be scheduled when the need arises instead of when a library lesson was timetabled.
4. library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.
5. students learn how to solve a problem on their own by searching for relevant information from the school library.
6. teaching and learning resources are provided by the teacher librarian on request.

The questionnaire survey reported teachers' specification of how they understood information literacy skills in their own words. Most related information literacy skills with information technology skills and information skills. So, interviewees were asked

to compare information skills, information literacy skills (in this research title) and information technology skills, how they developed their own information literacy skills, whether they thought their own development was taken alongside with the work they need to do with their students and whether those skills had developed in conjunction with their teaching of those skills to their students.

The questionnaire survey reported some teachers' disagreement that they are able to develop student information literacy skills without the collaboration of the teacher librarian. So interviewees were asked about the advice they would give to teacher training courses for the preparation of teachers in teaching information literacy skills. Respondents were asked if there were supplementary comments they wished to make concerning the role of the teacher librarian since they last responded in the questionnaire survey.

Qualitative data collection

"*One interview for every ten questionnaires is quite a substantial back-up*" (Gillham, 2000, p.83). Invitations to be interviewed were emailed to the five respondents who expressed willingness in the questionnaire. Number one was interviewed. Number two changed school when I contacted him. He introduced another female teacher in his previous school who had answered the questionnaire to be interviewed. Number three

mistook my email requesting to be interviewed as spam mail and did not reply. When I sent a reminder email to her, she then remembered that was what she promised. She was also interviewed. Number four and five did not respond. Three more teachers from the pilot schools were invited by my retired teacher friends to be interviewed by me. They were not known to me before. The time and venue of the interviews were arranged in mutual convenience. Six teachers were interviewed individually in February 2013. The interviews were conducted in Guangdong Hua as this was their first language. It started out by asking interviewees to describe the teacher librarian role in their school. Then they were asked to talk about the government legislated teacher librarian role in 1998 and 2002. Next, they were asked to talk about their awareness of and the ways of developing their own information literacy skills alongside with the work they needed to do with the students. Their responses were recorded and transcribed. The transcripts of the interviews were sent to the interviewees for their confirmation and approval. One interviewee would like to clarify her expression. I sent her the sound file for double checking. Then she agreed with the original transcript. The transcript was then translated into English before data analysis. The answers to the open-ended questions in the questionnaire were also translated into English and integrated into the data collected in the interview during the data analysis.

Data analysis

Analysing the questionnaire survey data

I loaded the questionnaires into Survey Monkey (Survey Monkey, 2016) and looked at the descriptives it provided.

Analysing the face to face interview data

Thematic analysis (Bryman, 2008) was applied to search for the themes from the transcripts of the interview. A theme was more than a code used in the coding processes in grounded theory. It was built up by groups of codes which described an opinion of the teachers of the role of the teacher librarian. Framework provided a general strategy for thematic analysis which was a "matrix based method for ordering and synthesizing data" (Ritchie et al. 2003:219, cited in Bryman 2008, p.554). First, an index of central themes and subthemes was constructed. They were represented in a matrix of an excel file. For example: The central themes "Teachers' perception on the role of the teacher librarian_Positive" became the file name of the excel file. Subthemes: CPT to provide resources, Teach IL skills, Curriculum support, Student librarian training, Manage the central library, Reading promotion, Coordination and management of reading material became the names of different sheets of the excel file. On each sheet, the six interviewees were named from 1 to 6. They were displayed in the six cells of the left hand side first column respectively (see Appendix O). The

transcript was read and reread thoroughly to look for the following (Ryan and Bernard, 2003 cited in Bryman, 2008, p.554-555):

- *"Topics that appear again and again*
- *Expressions that are unfamiliar or used in an unfamiliar way*
- *Thoughts that are represented in metaphors or analogies*
- *Similarities and differences"*

The central themes and subthemes were recurring motifs in the transcript. For example, one of the central themes was "Teachers' perception on the role of the teacher librarian_Positive".

Its subthemes:

CPT to provide resources, such as "*coordinate the main subjects* (Q1, I6), *provide some Extensive Reading Books to us. Those books have been duly discussed previously...with subject teachers together to see how to use those Extensive Reading Books* (Q1, I5)."

Teach IL skills, such as "*help provide some information for students as to how to collect data, how to find and apply information* (Q1, I5), *promote library books teaching...coordinate teaching subjects associated with the Library Book Teaching, to teach ... information literacy*(Q1, I6)."

Curriculum support, such as "*take a look at teaching to see how to use resources to help students learn* (Q1, I5), *integrated reading into the curriculum development, teach children some reading skills and reading strategies tied to the curriculum.* (Q1, I4)"

Student librarian training, such as "*set up library prefects and train them as a leadership role* (Q1, I3), *train some library ambassadors and student librarians* (Q1,

I6) ."

Manage the central library, such as "*lead the school to promote the operation of the library...promote children to go to the library or use the facilities... manage a library* (Q1, I6), *manage the school's central library* (Q1, I3)"

Reading promotion, such as "*arrange some reading related activities*(Q1, I5), *reading promotion. Engaged in book-related reading activities* (Q1, I2)"

Coordination and management of reading material, such as "*borrowing of books* (Q1, I3), *this is a good thing in both promoting reading atmosphere... because learning through reading and Library Books Teaching had been strongly emphasized then. In my school, both Chinese and English have Library Books Teaching….My feeling is positive*(Q4, I6)"

Each motif consisted of several snippets. Different snippets related to different motifs said by individual interviewees were coloured differently and inserted into the respective cells of the excel sheet. The number of the questions answered by the snippets was recorded at the end of each snippet to indicate where in the transcript the snippet came from. The language of the participant was kept as far as possible. The quoted material was kept to the minimum. Abbreviations were used in the cells as much as possible so that the cells would not be too full.

Recognising the snippets and subthemes were not straight forward. Sometimes, certain lines were talking about one snippet. Sometimes there were a few snippets in one sentence. Sometimes the names of the subthemes needed to be revised in order to

stand alone as a unique category which did not include the contents of other categories.

Preliminary data analysis of the answers to the first two interview questions found that most subthemes and snippets were either positive or negative answers to the questions concerning the perceptions of the role of the teacher librarian. Furthermore, the cells were soon full and the sheets created representing new subthemes had been so crowded that they could not be displayed all at once on the same screen. All brilliant colours had been used because there were many snippets each was highlighted by a different colour. There were fifty five interview questions and sub-questions altogether. There was a need to reduce the data to a manageable size that could be used for reporting (Mertens, 2010).

Finally, hierarchy diagrams with unlimited levels were used to show the relationship between themes, sub-themes, motifs and snippets. For the themes with large amount of data, additional diagrams were used so that the font size of the bottom layer would not be too small and all levels of the hierarchy could be shown in one page. The diagrams of the same theme were numbered consecutively. (See appendix S)

Sampling in the questionnaire survey

Systematic sampling was exercised to identify participating teachers (Gillham,

2000) aiming at a representative picture of the teacher population. Sets of questionnaires were sent to every tenth primary schools listed in the Primary School Profiles 2011 published by the Committee on Home-School Co-operation, Education Bureau, the Government of the Hong Kong Special Administrative Region. In May 2011, there were five hundred and twenty four primary schools in Hong Kong. Letters enclosed with four questionnaires were sent to each of the chosen school principals. Those schools randomly chosen with teachers or teacher librarians whom I knew well were deleted to avoid biased answers to the questionnaires due to the friendly relationship. Some of these teachers were members of Hong Kong Teacher-Librarians' Association in which I had been the vice president and president. Some of them were students in the Diploma of Teacher Librarianship organized by HKU SPACE in which I had been a part-time tutor. Some were the piloting schools. The low response rate of only thirteen responses from the first batch of questionnaires sent out reminded me to substitute the schools with my friends there with another one. One tenth of 524 schools were 52 schools. In these 52 schools, some were not sent with the questionnaires because my friends worked there. So, only 37 schools received my questionnaires. This might be one of the reasons why the response rate of the first batch was low. In the second batch, every ninth schools were chosen. When the chosen school had teacher friends of mine, the eighth ones were chosen. In doing so, every batch of schools amounted to 52. There were altogether three batches of letters and questionnaires sent. The second batch were sent to the ninth schools and the third batch to the eighth schools in general. A total of one hundred and

forty six schools had been chosen. Four questionnaires were sent to each school for the four teachers chosen by the principal to answer. Altogether 584 questionnaires were sent. I received 75 responses in total. The response rate was 12.8%.

On 24 October 2012 one school called me and asked why there was the remark "applicable to teachers only" in the consent form and why the principal did not have a questionnaire. I replied that the remark was applicable to one of the items in the consent form which was for the teachers only and the principal did not have to answer the questionnaire. S/he only had to sign the consent form and mail back together with the ones signed by the participating teachers. Teachers would not be invited to answer the questionnaires without the consent from the principal.

Participants in the face to face interview

After the second interview piloting, I found that the progress of the research had been influenced by the availability of the respondents. I would make appointments with the five potential respondents who had provided their email addresses expressing their willingness to be interviewed and got their feedback. If they then changed their mind to not willing to be interviewed, I needed to find some other teacher participants of the questionnaire who would be willing to be interviewed.

Limitations

There were altogether 75 survey questionnaire respondents. "*One interview for every ten questionnaires is quite a substantial back-up*" (Gillham, 2000, p.83).

In this research, only six interviews were conducted. The comprehensiveness of all kinds of teachers was not accessible through the limited number of interviewees.

Having discussed the methodology, the research design, the ethical issues, data collection and data analysis, I would like to proceed to the next chapter to discuss the results.

CHAPTER FOUR: RESEARCH RESULTS AND FINDINGS

This chapter presents the results from the data collected and analysed about Hong Kong primary teachers' perceptions of information literacy skills and the role of the teacher librarian. It starts off with the results from the questionnaire survey followed by the results from the face to face interview. There are 23 questions in the questionnaire. They will be discussed one by one according to their order. Questions one to six ask teachers' demographic information. From question seven to question twenty one, the demographic background of different teachers choosing different answer options for each question is also analysed and shown by a table attached to the question if the demographic pattern of that particular question is different from the main sample. There are fifteen themes emerged from the interview data. They are summarized by a table and then discussed one by one. Both sets of data are cross referenced where there are inter-related results.

The questionnaire results

A total of 584 questionnaires were sent out. 73 respondents answered the questionnaire and sent back to me using the postal paid envelopes provided. Two answered online. The total response rate was 12.8%. Five respondents provided their email addresses showing their interest to be interviewed by me to further discuss the issues relating to information literacy skills and the role of the teacher librarian.

Questionnaire responses

Sample characteristics

The first six questions of my questionnaire established the characteristics of the sample such as age range, genders, work experience, subjects taught and most importantly the year they started teaching in order to group respondents into those who started teaching before 1998, or in or after 1998, the year the government started to provide an additional teaching post of a teacher librarian and a school library in each government and aided primary school (Education Department, HKSAR, 1998). On the basis of the answers to these questions, the sample consisted of 96% classroom teachers who had not been teacher librarians. Only three (4%) of them had been teacher librarians. 72% were female and28% were male. In 2011, the percentage of teachers who are female in primary education in Hong Kong SAR, China was 78% (The World Bank, 2016). The percentage of female teacher librarian in the sample is a bit lower compared with the average percentage of female primary teachers in Hong Kong. Most (50.7%) respondents aged between 35 to 44 years. The second largest group (25.3%) aged between 25 to 34 years. The third largest group (20%) aged between 45 to 54years. Primary teachers in Hong Kong teach nearly all subjects. The mostly taught subject (77.3%) by the respondents was General Studies, followed by

Mathematics (66.7%), then Chinese Language (62.7%). 44% started teaching in or after 1998. 41% (31) started teaching before 1998. The pre and post 1998 initial appointments to be teachers do not make any significant difference to the answers. However, in four out of five questions (Q10, Q12, Q13, Q15 and Q16) where "not sure" was chosen as the answer, there were more post 1998 appointed than pre 1998 appointed teacher respondents.

Responses to the questions

Question 7 asked respondents how strongly they agreed with librarian provision. Nearly all respondents (94.7%) agreed strongly (40%) or agreed (54.7%) with the provision of an additional teaching post for undertaking the duties of a teacher librarian in aided primary ordinary schools since 1998.

Q7. Since 1998, an additional teaching post for undertaking the duties of a teacher librarian has been provided in aided primary ordinary schools. To what extent do you agree with such provision?

Answer Options	Response Percent	Response Count
Strongly agree	40.0%	30
Agree	54.7%	41
Not sure	4.0%	3
Disagree	0.0%	0
Strongly disagree	1.3%	1
	answered question	75
	skipped question	0

Question 8 asked whether the presence of the teacher librarian in the school since 1998 made any difference to the teaching and learning.

Q8. Has the presence of the teacher librarian in your school since 1998 made any difference to the teaching and learning? Please choose the statements which apply to your school. You may choose more than one.

Answer Options	Response Percent	Response Count
1. Teaching and learning remain unchanged.	16%	5
2. Yes, there have been changes but I'm not sure whether they have been due to the impact of the teacher librarian.	29%	9
3. Learning activities and assignments have been planned co-operatively by the subject teacher and the teacher librarian using relevant resources from the school library.	35%	11
4.In project learning, students are guided to search for information from the school library to answer the project questions.	52%	16
5. Library lessons can be scheduled when the need arises instead of when a “library lesson” was timetabled.	16%	5
6. Library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.	29%	9
7. Students learn how to solve a problem on their own by searching for relevant information from the school library.	45%	14
8.Teaching and learning resources are provided by the teacher librarian on request.	74%	23
Other. Please specify.	0%	0
	answered question	31
	skipped question	0

Only the answers from 31respondents who started teaching before 1998 were counted because only they could compare. The answers from others were merely speculations which were excluded. Most (74%, 23) respondents who started teaching before 1998 chose "Teaching and learning resources are provided by the teacher librarian on request" to be a difference to the teaching and learning since the presence of the teacher librarian in their school since 1998. In the Interview Data Theme Four which was “Agree with the 2002 legislated teacher librarian role as a reading resource and programme coordinator─teacher librarians work with subject teachers to source and provide teaching and reading materials needed by teachers and students”, Interviewee

Four who started teaching before 1998 also chose this by saying,

> *"Asks the subject panel heads the books they want to buy and the curriculum topics to be coordinated for the coming year"* (Q2:4).
>
> *"Look for those books teachers need to conduct extended reading"* (Q1:4)

In the Interview Data Theme Fifteen which was "examples of the answers to question number eight in the questionnaire ─ since the establishment of the teacher librarian……", Interviewee Four and Six who started teaching before 1998 also chose this by saying,

> *"We had a chapter about Jeme Tien Yow. We talked to the teacher librarian that we were looking for the material on various aspects of Jeme Tien Yow. The next day s/he had a stack of books placed on the table of the teachers. The teacher gave them to the students to do extended reading, or extracted some chapters to briefly teach"*(Q49:4,6).

The second largest group (52%, 16) of respondents chose "In project learning, students are guided to search for information from the school library to answer the project questions" to be a difference to the teaching and learning since the presence of the teacher librarian in their school since 1998. In the Interview Data Theme Fifteen which was "examples of the answers to question number eight in the questionnaire ─ Since the establishment of the teacher librarian……" this difference was also chosen by Interviewee Four who started teaching before 1998 by saying,

> *"A child had done an interview and got some information. S/he did not know how to analysis. The teacher did not tell him but referred him/her to the teacher librarian to find books about data analysis. S/he borrowed one and learned how"*(Q48:4).

As discussed in chapter one, under the title "The provision of the teacher librarians and their roles", "Project learning" (Curriculum Development Council, HKSAR, 2001b, p.67) is one of the four key tasks in the education reform since 2001. There is a

need to look at the effectiveness so far.

The third largest group of respondents (45%, 14) chose "Students learn how to solve a problem on their own by searching for relevant information from the school library" to be a difference to the teaching and learning since the presence of the teacher librarian in their school since 1998. Only two examples were provided by the interviewees. One of them was as follows:

> *"In my Mathematics lesson about π, one kid took out a book and said, "You said that π is an endless decimal, but not a recurring decimal, didn't you? I learned the reason from this book"* (Q48:4).

Solving problem on their own is one of the six information literacy skills identified by Doyle and McKenzie which I have discussed in the literature review chapter under the title "The definition of information literacy". Less than half schools reported to have this kind of student behavior.

The fourth largest group of respondents (35% 11) chose "Learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library" to be a difference to the teaching and learning since the presence of the teacher librarian in their school since 1998. Below are the examples provided by Interviewees Four and Six:

> *"Once we did "The Pride of the Chinese People" which integrated all subjects. The Physical Education teachers wanted to introduce Chinese sports celebrities. The teacher librarian immediately chose books with contents of this topic. S/he discussed this topic with the students in the library lessons to meet the students' national identity need"*(Q44:4),(Q49:6).

These examples illustrate that the teacher librarian working closely with the classroom

teacher as I had discussed in the literature review under the subtitle “Cooperative Planning and Teaching (CPT)”which means learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library. However, less than half schools utilize the teacher librarian in this way. Teacher librarians and subject teachers have no choice of their duties and teaching timetables. School administrators decide their duties and teaching timetables. With the traditional teaching timetable, there is no room for such “Cooperative Planning and Teaching (CPT)”. I have also discussed in the literature review under the subtitle “Flexible library timetable” that a flexible library timetable facilitates “Cooperative Planning and Teaching (CPT)”. Since there is no flexible library timetable reported in schools, less than half of the classroom teachers work closely with the teacher librarian.

Question 9 asked how much respondents know about the responsibility of the teacher librarian.

Q9. Which of the following is the responsibility of the teacher librarian? Please choose the statements which apply to your school. You may choose more than one.

Answer Options	Response Percent	Response Count
1. Identifies, procures, manages, promote and supplies reading materials for students relevant to the curriculum and extracurricular activities	86.7%	65
2. Co-teaches with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricular activity-related reading materials for students	57.3%	43

3. Develops teachers' and students' information searching skills and information literacy skills in the use of the school library collection	50.7%	38
4. Plans co-operatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library	33.3%	25
5. Train student librarians and library assistants to assist in managing the school library.	94.7%	71
6. Teach students how to use information in an ethical and responsible way.	48.0%	36
Other. Please specify.	4.0%	3
	answered question	75
	skipped question	0

Most (94.7%) respondents chose "Train student librarians and library assistants to assist in managing the school library" as the responsibility of the teacher librarian. Only two interviewees described this role spontaneously as setting up library prefects and train them as a leadership role (Q1:3, 6).

The second largest group of respondents to question 9 (86.7%) chose "Identifies, procures, manages, promotes and supplies reading materials for students relevant to the curriculum and extracurricular activities". In one of the sub-theme in Interview Data Theme Two which was “Agree with the 1998 legislated teacher librarian role items (a) to (j)” Interviewee Two also chose this by saying,

> *“Our teacher librarian's existing role concepts are those in 1998 under (a) to (j). (Q55:2)These are the most basic work to do.(Q37:2)They are being done.*(Q35:2)

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The third largest group of respondents (57.3%) chose "Co-teaches with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricular activity-related reading materials for students" No

relevant examples were provided by the interviewees. There is a need to explore how teachers and the teacher librarian co-teach.

Question 10 asked in schools who the person was taking the library management jobs of the teacher librarian. If respondents chose "Another person", they had to specify who the person was.

Q10. In your school, who is mainly responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities? Please select only one option.

Answer Options	Response Percent	Response Count
The teacher librarian	70.7%	53
Another person	12.0%	9
No one	0.0%	0
I am not sure	17.3%	13
Comments		10
	Answered question	75
	skipped question	0

Most (70.7%) respondents selected the teacher librarian as the person who is mainly responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities.

The second largest group of respondents (17.3%) was not sure.

The third largest group of respondents (12%) selected another person including the subject panel heads, the curriculum development officer or the teacher in charge of the project. In Interview Data Sub-theme-"teacher librarians may not have the sole

responsibility" in Theme Five which was "Disagree with the 2002 legislated teacher librarian role as a reading resource and programme coordinator", this was also selected by saying,

> *"we are all in great need of information. As teachers, we could not afford to search ourselves. We have to talk to the teacher librarian. Or we cooperate with each other. Our teacher librarian is also a subject teacher. Not necessarily hand over to him/her, put on him/her totally... fifty fifty"* (Q24:6).

Procuring, managing and supplying library books are administration work while identifying and promoting reading materials for students relevant to the curriculum and extracurricular activities are teaching jobs which was discussed in literature review under the subtitle "Cooperative Planning and Teaching in the big picture".

Question 11 asked in schools who the person was mainly responsible for co-teaching with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricular activity-related reading materials for students. The examples of co-teaching provided by the interviewees show that there were different kinds and levels of co-teaching. Here, by co-teaching I meant Cooperative Planning and Teaching (CPT) which was difficult to be made clear to the respondents. So the answers to this question were considered as not valid.

Question 12 asked in schools who the person was taking the information specialist jobs of the teacher librarian. If respondents chose "Another person", they had to

specify who the person was.

Q12. In your school, who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection? Please select only one option.

Answer Options	Response Percent	Response Count
The teacher librarian	50.7%	38
Another person	17.3%	13
No one	13.3%	10
I am not sure	18.7%	14
Comments		13
	answered question	75
	skipped question	0

Most (50.7%) respondents selected “teacher librarian” as the person who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection. In Interview Data Theme One which was “Teachers’ description and suggestion of the teacher librarian role─integrates reading into the curriculum and teaches skills”, this was also selected. There is a need to see what “skills” mean here. Are they equivalent to information literacy skills? This will be discussed in chapter five.

The second largest group of respondents (18.7%) selected “not sure”.

The third largest group of respondents (17.3%) selected “another person” including subject teachers, Information Technology (Computer) teachers, all teachers, discipline and guidance teachers, General Studies teachers. Ten out of thirteen (76.9%) “another person” are Information Technology (Computer) teachers. It shows that people associate information literacy skills with information technology skills. It is worth

noted that teacher librarians are also responsible for developing colleagues' information literacy skills in Australia as discussed in the literature review under the section "Comparison of the teacher librarian role between Hong Kong and Australia to identify the area where teaching information literacy skills by the teacher librarian had been administered" which is not popular in nearly half of the schools in Hong Kong. It is also worth noted that one answered, "*Information Technology panel head, but he does not necessarily use the school library collection.*" It further evidenced that some teachers associate information literacy skills with information technology skills, which could be totally disconnected with library books. This will be discussed in chapter five.

Question 13 asked in schools who the person was taking the teaching partner jobs of the teacher librarian. If respondents chose "Another person", they had to specify who the person was.

Q13. In your school, who is mainly responsible for planning co-operatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library? Please select only one option.

Answer Options	Response Percent	Response Count
The teacher librarian	46.7%	35
Another person	6.7%	5
No one	26.7%	20
I am not sure	20.0%	15
Comments		5
	answered question	75
	skipped question	0

Most (46.7%) respondents selected teacher librarian as the person who was mainly responsible for planning co-operatively with subject teachers classroom activities and

assignments on units of study by first checking to see the extent of relevant resources in the library. The second largest group (26.7%) said there was no one doing so. The third largest group (20%) said that they were not sure.

Question 14 asked in schools who the person was taking the library assistants and prefects training jobs of the teacher librarian. If respondents chose “Another person”, they had to specify who the person was.

Q14. In your school, who mainly trains student librarians and library assistants to assist in managing the school library? Please select only one option.

Answer Options	Response Percent	Response Count
The teacher librarian	93.3%	70
Another person	1.3%	1
No one	1.3%	1
I am not sure	4.0%	3
Comments		1
	answered question	75
	skipped question	0

Most (93.3%) respondents selected the teacher librarian as the person who mainly trains student librarians and library assistants to assist in managing the school library.

Question 15 asked in schools who the person was taking the information skills training jobs of the teacher librarian. If respondents chose “Another person”, they had to specify who the person was.

Q15. In your school, who mainly teaches students how to use information in an ethical and responsible way? Please select only one option.

Answer Options	Response Percent	Response Count

The teacher librarian	21.3%	16
Another person	61.3%	46
No one	0.0%	0
I am not sure	17.3%	13
Comments		48
	answered question	75
	skipped question	0

Most (61.3%) respondents selected “another person” who mainly teaches students how to use information in an ethical and responsible way. 38/48 (79.2%) of this other person are Information Technology (Computer) teachers. In interview data Theme Seven which was “Disagree with the 2002 legislated teacher librarian role as an information and media specialist─this is not the case in my school”, this was also selected.

The second largest group of respondents (21.3%) selected “the teacher librarian” as the person who mainly teaches students how to use information in an ethical and responsible way. InInterview Data Theme Six which was “Agree with the 2002 legislated teacher librarian role as an information and media specialist─this is something that s/he is doing in my school”, this was also selected.

The third largest group of respondents (17.3%) selected “not sure”.

Question 16 asked what happened when the additional post of the teacher librarian was filled by part-time non-teaching clerical assistants.

Q16. In schools where the additional post of the teacher librarian is filled by part-time non-teaching

clerical assistants, which of the following applies?

Answer Options	Response Percent	Response Count
1. The person holding the additional teacher librarian post fulfils the role of an ordinary subject teacher.	14.7%	11
2. The person holding the additional teacher librarian post partly fulfils the role of the teacher librarian as stated in Question 9. The rest of the time, he/she is devoted to ordinary subject teaching.	24.0%	18
3. I am not sure how the person holding the additional post of the teacher librarian is deployed.	50.7%	38
Other. Please specify.	10.7%	8
	answered question	75
	skipped question	0

Most (50.7%) respondents are not sure how the person holding the additional post of the teacher librarian is deployed.

The second largest group of respondents (24%) answered, “The person holding the additional teacher librarian post partly fulfils the role of the teacher librarian as stated in Question 9. The rest of the time, he/she is devoted to ordinary subject teaching.”

The third largest group of respondents (14.7%) answered, “The person holding the additional teacher librarian post fulfils the role of an ordinary subject teacher.”This is cross-validated by the description of one respondent in questionnaire question number twenty two who said that the school management had not yet established the library function in learning and teaching, so they appointed teacher librarians to take subject teaching jobs.

Question 17 asked respondents to assess their own level of understanding concerning information literacy skills.

Q17. Please assess your own level of understanding concerning Information Literacy Skills.

Answer Options	Response Percent	Response Count
Excellent level of understanding	0.0%	0
Good level of understanding	14.9%	11
Satisfactory level of understanding	51.4%	38
Poor level of understanding	32.4%	24
No understanding	1.4%	1
	answered question	74
	skipped question	1

Most (51.4%) respondents said that they were at the satisfactory level of understanding. The second largest group (32.4%) said that they were at the poor level of understanding. The third largest group (14.9%) said that they were at the good level of understanding. The table below shows the demographic information of the respondents with this perception. Men (18/21=85.7%) are more confident in their understanding of information literacy than women (31/52=59.6%).

Q17. Please assess your own level of understanding concerning information literacy skills.																						
Answer Options	Response %	Response Count	Appointed		Sex		Age				Subjects taught											
			Pre 1998	Post 1998	M	F	25-34	35-44	45-54	55+	Chi	Eng	Math	GS	Arts	Mu	PE	IT	PTH	Reli	Life Ed &Lib
Satisfactory level of understanding	51.4%	38(S4)	16	18	12	26	10	20	6	2	28	17	25	32	20	8	6	21	16	7	1
Poor level of understanding	32.4%	24(S3)	11	10	3	21	7	11	5	1	13	10	13	17	9	5	5	4	9	8	0
Good level of understanding	14.9%	11(S4)	3	4	6	5	2	6	3	0	5	5	11	8	4	0	4	6	1	1	0
Remarks:In Response Count, (S6) means 6 respondents skipped the question of the year they started teaching.																						

Table 1 Demographic information of most respondents of questionnaire question 17

Question 18 asked respondents to specify in their own words what they understood by the term ‘information literacy skills’. Appendix T shows the responses. The table below shows the main categories of responses which were cross validated by the interview data.

Response count in questionnaire question 18	Main categories of open ended responses in questionnaire question 18	Cross validated by the interview data
19/53 (36%)	Related to copy right issues	Theme Thirteen which was “Teachers' information literacy skills─ teachers' understand of information literacy skills” as the skill of making good use of the information from the resources and observing copyright.
12/53 (23%)	Related to making good use of the information from the resources and observing copyright	
8/53 (15%)	Related to information technology skills	N.A.
8/53 (15%)	Related to identifying the credibility of the information	Theme Thirteen which was “Teachers' information literacy skills─teachers' understanding of information literacy skills” as the skills to identify the credibility of the information.

Table 2 Main categories of teachers’ specification in their own words what they understood by the term information literacy skills cross validated by the interview data

Question 19 asked respondents to show their extent of agreement to the statement “Information literacy skills are necessary in the information age” to be supported by reasons.

Q19. Information Literacy Skills are necessary in the information age. Please show the extent of your agreement.

Answer Options	Response Percent	Response Count
Strongly agree	40.5%	30
Agree	52.7%	39
Not sure	5.4%	4
Disagree	0.0%	0
Strongly disagree	1.4%	1
Comments		72
	answered question	74
	skipped question	1

Give reasons for your answer

Most (52.7%) respondents agreed that information literacy skills are necessary in the information age. The second largest group (40.5%) strongly agreed that information literacy skills are necessary in the information age. The third largest group(5.4%) were not sure. Respondents were also asked to give reasons for their agreement. Two third, the majority of the questionnaire respondents did not give reasons to support their agreement to the fact that "information literacy skills are necessary in the information age" as shown in appendix Q. That mirrors 32.4% of the questionnaire respondents said that they were poor level of understandinginformation literacy skills in questionnaire question seventeen.

Question 20 had three parts. Below is the response count for question 20.1, 20.2 and 20.3

Q20. Please show the extent of your agreement with the following statements.

Answer Options	Strongly agree	Agree	Not sure	Disagree	Strongly disagree

1. Teachers are able to develop students' Information Literacy Skills without the collaboration of the teacher librarian.	(5.5%) 4	(16%) 12 (41%) 30	(32%) 23	(5.5%) 4
2.Your initial teacher training course prepared you to teach Information Literacy Skills.	(3%) 2	(33%) 24 (29%) 21	(30%) 22	(5%) 4
3. You have further professional development needs in terms of Information Literacy Skills.	(7%) 5	(57%) 42 (26%) 19	(10%) 7	(0%) 0

Question 20.1 asked respondents the extent of agreement of the statement, "Teachers are able to develop students' Information Literacy Skills without the collaboration of the teacher librarian."Most (41%) respondents were not sure whether teachers are able to develop students' information literacy skills without the collaboration of the teacher librarian.41% is very high and raise concerns to me and let me to do some additional reading.

The second largest group (32%) strongly disagreed that teachers are able to develop students' information literacy skills without the collaboration of the teacher librarian. The third largest group(16%) agreed that teachers are able to develop students' information literacy skills without the collaboration of the teacher librarian.

Question 20.2 asked respondents the extent of agreement of the statement, "Your initial teacher training course prepared you to teach information literacy skills." Most (33%) respondents agreed that the initial teacher training course prepared teachers to teach information literacy skills. The second largest group (30%) disagreed

that the initial teacher training course prepared teachers to teach information literacy skills. The third largest group(29%) was not sure.

Question 20.3 asked respondents the extent of agreement of the statement, "You have further professional development needs in terms of Information Literacy Skills."Most (57%) respondents agreed that they have further professional development needs in terms of information literacy skills. In Interview Data Theme Fourteen which was "Teachers' responses regarding information literacy skills─ it is the responsibility for all teachers to teach information literacy skills", interviewees suggested the following kinds of training requirement needed for them to be able to do that:

1. *"coupled with the ability of teachers to use information technology, what is information literacy? how to teach students knowledge in this area?"(Q12:1)*
2. *"In today's heavy teaching, teachers cannot afford to attend courses frequently. In my school experience, different subject teachers go out to attend lectures. The message will be disseminated in our school's own sharing sessions and staff meetings. The teacher librarian who gets his/her training, can share with us when s/he comes back" (Q12:6).*
3. *"some workshops by the Education Bureau for colleagues to attend. Let colleagues know what to pay attention to. Also it can be attended by a teacher, and comes back to share with other colleagues. Or simply circulate a memo. Then we will all know about what we have to comply with the Code" (Q12:4).*
4. *"First teachers have to correct the concept - make use of information and library materials are duties of the teacher librarian or the Information Technology teacher. Now learning is not a teacher only responsible for a subject. When teachers are on the Internet, endless information appears. How should we apply the information and do screening? When encountering copyright issues, some skills are needed. Some places need to pay attention to. We should not casually use someone's information. How to tell whether one is able to use the information correctly? If teachers are aware of these, they are willing to share the work to help students learn"* (Q12:5).

The second largest group of respondents (26%) was not sure whether they have further professional development needs in terms of information literacy skills. The third

largest group of respondents (10%) disagreed that they have further professional development needs in terms of information literacy skills.

Question 21 asked the ways teachers think which would help them utilize the skills of the teacher librarian.

Q21. Which of the following do you think would help you to utilize the skills of the teacher librarian? You may choose more than one.

Answer Options	Response Percent	Response Count
1. Awareness of the role of the teacher librarian.	78.1%	57
2. Awareness of Information Literacy Skills	58.9%	43
3. Developing your personal Information Literacy	41.1%	30
4. The ability to develop students' Information Literacy Skills.	58.9%	43
Other (please specify)	0.0%	0
	answered question	73
	skipped question	2

"Awareness of the role of the teacher librarian" was mostly (78.1%) chosen to help teachers utilize the skills of the teacher librarian. Both "awareness of information literacy skills" and "the ability to develop students' information literacy skills" were secondly (58.9%) chosen to help teachers utilize the skills of the teacher librarian."Developing teachers' personal information literacy skills" was thirdly (41.1%) chosen to help teachers utilize the skills of the teacher librarian.

Question 22 asked respondents if there were other comments they wish to make concerning the role of the teacher librarian.

Q22. Are there any other comments you wish to make concerning the role of the teacher librarian?

Answer Options	Response Count
answered question	10
skipped question	65

One respondent pointed out that, "*The school management has not yet established the library function in learning and teaching, so they appoint teacher librarians to take subject teaching jobs."* In Interview Data Theme One which was "Teachers' description and suggestion of the teacher librarian role", there were similar comments. They are matched against the sub-themes in the table below.

Responses to Q22. Are there any other comments you wish to make concerning the role of the teacher librarian?	**Similar idea found in the Interview Data Theme One "Teachers' description and suggestion of the teacher librarian role"**
Teacher librarians should promote teacher professional exchanges (Combined teaching of Library and Subjects)	Teachers' suggestion of the teacher librarian role.
Reducing his/her duties to teach other subjects	Sub-theme ─ dedicated full-time. Should not do (ordinary subject) teaching.
To use their knowledge and skills, with the resources of the library, to empower teachers and students to obtain useful information at work and study.	Sub-theme ─ integrates reading into the curriculum and teaches skills.
● Contributes to the culture of reading in schools. Students generally love reading more. ● Establish a culture of reading for teachers and students of the whole school. ● the leadership role of teachers and students to promote a reading culture. ● The teacher librarian may put more effort in training students to share stories for the whole school. He/she should also introduce new books for students in the morning assembly. ● Focused on the promotion and to develop reading habits and culture.	Sub-theme ─ develops the school's overall reading.
● to be more proactive to provide teaching materials and information for subject learning. ● I hope that the teacher librarian could participate in the overall curriculum planning and assist in the planning of development on subject areas, especially in supporting the application of learning and teaching information. ● He should serve as a support for teaching and learning. ● In certain disciplines, the library collection supports the day-to-day teaching, especially in project-based learning. It plays a significant role.	Sub-theme ─ supports the curriculum, learning and teaching.

Table 3 Responses to questionnaire question 22 inter-related to the interview data

Question 23 asked if respondents were willing to attend a face to face interview to further discuss the role of the teacher librarian in Hong Kong primary schools by providing their names and email addresses.

Q23. If you are willing to attend a face to face interview to further discuss the role of the teacher librarian in Hong Kong schools, please provide your name and email address below

Answer Options	Response Percent	Response Count
Name	100.0%	5
Email address	100.0%	5
	answered question	5
	skipped question	70

Five male respondents provided their email addresses showing their willingness to attend a face to face interview to further discuss the role of the teacher librarian in Hong Kong primary schools. Number one was interviewed. Number two changed school when I contacted him. He introduced another female teacher in his previous school that had completed the questionnaire to be interviewed. Number three mistook my email requesting to be interviewed as spam mail and did not reply. When I sent a reminding email to him, he then remembered that was what he promised. He was also interviewed. Number four and five never responded. Three more teachers from the pilot schools were invited to be interviewed. My retired teacher friend who always went back to her school to be substitute teacher introduced them to me to be interviewed.

The face to face interview results

The demographic information

Only six questionnaire respondents were interviewed. They represented the views of a

very small subset of the questionnaire respondents. Two were male and four were female. Three of them were from government primary schools and the other three were from aided primary schools. Two of them were Curriculum Leaders (Education Bureau HKSAR, 2010). They were middle management teachers. The interviewees had taught General Studies, Physical Education, Mathematics, Chinese Language and English Language of which examples of classroom activities were provided. Interviewee Four and Six started teaching before 1998. Only they were asked to provide examples of the answers to question number eight in the questionnaire ─ Since the establishment of the teacher librarian……(these changes in teaching and learning had been identified) because only they could compare.

The fifteen themes emerged from the interview data

There were eight parts of interview questions each had some auxiliary questions making a total of fifty five interview questions (See appendix R). The themes and subthemes emerged from the interview data were recorded, analysed and were crossed validated against the questionnaire survey data using charts (See appendix P). Below is an example where R means responses and QQ means questionnaire question:

Interview Data Theme One: Teachers' description and suggestion of the teacher librarian role

Sub-themes	No. of R	Cross validated by questionnaire survey data

Develops the school's overall reading.	9	QQ22, 5/10 (50%) respondents suggested the same.
Integrates reading into the curriculum and teaches skills.	9	QQ22, 1/10(10%) respondents suggested the same.
They are teachers professionally trained with library knowledge. (In 1998, interested teachers applied for the teacher librarian post in school. Successful applicants attended a professional training course before taking the job. Disagree with teacher librarian's role to be fulfilled by non-teaching clerical staff.)	33	QQ22, 1/10 (10%) suggested teacher librarians use their knowledge and skills, with the resources of the library, to empower teachers and students to obtain useful information at work and study.
The legislated teacher librarian role is not known explicitly to all.	4	QQ21, Most (78.1%) respondents thought that the awareness of the role of the teacher librarian would help them to utilize the skills of the teacher librarian.
Good to have a dedicated teacher who became a teacher librarian, managed the library and worked with teachers to promote reading.	2	In QQ9, 94.7% respondents chose "Train student librarians and library assistants to assist in managing the school library." as the teacher librarian's role. 86.7% chose "Identifies, procures, manages, promotes and supplies reading materials for students relevant to the curriculum and extracurricular activities". In QQ10, 70.7% selected the teacher librarian who is responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities.
The government did not set job limitation.	2	N.A.
Supports the curriculum, learning and teaching.	2	QQ22, 4/10 (40%) respondents suggested the same, of which 1/10 (10%) added "especially in supporting the application of learning and teaching information."
Teacher librarians should join the community libraries to guide students' use of community resources.	1	N.A.
Dedicated full-time.	12	In QQ22, 1/10 (10%) respondents suggested reducing his/her duties to teach other subjects.
	74	

There were fifteen themes altogether. They were presented in the order of the year of the legislated role of the teacher librarian. Each legislated role had been agreed and disagreed by teachers. Below is a table of all the themes with examples of the items included in each theme:

Theme No.	Theme Description	No. of times it	Example

		had been identified	
1	Teachers' description and suggestion of the teacher librarian role	74	Develops the school's overall reading
2	Agree with the 1998 legislated teacher librarian role items (a) to (j)	4	These are the most basic work.
3	Disagree with the 1998 legislated teacher librarian role items (a) to (j)	14	Some items are outdated and need to be replaced by new ones. (b) Coordinating the management of the class libraries. It has been 12 years since 2000. Classroom libraries have been allocated to the Central Library. Books are not systematically borrowed There is a classroom furnished with English books.(d) Supporting the implementation of the Chinese and English Extensive Reading Schemes. The Chinese and English Extensive Reading Scheme have been handed over to the Subject Panel Heads. Now, to match with the curriculum development, they need to find more information to develop the school's teaching plan and reading to learn. They have to teach students information literacy skills.
4	Agree with the 2002 legislated teacher librarian role as a reading resource and programme coordinator	25	Work with subject teachers to source and provide teaching and reading materials needed by teachers and students.
5	Disagree with the 2002 legislated teacher librarian role as a reading resource and programme coordinator	8	The role of subject panel heads and teacher librarians need to be adjusted since the presence of the teacher librarian.
6	Agree with the 2002 legislated teacher librarian role as an information and media specialist	14	We need a specialized teacher who teaches information literacy skills solely.
7	Disagree with the 2002 legislated teacher librarian role as an information and media specialist	33	It is the responsibility for all teachers to teach information literacy skills, however training is not necessary.
8	Disagree with the 2002 legislated teacher librarian role as a teaching partner	13	S/he has to teach a subject, so is involved. Not because s/he is the teacher librarian. Partly done.
9	Agree with the 2002 legislated teacher librarian role as a curriculum facilitator	6	Good to match the students' learning and teachers' teaching.
10	Disagree with the 2002 legislated teacher librarian role as a curriculum facilitator	12	S/he does so in the subject s/he is asked to teach, not for other subjects.
11	Negative perspectives	6	Our teacher librarian finds difficulty in implementing the four roles legislated in 2002. Too much and confusing.
12	Principals' perceptions in teachers' eyes	1	Inconsistent administrative arrangement. In some schools, the principals think that how much teacher librarians think they can do is that much. The most important

			thing is able to manage the library and support the learning and teaching. In other schools, the Curriculum is under him/her, very messy.
13 (1)	Teachers' information literacy skills ─ understand information skills as	7	Information Technology ability to use a computer, Tablet PC and software.
13 (2)	Teachers' information literacy skills ─ understand information technology skills as	4	The ability to master the computer and software, applying online/library resources to homework, such as Powerpoint presentation, video shot.
13 (3)	Teachers' information literacy skills ─ understand information literacy skills as		The skill of making good use of the resources & observe copyright.
13 (4)	Teachers' information literacy skills ─ the way of developing information literacy skills	7	I learn from my teacher, the printing press and the Internet. My teacher reminded me to pay attention to copyright, refer to someone else's material and avoid plagiarism. I learn the importance of literacy from the printing press and on the Internet.
14	Teachers' responses regarding information literacy skills	16	Teachers develop their own information literacy skills in relation to students need.
15	Examples of the answers to question number eight in the questionnaire ─ Since the establishment of the teacher librarian……	27	Learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library.

Table 4 the fifteen themes emerged from the data collected in the face to face interview with examples of the items included in each theme

The key messages of the interview data

To facilitate the presentation of the interview data, (Q2:4) is used to represent question number two answered by interviewee four.

Teachers' spontaneous description of the role of the teacher librarian

When asked to describe the role of the teacher librarian, the interviewees said that the teacher librarian provided some bibliographies for their selection (Q36:5), complemented their teaching curriculum with some educational materials in need (Q1:3,4), worked with subject teachers to support teaching and learning (Q1:6), promoted reading (Q1:6), (Q5:3), taught information skills, dealt with all the books (Q1:2,3), managed the school's central library (Q1:3,6)with specialized skills(Q36:5), set up library prefects and trained them as a leadership role(Q1:3,6).

Teachers' perceptions of the 1998 legislated role of the teacher librarian

The interviewees were introduced the government legislated teacher librarian role in 1998. There were ten items (a) to (j). The interviewees were then asked to give ideas on these role items. Some agreed by saying that those were the role concepts of the teacher librarian in their school (Q55:2), those were the basic work to do (Q37:2) and were being done (Q35:2). The items were very specifically stated. Even if they were not a teacher librarian, they all knew very well that if necessary, they could find the teacher librarian to help them/work together to do those work (Q33:6). Some disagreed by saying that it had been 12 years since 2000. Classroom libraries in their schools had been allocated to the Central Library. There was a classroom furnished with English books. Classroom library books became unimportant. Although they were still kept in the Class Library shelves, they were not systematically borrowed

(Q35:1). For item (d) "the Chinese and English Extensive Reading Scheme" had been handed over to the Subject Panel Heads. They were less involved (Q35:1). For item (i)"advising the School Head and other teachers on matters concerning the central and the class libraries", s/he seldom did so. S/he just said that when the subject teachers wanted certain types of books or resources, they could inform the teacher librarian to help find (Q35:1). Item (j) "any other appropriate duties as required by the Head of School" was very vague, difficult and questionable (Q39:1), unrealistic, could be any work. Now they knew from the introduction by the interviewer that there were so many tasks. The "work designated by the principal" might not be just one item. They guessed there might be i, j, and even k, l, m, n…… (Q35:1)(Q35:3),(Q34:6). Those mostly were administrative aspect and assisting the subject teachers. "Assisting" should be replaced by "co-promotion" (Q38:2). If they looked back, except library classes, namely to teach library skills, the others, not necessarily done by a teacher at that time. Library classes could be very simple. At their time in the high school, the librarian simply told you how to find books. S/he spoke once, afterwards, they went to find on their own (Q35:4). Then, to match with the curriculum development, they need to find more information to develop the school's teaching plan and reading to learn (Q38:4)(Q35:4),(Q38:4),(Q37:4). They had to teach student information literacy skills (Q38:5), (Q37:5).

Teachers' perceptions of the 2002 legislated teacher librarian role as a reading resource and programme coordinator

Interviewees were introduced the 2002 legislated teacher librarian role as a reading resource and programme coordinator and were then asked to give ideas. Some agreed by saying that each year, s/he asked subject panel heads what (books) they wanted. During the teaching processes, teachers might need further reading material which s/he would provide (Q2:1, 2, 4), (Q18:4), (Q21:5), (Q4:5). In project learning, the teacher librarian had some information; materials, books and everything to help the students study (Q24:3). Teachers were busy. With a teacher librarian, their needs are known. S/he then helped find the necessary information. With his/her profession, s/he could access the necessary information more easily (Q4:2-4), (Q26:6). It was good to have a teacher librarian because learning through reading and Library Book Teaching had been strongly emphasized (Q4:6). Teacher librarians collected teaching materials often used by teachers to be stored in the library to facilitate easy circulation (Q5:3). The teacher librarian worked with Chinese teachers to set up "the Ability to Learn from Reading Framework"(Q2:2), designed and revised with subject teachers reading strategies students learn in each level and related worksheets (Q36:5), (Q26:4-5). Some interviewees disagreed this role by saying that teachers did not know about this guideline when they asked the teacher librarian to do such work (Q4:2,6). Even teacher librarians themselves did not know they need to do this work. Teacher librarians might not understand the needs of all subjects. The role of the subject panel heads and the teacher librarian need to be adjusted (Q4:1). The teacher librarian might not have the sole responsibility (Q2:1), (Q3:1).S/he him/herself had a teaching job, they felt that s/he had a heavy workload (Q5:6). Purely book circulation or asking

subject teachers the books they wanted could be fulfilled by non-teaching clerical staff. (Q6:2).

Teachers' perceptions of the 2002 legislated TL role as an information and media specialist

Interviewees were introduced the 2002 legislated TL role as an information and media specialist and were then asked to give ideas. Some interviewees agreed by saying that they needed a specialized teacher who teaches information literacy skills solely (Q8:3), (Q9:3), (Q37:5), (Q38:5), (Q41:5), (Q15:3, 4). The teacher librarians in their schools were doing so in their schools (Q13:3, 5, 6), (Q14:3, 5). This role could not be fulfilled by non-teaching clerical staff.(Q16:1, 3, 4, 5, 6). They needed to develop student information skills (Q52:3), (Q36:3). Some interviewees disagreed by saying that it was the responsibility for all teachers to teach information literacy skills, however training was not necessary (Q12:2, 3). This role could be fulfilled by non-teaching clerical staff (Q16:2). This was not the case in my school (Q13:1, 2, 4), (Q14:2, 4), (Q15:2). Information literacy skills should not be taught solely by the teacher librarian (Q11:5, 6), (Q8:5, 6),(Q8:1, 2, 4, 6), (Q9:2, 4, 5, 6), (Q11:1, 4), (Q10:2, 3, 4, 5, 6), (Q11:2, 3, 4)(Q14:1, 6), (Q9:1), (Q10:1). It was the responsibility for all teachers to teach information literacy skills. They suggested four kinds of training for them to be able to do that (Q12:1, 4, 5, 6).

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Teachers' perceptions of the 2002 legislated TL role as a teaching partner

Interviewees were introduced the 2002 legislated TL role as a teaching partner and were then asked to give ideas. Some interviewees agreed by saying that teacher librarians integrated reading into the curriculum, taught reading skills and strategies tied to the curriculum(Q1:4) (Q18:5), taught Internet searching skills (Q18:5), (Q36:6) especially in project learning (Q18:6). They asked subject panel heads how s/he could work with them to help (Q18:4). Some interviewees disagreed by saying that this was partly done. S/he had to teach a subject, so s/he was involved. Not because s/he was a teacher librarian (Q18:1).Reading promotion was done together by all. S/he only helps to find books. In assessment, what teacher librarians could help? (Q18:2) how? There were no examinations, reports or feedback (Q18:3). (Library Studies) was not a subject, scarcely touched on the assessment (Q18:5-6), (Q19:2). This was not the teacher librarian's sole responsibility. The Curriculum Leader had greater responsibility (Q19:1-6). The responsibilities of the teacher librarian and the Curriculum Leader were confused (Q20:1). The teacher librarian seemed to be doing some work of the Curriculum Leader and the Information Technology teacher. Who from us was expected by the Education Bureau to co-ordinate (Q55:2)? No need (for teacher librarians) to be involved so heavily. Teacher librarians had already involved in many areas. The workload was quite heavy (Q20:6).

Teachers' perceptions of the 2002 legislated TL role as a curriculum facilitator

Interviewees were introduced the 2002 legislated TL role as a curriculum facilitatorand were then asked to give ideas. Some interviewees agreed by saying that it was good to match the students' learning and teachers' teaching (Q26:3), (Q27:3-6). Curriculum development had gone so far for so many years. Might be it was but the teacher librarian then to help them think about how to optimize. Their teacher librarian knew what topics were being discussed at all levels. S/he passed to them via their intranet, told them the good materials that fit and the latest information (Q26:6). This role should not be fulfilled by non-teaching clerical staff (Q28:1-3). Some interviewees disagreedby saying that s/he did so in the subject s/he was asked to teach, not for other subjects (Q24:1). This was not any of the teacher librarian's role because the school's project learning and life-wide learning activities were coordinated by the Curriculum Leader (Q24:2). This was not the sole responsibility of the teacher librarian (Q24:5), (Q25:2, 3, 5), (Q26:1). They did not feel the need for the teacher librarian to be responsible (Q26:2). This role in the school was stereotyped. If we say that the teacher librarian was responsible for this aspect, the Curriculum Leader's role would be relatively vague. Comments could not be made unless the roles were clearly defined (Q27:2).

Teachers' positive and negative perceptions regarding the role of the teacher librarian

There was a positive perspective from (Q21:3) saying that teacher librarians were professionally trained. There were negative perspectives including disagreeing with the overall 2002 legislated teacher librarian role, disagreeing with the administrative arrangement, disagreeing with teacher librarians' role to be fulfilled by non-teaching clerical staff (Q22:1-6) and the subject "Library Studies" did not have a curriculum guideline (Q55:2).

Teachers' perceptions of the principals' perspectives regarding the role of the teacher librarian

Interviewee Two expressed her ideas on the two extreme perceptions of principals as follows:

(For some principals) how much teacher librarians think they can do is that much. The most important thing is able to manage the library and support learning and teaching(Q55:2).

(For some other principals) the teacher librarian seems to play a Curriculum Leader's role. It seems that the Curriculum Leader is under him/her. Very messy (Q55:2).

Teachers' suggestions to use the teacher librarian

When asked to suggest ways to use the teacher librarian, interviewees said that they should not do (ordinary subject) teaching (Q29:1,6),(Q55:1), (they should) teach skills and all aspects of reading strategies (Q29:2),(Q55:1), develop the school's overall reading (Q29:2), (Q55:1), understand his/her own roles and responsibilities (Q55:1), support the curriculum (Q29:1), learning and teaching (Q29:2), join the community libraries to guide students' use of community resources. If only confined to the school library, may limit the scope of students' reading (Q38:1), just accomplish the 2002 legislated roles (Q29:1), purely a teacher librarian, sufficient workload (Q29:6), dedicated full-time (Q29:6).

Teachers' understanding of information skills, information literacy skills and information technology skills

When asked to compare the following three terms: information skills, information literacy skills (in this research title) and information technology skills, interviewees expressed their understanding of information skills as information technology skills referring to the ability to use a computer, Tablet PC (Q50:3), the skill of using the software (Q50:5), searching skills such as how to type the website and keywords to search for books, web pages, newspapers and the like (Q50:2) and the Internet to look for information (Q50:1,4,6) and the skill of absorbing the information after reading

it(Q50:3). They expressed their understanding of information literacy skills as the skill of making good use of the resources and observe copyright (Q50:1,2,4,5,6), (Q53:6), the skill to select and apply information (Q50:6), the skill to identify the credibility of the information (Q50:2), personal analysis of the matter, the standpoint one holds, taking on alternatives and be critical, associated with the person's inner, human and conduct (Q50:3), neutrality, not to be radical, not to be unilateral. Be smooth and macroscopic (Q51:3). They expressed their understanding of information technology skills as the ability to master the computer to use some software, applying online/library resources to homework, such as powerpoint presentation, video shot (Q50:1),higher order and more specialized compared with information skills (Q50:3), more technical (Q50:4), similar to information literacy skills and using online/library information properly (Q50:5).

Teachers' ways of developing their own information literacy skills

When asked how they develop their own information literacy skills, some interviewees said their teachers reminded them to pay attention to copyright, how to refer to someone else's material and avoid plagiarism. They learn the importance of literacy from the printing press (Q51:1) and on the Internet (Q51:5, 6). One interviewee said that s/he learned by doing. S/he did not deliberately develop. S/he based on his/her own needs to do homework and to find information. S/he did not

have a formal teacher who teaches him/her information literacy (Q51:2). Some said that in the courses they attended, they continuously heard that actually something was wrong in some ways. They alerted. During school general meetings, they reminded colleagues to pay attention to and to avoid doing so as a teacher (Q51:4,5). One interviewee said that the teacher librarian gave teachers some information for teaching and promotion among children. There were video clips. When they promoted to their children, they would know. During the staff meetings, the teacher librarian also shared the materials s/he received/ when s/he was trained (Q51:6).

Teachers' perceptions of their own development of information literacy skills in relation to student need

When asked if they thought their own development of information literacy skills was taken alongside with the work they need to do with their students, interviewees answered that they developed their own information literacy skills in relation to student need.

Further information about the answers to the questionnaire question number eight regarding changes in teaching and learning in schools since the establishment of the teacher librarian

Only Interviewee Four and Six were asked to give further information about their

answers to the questionnaire question number eight regarding changes in teaching and learning in schools since the establishment of the teacher librarian because only they could compare. They provided examples of school practices regarding learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library, library lessons can be scheduled when the need arises instead of when a library lesson was timetabled, teaching and learning resources are provided by the teacher librarian on request, in project learning, students are guided to search for information from the school library to answer the project questions, library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.

Having displayed the data collected and analysed, I now move on to discuss the findings in the next chapter.

CHAPTER FIVE: DISCUSSIONS

This chapter discusses the significance of the findings as presented in the previous chapter. The discussion is centred around the research questions about teachers'

perceptions of information literacy skills, who should be responsible for teaching such skills, whether they feel able to teach and teachers' perceptions of the teacher librarian role. It brings into perspective some of the key findings from the literature review. The chapter starts with examining Hong Kong primary teachers' level of awareness about and the perceptions of the teacher librarian role based on the 1998 legislated role and the four legislated roles by the government in 2002as: a reading resource and programme coordinator; an information and media specialist; a teaching partner and a curriculum facilitator. This section of the chapter is followed by a discussion about teachers' views on the additional post of and the role of the teacher librarian. Then, the chapter goes on to discuss whether the teacher librarian role is explicitly known to teachers and schools administrators. Finally the chapter broadens into a discussion and analysis of teachers' perception of information literacy and how information literacy skills are taught. Throughout the chapter broader aspects about my research arise and in the conclusion I discuss what can be gleaned from my work.

Hong Kong primary teachers' perceptions of the legislated teacher librarian role

In this section I discuss Hong Kong primary teachers' perceptions of the following legislated teacher librarian roles as discussed in chapter one, which is the main part of the research title:

the 1998 legislated teacher librarian role (p.23);

the 2002 legislated teacher librarian role as a reading resource and programme coordinator, besides managing the library (p.27);

the 2002 legislated teacher librarian role as an information and media specialist, besides managing the library (p.27-28);

the 2002 legislated teacher librarian role as a curriculum facilitator, besides managing the library (p.28); and

the 2002 legislated teacher librarian role as a teaching partner, besides managing the library (p.28).

Teachers' perception of the legislated teacher librarian role in 1998

The 1998 legislated teacher librarian role had 10 items as follows, as discussed in chapter one (p.23-24):

(a)managing the central library;
(b)coordinating the management of class libraries;
(c)selecting, acquiring, processing, maintaining and circulating library books and other resource materials for the central library and the class libraries;
(d)supporting the implementation of the Chinese and English Extensive Reading Schemes;
(e)coordinating the efforts of teaching staff in planning and organizing library programmes to support and enrich the school curriculum;
(f)planning and developing reading programmes in consultation with subject teachers;
(g)coordinating the conducting of library periods to equip pupils with basic library skills;
(h)serving on committees related to the acquisition and use of the library resources;
(i)advising the School Head and other teachers on matters concerning the central library and the class libraries; and

> *(j)any other appropriate duties as required by the Head of School"*(Education Department, 1998, n.p.).

On p.165, when asked to give ideas on these role items, two interviewees related them to their existing school situation. They agreed with these items by saying that those were the role concepts of the teacher librarian in their school (Q55:2), those were the basic work to do (Q37:2) and were being done (Q35:2). The items were very specifically stated. Even if they were not a teacher librarian, they all knew very well that if necessary, they could find the teacher librarian to help them/work together to do those work (Q33:6).They told us that, in some schools, these role items were being implemented. These are in line with teachers' feeling that there must be someone to manage the newly established library as discussed in the later section "Teachers' views on the additional post of and the role of the teacher librarian". These work are isolated from students' learning environment as described by Mokhtar and Majid (2005) (p.86) in the literature review. They have little contact with teachers and teaching objectives, except to locate books and reference materials.

At the same time, on p.165-166, one interview compared these role items with their existing school situation. He/She disagreed by saying that

> *it had been 12 years since 2000. Classroom libraries in their schools had been allocated to the Central Library. There was a classroom furnished with English books. Classroom library books became unimportant. Although they were still kept in the Class Library shelves, they were not systematically borrowed (Q35:1). For item (d) "the Chinese and English Extensive Reading Scheme" had been handed over to the Subject Panel Heads. They were less involved (Q35:1).*

He/She told us that, along with the provision of a central library in schools, classroom libraries gradually faded. Teacher librarians were not the only person to organize

reading schemes. Subject Panel Heads became more involved. Subject Panel Heads coordinate all matters specifically related to their subject. In such cases, there is no need for the teacher librarian to support the implementation of the Chinese and English Extensive Reading Schemes anymore. These are natural changes in the education system in Hong Kong and so, it is in line with the need to continuously update the teacher librarian role by the government as discussed in chapter one section "The evolving nature of the teacher librarian's work"(p.27).

Three, half of the interviewees described the existing role of the teacher librarian in their own school and said that

> *for item (i)"advising the School Head and other teachers on matters concerning the central and the class libraries", s/he seldom did so. S/he just said that when the subject teachers wanted certain types of books or resources, they could inform the teacher librarian to help find (Q35:1). Item (j) "any other appropriate duties as required by the Head of School" was very vague, difficult and questionable (Q39:1), unrealistic, could be any work. Now they knew from the introduction by the interviewer that there were so many tasks. The "work designated by the principal" might not be just one item. They guessed there might be i , j, and even k, l, m, n…… (Q35:1)(Q35:3),(Q34:6). Those mostly were administrative aspect and assisting the subject teachers……if they looked back, except library classes, namely to teach library skills, the others, not necessarily done by a teacher at that time. Library classes could be very simple.*

They reported that the teacher librarians in their school were not advising the principal and teachers on matters concerning the school libraries. The last role item "*any other appropriate duties as required by the Head of School"* (Education Department, 1998, n.p.) was problematic. Most of the role items were administrative in nature which might not necessarily need to be accomplished by a teacher. This is in line with Henri's (1990) classification of library work into two types, administrative and management in the literature review under the section "Cooperative Planning and

Teaching (CPT) in the big picture". Teacher librarians should be responsible for the management duties.

One interviewee related the role of the teacher librarian in the school when they were high school students themselves and said that

> *At their time in the high school, the librarian simply told you how to find books. S/he spoke once, afterwards, they went to find on their own* (Q35:4).

One interviewee related item (d) with his/her own working experience and said that

> *"Supporting" in item (d) should be replaced by "co-promotion" (Q38:2).*

He/She pointed out that teacher librarians should be collaborating with subject teachers instead of supporting them. This shows teachers view the teacher librarian as equal partners as discussed in the literature review (p.75) that in the publication of Education World published in 2011, the authors stated that our students need several persons to guide their education. They need the value added power of more than one brains working together for their good. Teachers cannot do it all on their own. No one can meet all the needs of all the students without help. Other professionals within the school have special strengths and talents to enhance the lessons.

Two interviewees related these items with their teaching needs also said that

> *Then, to match with the curriculum development, they need to find more information to develop the school's teaching plan and reading to learn (Q38:4)(Q35:4),(Q38:4),(Q37:4). They had to teach student information literacy skills (Q38:5), (Q37:5).*

They felt the need to have someone in school to provide more information to develop teaching plans, reading to learn, and teaching information literacy skills. These show

some expectations of teachers on teacher librarian role to connect with teachers and teaching especially the teaching of information literacy skills. This is in line with the literature review that the significance of information literacy skills has been connected to the work place (Majid et al., 2011) (P.50)

Teachers' perception of the legislated teacher librarian role as a reading resource and programme coordinator

I now discuss teachers' perception of the legislated teacher librarian role as a reading resource and programme coordinator. Most (74%) questionnaire respondents who started teaching before 1998 chose "Teaching and learning resources are provided by the teacher librarian on request" to be a difference to the teaching and learning since the presence of the teacher librarian in their school since 1998. In the Interview Data Theme Four which was "Agree with the 2002 legislated teacher librarian role as a reading resource and programme coordinator ─ teacher librarians work with subject teachers to source and provide teaching and reading materials needed by teachers and students". Interviewee Four and Six who started teaching before 1998 also agreed by giving an example. More examples were provided in the Interview Data Theme Fifteen which was "examples of the answers to question number eight in the questionnaire ─ since the establishment of the teacher librarian……." These are consistent with some of the views that emerged in the literature review section (p.75)

that in the publication of Education World published in 2011, the authors stated that our students need several persons to guide their education. They need the value added power of more than one brains working together for their good. Teachers cannot do it all on their own. No one can meet all the needs of all the students without help. Other professionals within the school have special strengths and talents to enhance the lessons.

Three interviewees compared the teacher librarian role in their school and disagreed this role statement by saying that teachers did not know about this role statement when they asked the teacher librarian to do such work (Q4:2,6),even teacher librarians themselves did not know they need to do this work, teacher librarians might not understand the needs of all subjects, the role of the subject panel heads and the teacher librarian need to be adjusted(Q4:1), the teacher librarian might not have the sole responsibility(Q2:1), (Q3:1).S/he him/herself had a teaching job, they felt that s/he had a heavy workload (Q5:6),purely book circulation or asking subject teachers the books they wanted could be fulfilled by non-teaching clerical staff (Q6:2).Teachers need to clarify teacher librarian role in order to make full use of the professionally trained teacher librarians.

Teachers' perception of the legislated teacher librarian role as an information and media specialist

I now go on to discuss Teachers' perception of the legislated teacher librarian role as an information and media specialist. Most (61.3%) questionnaire respondents selected "another person" who mainly teaches students how to use information in an ethical and responsible way. (79.2%) of this other person are Information Technology (Computer) teachers. In interview data Theme Seven "Disagree with the 2002 legislated teacher librarian role as an information and media specialist ─ this is not the case in my school". When asked to identify the person who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection, the third largest group of respondents (17.3%) selected "another person" including subject teachers, Information Technology (Computer) teachers, all teachers, discipline and guidance teachers, General Studies teachers. Ten out of thirteen (76.9%) "another person" are Information Technology (Computer) teachers. It is worth noting that one respondent answered, "……*Information Technology panel head, but he does not necessarily use the school library collection.*" It evidenced the technological nature of information literacy as discussed in the literature review that increasingly, most students turned first to computers to locate information in the internet, web sites, databases and electronic books (Dunn, 2002) (p.78) and the use of print resources has decreased. As discussed in the literature review, the convenience of online sources made them become more favoured of over other sources (Williamson et al., 2007) (p.81).Out of the four suggested ways of training teachers' information literacy skills, one was

"*coupled with the ability of teachers to use information technology…"* which shows that teachers associate information literacy skills with information technology. More teachers think that the information technology teacher has the role of an information and media specialist, not the teacher librarian.

The relationship between information literacy skills and information technology skills

I would like to discuss the relationship between information literacy skills and information technology skills here. As discussed in the literature review, technology became an enabler in information literacy in two ways: technology as an instructional tool (Umbach, 1998) (p.54) and as an instructional object (Umbac, 1998; Eisenkraft, 2010)(p.53). Topaloglu and Tekkanat (2015) (p.55) insisted that in line with the rapid developments in information and technology, using technologies to get the information changing and growing is a must. People need to know how to access information, utilize it for their needs and to keep abreast with the developing technology.

The implication of the relationship between information literacy skills and information technology skills

In this section, I would like to discuss the implication of the relationship between information literacy skills and information technology skills. In the literature review, Conde et al. (2011) (p.86) developed a diagnostic assessment of information literacy competence in more than 1000 Secondary Education students of 15 years old in the Spanish region of Castilla y León to find out the existing contrast between the level of use of technologies (videogames, social networks…) and the level of information literacy of the students. The result on information literacy competences showed that the majority of students were able to create a text document (78.8 %) and to install and uninstall a program (71 %), while only approximately a third (32.2 %) declared to be able to create a data-base. Students had high abilities when searching for information (91.8 %) and file downloading (77.5 %), they also declared to have a lower ability on publishing contents on the internet (36.9 %). It was found that information literacy is a nuclear integrative competence, not only in the technical use of ICTs, but also in the efficient management of information. Spanish students believed themselves experts in the use of ICTs, a fact that was actually turned into a lack of internalization of processes of correct management of information. Besides this, students declared that they should know more about information selection and popularization. Students showed a high use of computing tools, but had a low level of information competences. Miriam et al.'s (2015) research studying the online information behavior of 2,747 eleven to eighteen year-old Internet users found that they were weak in online information evaluation including the awareness of

credibility needs, their use of specific information evaluation practices and their accuracy in credibility assessment. Young Internet users were often uncritical when seeking information online as shown in Shenton and Dixon's (2003) study of 188 students who did not show they were aware of the need for scrutiny. Although young people were born in this digital world, they may lack the tools and capability critical to evaluate information effectively partly due to their limited development and life experience. They often attributed intent to authors superficially without considering possible bias. They usually trusted the top results yielded by search engines without asking why the results received high rankings (Julien and Barker, 2009). This may have been due to an egocentric mind perspective, meaning that early childhood children were unaware of others' thinking or the potential of different views of the same event (Kuhn, 2002). As they grew older and encountered schooling, assignments involving Internet research were found to correlate to credibility evaluation (Bulger, 2009).As discussed in the literature review, in this knowledge society, large amount of information that reaches us has not been filtered, uncertain in quality, is anonymous and appears in multiple formats (CAUL, 2002) (p.53).People need to have the continuous ability of updating and acquisition of new literacies required in each moment (MajóiCrúzate and Marqués, 2002; Markauskaite, 2006) (p.53). In response to emerging technologies, new literacies such as media literacy, digital literacy, visual literacy and cyber literacy share and go specifically deeper into one or more aspects of information literacy (Mackey and Jacobson, 2011) (p.53).

Here, I go on to discuss teachers' disagreement with the 2002 legislated teacher librarian role as an information and media specialist. 33 of those interviewed responses disagree with the 2002 legislated teacher librarian role as an information and media specialist with the reason that it is the responsibility for all teachers, not the teacher librarian solely, to teach information literacy skills. Small, Zakaria and El-Figuigui (2004) (p.85) argued that collaboration between librarians and professors is essential to the success of information literacy skills instruction. This is because good teacher librarians possess a detailed knowledge of educational pedagogy and a comprehensive understanding of school curriculum. They are also well-trained about information literacy theory and practice, which enable them to provide better information literacy instruction (ALIA, 2012) (p.86). The role of the teacher librarian becomes more important when the teaching of information literacy skills becomes more urgent. Only 14 of those interviewed responses agree with this role with the reason that we need a specialized teacher who teaches information literacy skills solely which, according to the discussion above would be less successful. As discussed in the literature review, information literacy was difficult to isolate from the learning and teaching environment (Williams and Wavell, 2006) (p.52).

Teachers' perception of the legislated teacher librarian role as a teaching partner

In this section, I discuss teachers' perception of the legislated teacher librarian role as a teaching partner. According to the 2002 legislated teacher librarian role, teacher librarians were a teaching partner who supported the studies in Key Learning Areas, teaching and assessment(P.28).Three interviewees recalled their experience working with the teacher librarian and agreed by saying that teacher librarians integrated reading into the curriculum, taught reading skills and strategies tied to the curriculum(Q1:4)(Q18:5), taught Internet searching skills (Q18:5), (Q36:6)especially in project learning(Q18:6). They asked subject panel heads how s/he could work with them to help (Q18:4). They reported that the above teacher librarian role was being implemented in their schools.

At the same time, all six interviewees also recalled their experience working with the teacher librarian and disagreed by saying that this was partly done. S/he had to teach a subject, so s/he was involved. Not because s/he was a teacher librarian (Q18:1).Reading promotion was done together by all. S/he only helps to find books. In assessment, what teacher librarians could help?(Q18:2) how? There were no examinations, reports or feedback (Q18:3). (Library Studies) was not a subject, scarcely touched on the assessment (Q18:5-6), (Q19:2). This was not the teacher librarian's sole responsibility. The Curriculum Leader had greater responsibility(Q19:1-6). The Curriculum Leader helps the school in reforming the curriculum in accordance with the educational aims to promote whole-person development and life-long learning by assisting the school head to lead whole-school

curriculum planning and facilitate implementation of the plans; planning and coordinating assessment policy and assessment practices; leading teachers/specialist staff in improving learning and teaching strategies; promoting a professional exchange culture; and taking up a reasonable teaching load (about 50% of the average teaching load of a teacher) in the school for trying out or piloting different strategies for further curriculum development (Education Bureau, 2010). The responsibilities of the teacher librarian and the Curriculum Leader were confused(Q20:1). The teacher librarian seemed to be doing some work of the Curriculum Leader and the Information Technology teacher. Who from us was expected by the Education Bureau to co-ordinate(Q55:2)?No need (for teacher librarians) to be involved so heavily. Teacher librarians had already involved in many areas. Their workload was quite heavy(Q20:6). Teachers felt the role conflict between the teacher librarian, the Curriculum Leader and the Information Technology teacher.

Teachers' perception of the teacher librarian role as a curriculum facilitator

In this section, I discuss teachers' perception of the teacher librarian role as a curriculum facilitator. Five interviewees recalled their experience working with the teacher librarian and agreed by saying that it was good to match the students' learning and teachers' teaching (Q26:3), (Q27:3-6). Curriculum development (since

1998)(Education Bureau, 2012)had gone so far for so many years. Might be it was but the teacher librarian then to help them think about how to optimize. Their teacher librarian knew what topics were being discussed at all levels. S/he passed to them via their intranet, told them the good materials that fit and the latest information(Q26:6). This role should not be fulfilled by non-teaching clerical staff(Q28:1-3).

At the same time, four interviewees also recalled their experience working with the teacher librarian and disagreedby saying that s/he did so in the subject s/he was asked to teach, not for other subjects (Q24:1). This was not any of the teacher librarian's role because the school's project learning and life-wide learning activities were coordinated by the Curriculum Leader(Q24:2). This was not the sole responsibility of the teacher librarian (Q24:5), (Q25:2, 3, 5), (Q26:1). They did not feel the need for the teacher librarian to be responsible (Q26:2). This role in the school was stereotyped. If we say that the teacher librarian was responsible for this aspect, the Curriculum Leader's role would be relatively vague. Comments could not be made unless the roles were clearly defined (Q27:2).

Teachers' perceptions of the legislated teacher librarian role are mostly administrative

Here, I would like to conclude teachers' perceptions of the legislated teacher librarian

role both in 1998 and 2002. The above sub-sections are Hong Kong primary teachers' perceptions of the roles of the teacher librarian which is the title of this research. As discussed in the literature review, these are mostly administrative aspects such as routine activities to maintain library services. They are often of a low level of difficulty which should be delegated to others such as non-teaching clerical clerk. Management refers to the ability of a leader to get things done through other people. The teacher librarian's management function needs "people skills" to delegate routine tasks to the clerical assistant, to control noise in the library and to plan and teach with other teaching staff (Henri, 1990) (p.92) which is still true today. As discussed in the literature review, along with the ever increasing quantity of information thrown at students and school staff, information literacy practices will be even more important for our students. Educators and advocates of information literacy within school community and leaders of face-to-face or virtual in-service sessions for school staff will continue to be teacher librarian role (Herring, 2013) (p.61). As discussed in the previous section in this chapter "The implication of the relationship between information literacy skills and information technology", this role of the teacher librarian becomes more important when the teaching of information literacy skills becomes more urgent. In the teacher librarian role list, Fischer (undated) (p.61) put training and supervising teachers as a personnel management role of the teacher librarian. Hong Kong primary teachers' perceived teacher librarian role is more administrative in nature as compared with the description in the literature review section "Cooperative Planning and Teaching (CPT) in the big picture" (p.91). It

reflects Hong Kong teacher librarians' self description as discussed in the literature review that teacher librarians in Hong Kong thought that their professional roles are undervalued by being asked to teach ordinary subjects leaving them limited time and opportunities to teach information literacy in collaboration with subject teachers which they assumed to be their professional role (Warning, Chan, Ma, Chu and Wu, 2013) (P.71).

Teachers' views on the additional post of and the role of the teacher librarian

In this section I discuss whether teachers think that an additional post of the teacher librarian is necessary. Nearly all respondents (94.7%) agreed strongly (40%) or agreed (54.7%) with the provision of an additional teaching post for undertaking the duties of a teacher librarian in aided primary ordinary schools since 1998. It is mainly because a school library has been provided by the government at the same time as discussed in chapter one section "Provision of the teacher librarians and their roles in Hong Kong" (p.20). There must be someone to manage it.

When asked if there were other comments they wish to make concerning the role of the teacher librarian, questionnaire respondents said that teacher librarians should promote teacher professional exchanges (Combined teaching of Library and Subjects), use their knowledge and skills, to empower teachers and students to obtain useful

information at work and study with the resources of the library. Their duties to teach other subjects should be reduced. Similar ideas are found in the key messages of the interview data as dedicated full-time, should not do (ordinary subject) teaching (12 responses); integrate reading into the curriculum and teach skills (9 responses) and develop the school's overall reading (9 responses).These show some teachers' expectation of the additional post of the teacher librarian. These observations therefore agree with the concept that information literacy was difficult to isolate from the learning and teaching environment (Williams and Wavell, 2006) (p.52-53). The connection between the teacher librarian and the development of information literacy will be discussed below.

In terms of teachers' views about whether teacher librarians are teachers professionally trained with library knowledge, 33 of those interviewed responses agreed that this was the case. "Library knowledge" is a general term. The level of teachers' awareness of information literacy skills is discussed later in this chapter. According to the literature review, librarians are trained to develop student information literacy skills including selection of information sources and the management of information (Williamson et al., 2007) (p.83). The study by ALIA (2012) agrees by saying that teacher librarians are well-trained about information literacy theory and practice. Also, as discussed previously in this chapter under the section "The implication of the relationship between information literacy skills and information technology skills", good teacher librarians possess a detailed knowledge

of educational pedagogy and a comprehensive understanding of school curriculum. They are also well-trained about information literacy theory and practice, which enable them to provide better information literacy instruction (ALIA, 2012) (p.86).This then facilitates teacher librarians to provide better higher order information instruction and teaching in their schools as discussed in the literature review section "Higher order information literacy skills need to be taught through teacher-librarian collaboration." (p.84)

The teacher librarian role is not explicitly known to teachers and school administrators

In this section I discuss the awareness level of teachers and school administrators in relation to the role of the teacher librarian. Regarding teachers' awareness, the big picture here is that generally, the pre and post 1998 initial appointments to be teachers do not make any significant difference to the answers of questionnaire questions. However in the five questions that ask about who takes the library management, information specialist, teaching partner, information skills training jobs of the teacher librarian and what happened when the additional post of the teacher librarian was filled by part-time non-teaching clerical assistants, there were more post 1998 appointed than pre 1998 appointed teacher respondents who chose "not sure" as the answer. This uncertainty shows that more post 1998 appointed teachers are not aware of the teacher librarian role. As time goes by, the teacher librarian role is becoming

blurred for Hong Kong primary teachers which is discussed below.

Most (50.7%) questionnaire respondents are not sure how the person holding the additional post of the teacher librarian is deployed. When asked to identify the person who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection, (18.7%) the second largest group, selected “not sure”. “Awareness of the role of the teacher librarian” was mostly (78.1%) chosen to help teachers utilize the skills of the teacher librarian.

Such awareness is necessary as discussed in the literature review section, the authors of Education Union (2014) (p.75) showed that teaching is becoming increasingly about working in teams. Teachers and support staff are increasingly working with other professionals in multi-agency teams. Teacher assistants, support and administrative staff have a unique role to play in the effective schooling (The Education Union, 2014) (p.75). In the literature review, Small, Zakaria and El-Figuigui (2004) (p.85) agreed with such team work by saying that collaboration between librarians and professors is essential to the success of information literacy skills instruction. Chang et al.(2012) (p.86) suggested that Singapore secondary schools should enhance the collaboration between teachers and school librarian, and promote the training of teacher librarian professionals to integrate information literacy into the school curriculum. As discussed in the literature review, in 1994, (p.61)

Hufton in British Columbia, Canada, studied whether teachers, teacher librarians and administrators all have the same vision of the role of the teacher librarian and school library resource centre. This study is important because there should be a shared recognition as teaching staff (including principals) and non-teaching staff have individual employment history, education or training background, roles, skills, needs, and concern (STF's Reference Committee, 2005) (p.76).

Now I discuss school administrators' awareness of teacher librarian role. The second largest group of questionnaire respondents (24%) answered, "The person holding the additional teacher librarian post partly fulfils the role of the teacher librarian as stated in Question 9. The rest of the time, he/she is devoted to ordinary subject teaching." This shows the part time status of teacher librarians in Hong Kong. The third largest group of questionnaire respondents (14.7%) answered that "The person holding the additional teacher librarian post fulfils the role of an ordinary subject teacher". This can be connected to the description of one questionnaire respondent when asked to give other comments he or she wish to make concerning the teacher librarian role that the school management had not yet established the library function in learning and teaching, so they appointed teacher librarians to take subject teaching jobs. This shows the unawareness of teacher librarian role by the school management. This institutional approach is critical as discussed in the literature review that if information literacy was considered as an institutional responsibility, administration policy could be put in place to facilitate librarians to train students and academic staff the necessary skills.

Institutional approaches were crucial for the expertise of the academic librarians to be used to promote information literacy (Williamson et al., 2007) (p.83). This reflected the literature review that teacher librarians in Hong Kong thought that their professional roles are undervalued by being asked to teach ordinary subjects leaving them limited time and opportunities to teach information literacy in collaboration with subject teachers (Warning, Chan, Ma, Chu and Wu, 2013 and Shu, 2014) (p.71). Similar situation is described by Mokhtar and Majid (2005) (P.86) in the literature review that in Singapore, school libraries have long been underused and isolated from students' learning environment. Librarians have little contact with teachers and teaching objectives, except to locate books and reference materials, or babysit students who use the library (Manzo, 1997) (p.86).

Teachers' perception of information literacy skills

Teachers' understanding of information literacy skills is different from the literature

In this section I discuss teachers' understanding of information literacy skills. 59% questionnaire respondents related information literacy skills with observing copyright. This was cross validated by the key messages of the interview data that teachers' understanding of information literacy skills as the skills of making good use of the

information from the resources and observing copyright. As discussed in the literature review, The Society of College National and University Libraries (SCNUL) (2011)developed the Seven Pillars of Information Literacy model where they use "information literate" with reference to the American Library Association's 1989 statement:

> "*To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information*".

This shows that teachers' understanding of information literacy skills is different from the literature. In the key messages of the interview data, teachers understand information skills as information technology ability to use a computer, tablet PC and software. Since technology is becoming an enabler in information literacy (Umbac, 1998; Eisenkraft, 2010) (p.54) as stated in the literature review, the concept that information skills means information technology skills partly agrees with the literature. 93.2 % questionnaire respondents strongly agreed (40.5%) or agreed (52.7%) that information literacy skills are necessary in the information age. However, two third of the questionnaire respondents did not give reasons to support their agreement to the fact that "information literacy skills are necessary in the information age". That mirrors 32.4% of them said that they were poor level of understanding information literacy skills. It explains why most (57%) respondents agreed that they have further professional development needs in terms of information literacy skills.

Teachers' perception regarding the teaching of information literacy skills

I now discuss teachers' perception regarding the teaching of information literacy skills. Teachers agreed that they have the responsibility to teach information literacy skills as shown in the key messages of the interview data that it is the responsibility for all teachers to teach information literacy skills. However, only one third (33%) questionnaire respondents agreed that the initial teacher training course prepared them to teach information literacy skills, slightly less than one third (30%) disagreed that the initial teacher training course prepared them to teach information literacy skills and nearly one third (29%) were not sure. Most (41%) questionnaire respondents were not sure whether teachers are able to develop students' information literacy skills without the collaboration of the teacher librarian. These variations raise the need to prepare teachers to teach information literacy skills which echo the result that most (57%) questionnaire respondents agreed that they have further professional development needs in terms of information literacy skills. Both "awareness of information literacy skills" and "the ability to develop students' information literacy skills" were chosen by (58.9%) questionnaire respondents to help teachers utilize the skills of the teacher librarian."Developing teachers' personal information literacy skills" was chosen by (41.1%) questionnaire respondents to help teachers utilize the skills of the teacher librarian.16of those interviewed responses said that teachers develop their own information literacy skills in relation to student need. It reviews that

the significance of information literacy skills has been connected to the work place (Majid et al., 2011) (p.50) as discussed in the literature review.

Conclusion

This discussion chapter brings into some perspectives related to the research title based on the key findings and the literature review. Teachers feel the necessity to have an additional post of the teacher librarian since 1998. However, the teacher librarian role was not explicitly known to them. Their understanding of the legislated teacher librarian role is mostly administrative. Their understanding of information literacy skills is different from the definition in the literature review. They feel the necessity to have further professional development on information literacy skills in order to teach such skills.

CHAPTER SIX: CONCLUSIONS

There are four sections in this chapter. Firstly there will be a summary of the key findings and analysis that answered my research questions followed by their implications for the Education Bureau, teacher education, school administrators,

teachers and the public. Then it goes on to discuss the limitation of the research. Finally it will reflect on the research questions and suggest ways of setting them differently if I were to do this research again.

A summary of findings

The study aimed to explore Hong Kong primary teachers' perceptions of information literacy skills and the role of the teacher librarian to answer these questions:

1. What are teachers' perceptions of information literacy skills?
2. Who do teachers think are responsible for developing student information literacy skills?
3. Do teachers feel able to teach information literacy skills?
4. What are teachers' perceptions of the role of the teacher librarian?

The findings were based on the data collected from seventy five self-completed questionnaires and six questionnaire respondents.

The increasingly complex nature of information literacy

Mackey and Jacobson (2011) asserted that information literacy was first used in 1980s and is still valid. A few organizations such as the American Library Association (ALA), the Association of College and Research Libraries (ACRL), the Society of College, National and University Libraries (SCONUL) had developed the definition of information literacy. Those definitions developed prior to the astonishing rise of

social media and collaborative online communities such as Facebook, Twitter, sms messages, emails, blogs, wikis, podcasts and RSS feeds, do not fully address the information skills required to participate in these new environments where creating, sharing and publicizing information become prevalent. The technology for storing, organizing, accessing and sharing the ever growing wave of information has been developing enormously (Hinchliffe, 2002). Technologies have facilitated people's learning and adaptation to social life (Topaloglu and Tekkanat, 2015). Young people are increasingly turning to the Internet to find information than to traditional media and information sources because of convenience (Dunn, 2002; Miriam et al., 2015). Large amount of information that reaches us has not been filtered, uncertain in quality, is anonymous and appears in multiple formats (CAUL, 2002). Research demonstrates short comings in young people's online information literacy in terms of consumption behaviors. Finding credible information is a complex and challenging task especially for children and adolescent. Although young people are born in this digital world, they lack the tools and capability critical to evaluate information effectively (Dunn, 2002; Miriam et al., 2015). Education in such information environment required children to think independently (Massis, 2011) and critically which is the main component of information literacy skills. The significance of information literacy skills has been connected to academic performance (Chang et al., 2012; Miriam, Metzger, Flanagin, Markov, Grossman and Bulger, 2015) and in the work place (Majid et al., 2011).The traditional definitions of information literacy are insufficient for the astonishing rise of social media and collaborative online communities.

In response to the continuous changing information technological environments, the above organizations continuously refine the definition of information literacy to bear necessary elements such as "the ability to synthesize and build upon existing information, contributing to the creation of new knowledge (SCONUL 2011)" and "the need to share information, in academic situations, in the personal realm, and in the workplace, using a variety of mediums (SCONUL 2011)."

In response to emerging technologies, new literacies such as media literacy, digital literacy, visual literacy and cyber literacy have been developed. They share and go specifically deeper into one or more aspects of information literacy of determining when and what information is needed, accessing, evaluating, incorporating, understanding, producing, sharing and using information. As media and technology formats continue to change, information literacy skills prepare individuals to adapt to shifting environments for a lifetime.

Hong Kong primary teachers' perceptions of information literacy skills

Hong Kong primary teachers' perceptions of information literacy skills were mainly observing copy right, making good use of the information, similar to information technology skills (to be discussed further in the following section),to identify the credibility of the information, and be critical. These are discrete and not as systemic as

the standard definition of information literacy. Given the abundance of unfiltered and uncertain information options available today, teachers also need the necessary skills to identify credible information to solve their daily problem. Their ways of solving problems inevitably become models for their students. Take plagiarism as an example. If teachers plagiarize, students might plagiarize. The notion that the significance of information literacy has been connected to academic performance and the work place (Majid et al., 2011) has dual meaning to teachers. They have the responsibility of maintaining student academic performance as well as developing student information literacy skills in schools. Teachers' limited and discrete awareness of information literacy skills is inadequate for them to fulfill their responsibility. Raising teachers' personal awareness of information literacy skills and prepare them to teach such skills should not be delayed.

Teachers associate information literacy skills with information technology skills

One of the teachers' perceptions of information literacy skills is that information literacy skills are similar to information technology skills. In Hong Kong, Technology became a Key Learning Area in 2000 (Education Bureau, HKSAR, 2013) (p.56) to prepare students to be valuable human capital amidst the rapidly emerging technologies. School administrators need to assign Information Technology teachers

to develop student information technology skills. Such government policy and institutional approach pass on an idea to the public including the principals themselves, teachers, parents and students that information technology education is an institutional responsibility. Since then, the Education Bureau, universities and teacher educators have provided training workshops to serving teachers and new teachers to prepare them to teach information technology skills. Teachers are used to such kind of professional development along with the continuous education reform. One of the key messages of the interview data that suggested ways of training serving teachers information literacy skills by including information literacy skills training in the information technology workshops organized by the Education Bureau from time to time. This is a good idea as teachers might consider such training as an extension or continuation of information technology training and would not feel burden on them.

Teachers insisted that all teachers are responsible to teach information literacy skills but were not sure they are able to do so

All interviewees expressed that it was the responsibility of all teachers to teach information literacy skills. Regarding teachers' ability to teach information literacy skills, most (41%) questionnaire respondents were not sure whether teachers are able to develop students' information literacy skills without the collaboration of the teacher librarian. 35% disagreed or strongly disagreed that the initial teacher training course

had prepared them to teach information literacy skills. 29% were not sure. Most (57%) agreed that they have further professional development needs in terms of information literacy skills.

Teachers were unaware of the legislated role of the teacher librarian

In the beginning of the face to face interview before any questions were asked, interviewees were invited to describe the teacher librarian role spontaneously. They said that the teacher librarian provided some bibliographies for their selection, complemented their teaching curriculum with some educational materials in need, worked with subject teachers to support teaching and learning, promoted reading, taught information skills, dealt with all the books, managed the school's central library with specialized skills, set up library prefects and trained them as a leadership role. They did not have any idea about the legislated teacher librarian role by the Education Bureau in 1998 and 2002. Then the interviewer told them the details and asked them to give ideas. Both agreement and disagreement to those roles were expressed.

Implications

Based on the findings and discussion of this research, the following implications have been identified.

Teacher education and the Education Bureau are responsible for the further professional development of teacher information literacy skills

The significance of information literacy skills has been connected to the work place (Majid et al., 2011) and yet Hong Kong primary teachers are not sure whether they are able to develop student information literacy skills. Furthermore, the nature of information literacy is becoming increasingly complex. In this knowledge society, large amount of information that reaches us has not been filtered, uncertain in quality, is anonymous and appears in multiple formats (CAUL, 2002). People need to have the continuous ability of updating and acquisition of new literacies required in each moment (MajóiCrúzate and Marqués, 2002; Markauskaite, 2006). In response to emerging technologies, new literacies such as media literacy, digital literacy, visual literacy and cyber literacy share and go specifically deeper into one or more aspects of information literacy (Mackey and Jacobson, 2011).Questionnaire respondents were asked to express the extent of agreement to "You have further professional development needs in terms of information literacy skills". Most (57%) agreed. They were also asked to express the extent of agreement to "Your initial teacher training course prepared you to teach information literacy skills". 35% disagreed or strongly disagreed.29% were not sure. Developing teachers' personal information literacy skills

and preparing them to teach information literacy skills become more urgent than ever in this information age.

Since the education reform in Hong Kong in 2000, life-long independent learning skills such as project learning skills have been emphasized. The example from Interviewee One's school showed that during project learning, students were requested to search for information to answer the project learning questions. Another finding showed that teachers agreed that it was the responsibility of all teachers to teach students information literacy skills. "*Only when teachers understand that information literacy must begin with them, is an information literate school community possible*" (Henri, Hay and Oberg, 2002, p.2).In the data collected in this research in 2012, most (57%) questionnaire respondents agreed that they have further professional development needs in terms of information literacy skills. Regarding the extent of agreement to "Your initial teacher training course prepared you to teach information literacy skills", 35% disagreed or strongly disagreed. 29% were not sure. Such data collected in 2012 strongly suggested that the initial teacher training prepare teachers to teach information literacy skills.

In Hong Kong, training new teachers with information literacy skills is the responsibility of teacher educators, teacher training institutes and universities. Training serving teachers with information literacy skills is the responsibility of the Education Bureau. There is a finding which suggested ways of training serving

teachers such skills by including information literacy skills training in the information technology workshops organized by the Education Bureau from time to time. Teachers also suggested the teacher librarian to train colleagues such skills because he or she had been trained such skills in professional teacher librarian training courses.

Raising teachers' awareness of teacher librarian role is as important as establishing such additional post to develop student information literacy skills

"Awareness of the role of the teacher librarian" was mostly (78.1%) chosen by teachers to help them utilize the skills of the teacher librarian. Raising teachers' awareness of teacher librarian role is as important as establishing such additional post in order to achieve its full potential. Teachers' awareness of teacher librarian role eventually becomes the principal and the school management awareness which is crucial for institutional approaches of developing student information literacy skills.

The research by Williamson et al (2007) suggested that both the subject teacher and the teacher librarian have their unique role in meeting student information literacy need in this digital age. When information literacy is considered as institutional responsibility, administration policy can be put in place to make full use of the trained teacher librarian to train teachers and students information literacy skills. Institutional

approaches facilitate the integration of information literacy skills into the curriculum. Institutional approaches were crucial for the expertise of the teacher librarian to be used to promote information literacy.

Pilot and share the role of the teacher librarian

One of the four roles of the teacher librarian legislated by the government in 2002 is that they are teaching partners as well as responsible for managing the school library. One of the interviewee is the Curriculum Leader. She strongly disagrees with this role statement by saying that the responsibilities of the teacher librarian and the Curriculum Leader is confused. The teacher librarian seems to be doing some work of the Curriculum Leader and the Information Technology teacher. Other interviewees join her by saying that this is not the teacher librarian's sole responsibility. The Curriculum Leader has greater responsibility. In this role statement the purpose of the partnership between the teachers and the teacher librarian is not clearly stated. In the literature review (p.88), a teacher librarian trainer, Henri (1990) claimed that Cooperative Planning and Teaching (CPT) is an instructional model in which the teacher librarian and the class teacher are equal partners in the instructional process. They share the responsibility for the planning, implementing and evaluating of Learning programmes that incorporate information literacy. In the information society, the teacher librarian has become a special teacher who has special competence in planning effective learning such as resource based learning in collaboration with

teacher colleagues. S/he is by nature and position a team person, cooperating with other teachers to enhance teaching and learning(Henri, 1990) (p.88). Class teachers will benefit from the teacher librarian's knowledge about resources, information sources and skills. They can benefit from getting a few trusted items and relevant information to the topic without going through unnecessary ones, if they have no time to read more than enough materials(Henri, 1990) (p.91).As discussed in the literature review (p.85), in a study in community college libraries, Small, Zakaria and El-Figuigui (2004) argued that collaboration between librarians and professors is essential to the success of information literacy skills instruction. When information literacy is considered as institutional responsibility, administration policy can be put in place to make full use of the trained teacher librarian to train teachers and students information literacy skills. Institutional approaches facilitates the integration of information literacy skills into the curriculum (Williamson et al., 2007) (p.80). It is suggested to legislate the unique role of the teacher librarian to develop student information literacy skills in cooperation with classroom teachers.

Besides legislating such partnership role of the teacher librarian, piloting such role is necessary because as Interviewee Two said, "*the library does not actually have a curriculum guideline. The progress of each school is not the same*." Also, there is no such post of a teacher librarian in primary schools before 1998. The literature suggested Cooperative Planning and Teaching to teach information literacy skills and the flexible library timetable (p.92) to facilitate Cooperative Planning and Teaching

need to be piloted.

Another role of the teacher librarian legislated by the government in 2002 is that they are reading resource and programme coordinator besides managing the school library. Here, reading resource includes leisure reading resource and curriculum related reading resource. In the days without the teacher librarian, subject panel heads manage the curriculum related resource. With the newly established teacher librarian, the role of the subject panel head and the teacher librarians need to be adjusted. Since there is no such practice of managing curriculum related resource by a teacher librarian, pilot scheme of using the teacher librarian in doing so is suggested to adjust traditional school practices. Furthermore, one of the findings is that the role of the teacher librarian is not known explicitly by teachers. Authors of The Education Union and STF's Reference Committeestated that all teaching staff should be able to provide invaluable support for teaching, so it is really important for teachers to understand their role, responsibilities and expectations in order to work with them (The Education Union, 2014; STF's Reference Committee, 2005).The pilot schemes are necessary to let people know the role of the teacher librarian in relation to daily teaching.

Another role of the teacher librarian legislated by the government in 2002 is that they are information specialists responsible for developing students' information skills and attitudes in using information from all formats and contexts appropriately and ethically. Over half of the questionnaire respondents feel that someone else is doing

information skills training and 50.7% think this someone is the Information Technology teacher. There is considerable uncertainty about the role of the teacher librarian. One of the findings is that the legislated role description of the teacher librarian is not widely shared. So sharing the legislated role is important to its implementation and piloting it is a good way of sharing.

The limitation of this research

In this section I discuss the limitation of this research. Questionnaire question twenty asked respondents to respond to three statements and they were given the choices of "Strongly agree", "Agree", " Not sure", "Disagree" and "Strongly disagree". There is a limitation of this attitude scale as LaMarca (2011) said that, *"Frequently, people avoid choosing the "extremes" options on the scale, because of the negative implications involved with "extremists",* even if an extreme choice would be the most accurate. Interviews may help determine how strong that is. People are generally fine about giving their views in the interview even if they do not want to be strongly negative in the questionnaire.

As discussed in method and methodology, "One interview for every ten questionnaires is quite a substantial back-up" (Gillham, 2000, p.83). There were 75 questionnaire respondents and only six of them were interviewed. Only one out of every 12.5 questionnaire respondents was interviewed. Their representativeness of the

questionnaire respondents was relatively low. If similar research was conducted, it is suggested to interview more questionnaire respondents.

One of the drawbacks of multiple choice questions in questionnaire survey is that the respondents have been given limited choices by the researcher which might not exactly express their ideal answers. This could be supplemented by asking the same respondents open ended questions in the face to face interview. In this research, only six out of seventy five questionnaire respondents were interviewed. They were asked to and had the opportunity to describe the role of the teacher librarian spontaneously. But this small set of the questionnaire respondents could hardly represent all the questionnaire respondents. In some of the themes that emerged from the interview data, although all six interviewees agreed the same, they are too weak to represent the perceptions of the teacher population. For example, all six interviewees agreed that teacher librarians are professionally trained with library knowledge. This representativeness is low. Actually, the total number of interviewees was hard to guarantee because it had to be depended on the willingness of the respondents to be interviewed. Focus group discussion to collect qualitative data could be one way out.

The aim of this research is to examine Hong Kong primary teachers' perceptions of information literacy skills in relation to teacher librarian role. Teacher librarians themselves might also be invited to express their ideas on their role in relation to information literacy skills. They might provide perceptions from their point of view

making the investigation more comprehensive. But I did not do so because a few researches in Hong Kong such as Warning, Chan, Ma, Chu and Wu(2013), Shu (2014) andLo, Chen, Dukic, Youn, Hirakue, Nakahima and Yang (2014) have done so and teachers are seldom invited to express their perceptions on teacher librarian role.

The way of doing this research differently if I were to do it again

Half of the six interviewees were from government schools and the rest were from aided schools. But there are more aided schools than government schools in Hong Kong. Since I did not know the background of the respondents who only provided their names and email addresses to show willingness to be interviewed, I had no choice on the type of schools they came from. Are there any differences in implementing government policies in both types of schools? It is ideal to have the number of teacher interviewees in the ratio of the total number of government schools to the total number of aided schools. Besides inviting the questionnaire respondents to be interviewed, additional individual interview with other teachers might be a way out.

The literature about Cooperative Planning and Teaching (CPT) of how teachers cooperate with teacher librarians to train student information literacy skills was used to structure questionnaire question 11 by asking, “Who is mainly responsible for

co-teaching with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricular activity-related reading materials for students? Here, by co-teaching, I meant Cooperative Planning and Teaching (CPT) which was difficult to be explained to the respondents in the questionnaire. The examples of co-teaching provided by the interviewees showed that there were different kinds and levels of co-teaching with different characteristics in schools which were not necessarily Cooperative Planning and Teaching. So the answers to this question were considered as not valid. If I were to do this research again, I would make it an interview question so that it becomes an open ended question, "In your school, does the teacher librarian co-teach with subject teachers? Why do they co-teach? How do they co-teach?"

There are overlapping skills to be taught by the teacher librarian and the information technology teacher. In questionnaire question 12, I asked, "In your school, who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection? Please select only one option." Most answered the information technology teacher. One supplemented that the teacher did not necessarily use the school library collection. This showed that the question was too specified and was narrowly focused on the teacher librarians' duties. Furthermore, according to the literature, information literacy skills include information searching skills. If I were to do this study again, I would split the question into four questions. Firstly, I would ask, "Who is mainly responsible

for developing teachers' information literacy skills?" Secondly I would ask "Who is mainly responsible for developing students' information literacy skills?" For each of the above questions, I would ask a following up question "How?" and provide a number of ways of teaching information literacy skills for respondents to choose from.

In Interview Data Theme One: Teachers' description and suggestion of the teacher librarian role ─ integrates reading into the curriculum and teaches skills. There is a need to see what "skills" teachers mean here? If I were to do this research again, I will listen carefully to the answers from the interviewees and ask following up questions immediately.

In questionnaire question ten, "In your school, who is mainly responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities?", According to Henri (1990), procuring, managing and supplying library books are administration work while identifying and promoting reading materials for students relevant to the curriculum and extracurricular activities are teaching jobs. If I were to do this research again, I will split this question into two. One asks about administration work and the other asks about teaching jobs.

Summary

This chapter starts with a summary of the key findings which answer the research questions about teachers' perceptions of information literacy skills, who should be responsible for teaching such skills, whether they feel able to teach and the teachers' perceptions of the teacher librarian role. The traditional definition of information literacy prior to the astonishing rise of social media and collaborative online communities do not fully address the information skills required to participate in new environments where creating, sharing and publicizing information become prevalent. In response to the enormously developing (Hinchliffe, 2002) information technological environment, the definition of information literacy needs to be continuously renewed to ensure the presence of the necessary elements to prepare individuals to adapt to shifting environments for a lifetime. Technologies have facilitated learning and adaptation to social life (Topaloglu and Tekkanat, 2015). People can be overwhelmed by large amounts of non-filtered, uncertain information that are anonymous and in multiple formats (CAUL, 2002). People are in more urgent need of information literacy skills encompassing the capability to evaluate information effectively (Dunn, 2002). The significance of information literacy has been connected to academic performance (Chang et al., 2012 and Miriam et al. 2015) and in the work place (Majid et al., 2011) which implies that teachers have the dual responsibility of maintaining student academic performance as well as developing student information literacy skills. Hong Kong primary teachers' awareness of information literacy skills were found to be limited and discrete, hindering them from fulfilling their responsibility to train student in such skills. They thought that information literacy

skills were similar to information technology skills suggesting an extension of information technology training to include information literacy training. Teachers agreed that they had the responsibility to teach information literacy skills but were not sure that they were able to do so. They agreed that they had further professional development needs in terms of information literacy skills. Teachers were unaware of the legislated teacher librarian role. When told about the four legislated teacher librarian roles as a reading resource and programme coordinator, an information and media specialist, a teaching partner and a curriculum facilitator, they felt that the responsibilities of the teacher librarian and those of the Curriculum Leader, the Information Technology teacher and the subject panel head were confused and needed to be adjusted because of the newly established post of the teacher librarian in 1998 in each school. The above results of this research imply that teacher education is responsible for initial teacher training to include information literacy skills and the Education Bureau is responsible for further professional development of teacher information literacy skills. Regarding the newly established teacher librarian post in 1998, raising teachers' awareness of the teacher librarian role is as important as establishing such additional post to collaboratively develop student information literacy skills. This can be done by sharing the teacher librarian role widely through piloting such a role in schools. When information literacy is considered as an institutional responsibility, administration policy can be put in place to make full use of the trained teacher librarian to train teachers and students in information literacy skills.

This research has some limitations. In questionnaire question 20, respondents were given the choices of "Strongly agree", "Agree", "Not sure", "Disagree" and "Strongly disagree". Usually people try not to choose the extreme options thinking that they represent negative expressions even if the extreme choices would be their most accurate answer (LaMarca, 2011). The total number of interviewees was hard to guarantee depending on the willingness of the questionnaire respondents to be interviewed. Only one out of every 12.5 questionnaire respondents was interviewed indicating a low representativeness.

If I were to do this research again the following might be done differently. It is ideal to have the number of teacher interviewees in the ratio of the total number of government schools to the total number of aided schools as there are more aided schools than government schools in Hong Kong. Questionnaire 10 asked about two types of duties namely administration work and teaching jobs which should be split into two questions. The examples of co-teaching provided by the interviewees showed that there were different levels and modes of co-teaching between teachers which were not necessarily the type I was referring to in questionnaire question 11. It is better to be asked during interviews as open ended questions. Questionnaire question 12 "In our school, who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection?" asked about four items which should be split into four questions.

This research explores Hong Kong primary teachers' perceptions of information literacy skills. An interviewee mentioned that teacher librarians teach skills. I was interested in the kind of skills he/she referred to. In such circumstances, I should have asked follow up questions immediately. I regret that I did not do so.

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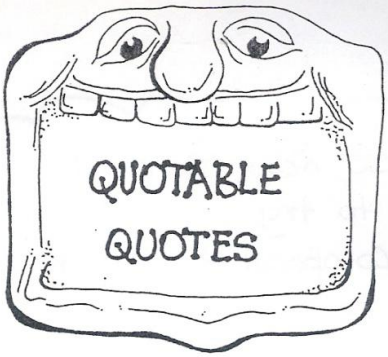
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Appendix A: Handout at Collaborative Planning and Teaching Workshop 3



- Ever noted that any attempt to improve staff communication inevitably results in most of the staff refusing to talk to each other!

- The world is full of willing people - some willing to work - The rest to let them!
  Robert Frost

- I don't know the key to success - but the key to failure is trying to please everyone.
  Bill Cosby

- If you can keep your head when all about you are losing theirs - it's just possible you haven't grasped the situation.
  Jean Kerr

- What a school thinks about its library is a measure of what it feels about education
  U.S. Commissioner of Education

- The really great people are the ones who know how to make the other people feel great.
  A. Brilliant

- Don't agonize - ORGANIZE

- If at first you do succeed
  Try not to be too astonished.

- The journey of a thousand miles begins with a single step.
  Mao Tse-tung

16.

Appendix B: Flexible Co-operative Library Timetabling and What It Means

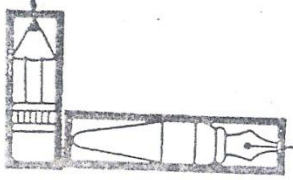
FLEXIBLE CO-OPERATIVE LIBRARY TIMETABLING AND WHAT IT MEANS —



BOONDALL STATE SCHOOL
JUDI FISCHER T/L

IT MEANS THAT :—

* The library really will become part of resource-based learning in our school instead of an artificially enforced obligation.
* Library and other research and reading skills will no longer be isolated experiences but will be learnt in subject context.
* Teachers will be able to select the frequency and length of library times needed.
* Classes can be scheduled when the need arises instead of when a "library lesson" was set down.
* Individuals and small groups as well as whole classes will have greater access to the library.
* Pupils will come to the library with needs to fulfil and thus be more highly motivated to learn and practise their location skills.
* Individual students will be able to seek immediate answers to problems which crop up in the classroom.
* Small groups from different year levels can share the same library space and time slot as long as the resource requirements are different.
* The reference collection and AV resources will become the working research tools that they should be.
* Lessons, activities, assignments on units of study will be planned co-operatively by the teacher and library staff by first checking to see the extent of relevant resources in the library.
* Teachers can share unit activities and resources more effectively and thus save doubling-up on preparation and time.
* Lessons will be tailored to suit pupil and teacher needs rather than time restrictions.
* Literature and non fiction resources can play a more active part in creative subjects such as Art and Writing.
* The library will become more involved with the teaching of learning.



K.I.

Appendix C: Consent form (English)

PARTICIPANT CONSENT FORM

Project title : Information Literacy Skills: Hong Kong primary teachers' perceptions of the role of the teacher librarian

Researcher's name: Leung Yuet Ha, Angel

Supervisors' names: Anne Convery and Gary Mills

- I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part.
- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
- I will not be identified individually and my personal details will remain confidential.
- I consent to the researcher sharing aggregated, anonymous findings from the research with the school principals.
- * I understand that I might be asked to take part in additional face to face interviews, in case further detail is sought. I will be audio-taped during the interview in order that an accurate transcription of my answers to the interview questions is obtained.
- I understand that data– including hard and electronic copies of transcripts–will be stored as Microsoft Word files with the researcher, the supervisor and the University of Nottingham only. I will have access to the research report on request.
- I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research.

Remarks: *For teacher participants only

Signed…… (principal/teacher participant)

Print name……**Date**……

Contact details

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School of Education Research Ethics Coordinator: educationresearchethics@nottingham.ac.uk

Appendix D: Consent form (Chinese)

參加研究意向書

研究主題：資訊素養技能：香港小學教師對學校圖書館主任角色的觀感

研究者姓名：梁月霞

導師姓名: Anne Convery and Gary Mills

我已經閱讀參加研究者資料書而有關研究目的及性質已向我解釋。我明白並同意參加。

- 我明白本研究的目的及本人的參與模式。
- 我明白我可於任何階段退出是項研究而不會影響我的現況及將來。
- 我明白如研究中所獲取的資訊被發表，我將不會被記名而我的個人結果絕對保密。
- 我將不會被記名而我的個人資料絕對保密。
- 我同意研究者向與校長分享整體、不記名的研究結果

*我明白如需進一步獲取詳情，我可能被邀請參加進一步面談訪問，其間將會被錄音以確保本人對面談問題的答覆得以準確地抄錄

- 我明白資料–包括硬本及電子抄本–將只限研究者、導師及諾丁漢大學以微軟文字檔儲存。如有需要，本人有權取存研究報告

- 我明白如需查詢有關本研究的進一步資訊，我可以聯絡研究者及導師。如有任何關於參與是項研究的投訴，我可聯絡諾丁漢大學教育學院研究道德規範協調員

備註：*只適用於教師參加者

簽署……

(校長/教師參加者)

正楷姓名……日期：……

聯絡詳情

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Appendix E: Information sheet for principals (English)

Information Sheet for Principals

What this research is about:
This research aims at collecting teachers' perceptions of the role of the teacher librarian in Hong Kong primary schools.

What will I have to do?
You are invited to identify non-teacher-librarian teachers in your school to answer a questionnaire either on paper or online. They might be invited to take part in additional face to face interviews with the researcher at their convenience.

How long will teachers' involvement take?
The questionnaire should take teachers approximately 30 minutes to complete. The face to face interview will last approximately 60 minutes.

How will my confidentiality be protected?
Your school will not be identified in any way in the final research report. The data, including the dissemination of findings, will be stored as Microsoft Word files with the researcher, the supervisors and the examiners only and will be used purely for the purposes of the research project. No-one other than the researcher, supervisors or examiners will have access to any of the data collected. You will not be identified individually and your personal details will remain confidential.

Can I withdraw from the research?
You may withdraw from the research project at any stage and this will not affect your status now or in the future. You may contact the researcher or supervisor if you require further information about the research, and you may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if you wish to make a complaint relating to your involvement in the research. If a teacher from your school wants to later withdraw from the project, aggregated feedback from the whole research study will be provided for you.

What will the benefits be for me?
You will benefit from the participation of your teachers in the study as they reflect on the role of the teacher librarian, which could lead to improving the teaching and learning in your school. This could also contribute to the further professional development of your teachers.

Contact details

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Appendix F: Information sheet for principals (Chinese)

校長參加研究資料書

這項研究是關於：

這項研究的目的是蒐集香港小學教師對學校圖書館主任角色的觀感。

我需要做什麼？

誠邀閣下襄助，約邀非學校圖書館主任老師回答或網上回答問卷。他/她們或會被邀請於他們方便的時間接受研究員進一步面談訪問。

教師的參與需時多久？

教師完成問卷約需 30 分鐘。面談訪問約需 60 分鐘。

如何保護我的機密？

最終研究報告以不記名方式進行。有關資料，包括研究結果的傳遞，將以微軟的 Word 檔案由研究員、導師和考官儲存，純粹用於研究目的，除研究員、導師和考官外，任何人不得取存任何已蒐集的資料。研究以不記名方式進行，閣下的個人資料絕對保密

我可以退出研究嗎？

您可以在任何階段退出的研究而不會影響你現在或將來的狀態。如需有關的研究的進一步資料，可聯絡研究員或導師。如想作出有關參與研究的投訴，可聯絡英國諾丁漢大學學校教育研究道德規範協調員。如貴校教師稍後想退出研究，將會爲您提供研究的整體反饋。

我將有什麼得益？

貴校將從老師參與研究、深思學校圖書館主任的角色中提高教與學，爲進一步教師專業發展作出貢獻。

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Appendix G: Information sheet for non-teacher librarian teachers (English)

Information Sheet for Non-teacher-librarian Teachers

What this research is about:

This research aims at collecting teachers' perceptions of the role of the teacher librarian in Hong Kong primary schools.

What will I have to do?

You are invited to answer a questionnaire either on paper or online. You might be invited to take part in additional face to face interviews.

How long will my involvement take?

The questionnaire should take you approximately 30 minutes to complete. The face to face interview will last approximately 60 minutes.

How will my confidentiality be protected?

As anon-teacher-librarian teacher in a school chosen at random fromthe 2010 list published by the Committee on Home-School Co-operation, Education Bureau, the Government of the Hong Kong Special Administrative Region, you agree that the data you provide can be used for the purpose of the above research only. The data, including the dissemination of findings, will be stored as Microsoft Word files with the researcher, the supervisors and the examiners only and will be used purely for the purposes of the research project. No-one other than the researcher, supervisors or examiners will have access to any of the data collected. You will have free access to the data kept on you. You will not be identified individually and your personal details will remain confidential.

Can I withdraw from the research?

You may withdraw from the research project at any stage and this will not affect your status now or in the future. You may contact the researcher or supervisor if you require further information about the research, and you may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if you wish to make a complaint relating to your involvement in the research.

What will the benefits be for me?

You will benefit from your participation in the study as you reflect on the role of the teacher librarian, which could lead to improving the teaching and learning in your school. This could also contribute to your further professional development.

Contact details

Researcher: Leung Yuet Ha, Angel.

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Appendix H: Information sheet for non-teacher librarian teachers (Chinese)

非學校圖書館主任教師參加研究資料書

這項研究是關於：

這項研究的目的是蒐集香港小學教師對學校圖書館主任角色的觀感。

我需要做什麼？

誠邀閣下回答或網上回答問卷。您或會被邀請參加進一步面談訪問。

我的參與需時多久？

完成問卷約需 30 分鐘。進一步面談訪問約需 60 分鐘。

如何保護我的機密？

作爲在香港特區政府教育局家庭與學校合作事宜委員會 2010 年學校名單中隨機選出的一位非學校圖書館主任教師，閣下同意所提供的資料只可用於上述研究目的。有關資料，包括研究結果的傳遞，將以微軟的 Word 檔案由研究員、導師和考官儲存，純粹用於研究目的，除研究員、導師和考官外，任何人不得取存任何已蒐集的資料。閣下將免費獲得已保存的有關閣下的資料。研究以不記名方式進行，閣下的個人資料絕對保密。

我可以退出研究嗎？

您可以在任何階段退出的研究而不會影響你現在或將來的狀態。如需有關的研究

的進一步資料，可聯絡研究員或導師。如想作出有關參與研究的投訴，可聯絡英國諾丁漢大學學校教育研究道德規範協調員。

我將有什麼得益？

閣下透過參與研究、深思學校圖書館主任的角色，可提高貴校的教與學，並爲閣下進一步的專業發展作出貢獻。

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Appendix I: The letter to the principal (English)

Dear principals,

I am a research student studying for a Doctor of Education degree, jointly organized by University of Nottingham and University of Hong Kong, School of Professional and Continuing Education. The focus of my study is "Information Literacy Skills: Hong Kong primary teachers' perceptions of the developing role of the teacher librarian". This research aims to collect teachers' perceptions of the role of the teacher librarian in Hong Kong primary schools. Since 1998primary schools in Hong Kong have been provided with a teacher librarian. In order to collect data from schools about the role of the teacher librarian, schools have been randomly selected from the 2010 list published by the Committee on Home-School Co-operation, Education Bureau, the Government of the Hong Kong Special Administrative Region and I would like to ask for your cooperation in identifying non-teacher-librarian teachers, who would be willing to be research participants and answer a questionnaire. They will also be invited to take part in additional face to face interviews with the researcher at their convenience.

Your school will benefit from the participation of your teachers in the study as they reflect on the role of the teacher librarian and the need to develop students' independent learning skills. This could raise the awareness of the impact of Information Literacy Skills on students. This could also lead to improving the teaching and learning in your school while equipping students with Information

Literacy Skills and contribute to the further professional development of your teachers' ability to develop Information Literacy Skills amongst their students.

You and your teachers will not be identified individually and your personal details will remain confidential.

Name/s of non-teacher-librarian teachers	Email address/es

I should be extremely grateful if you could complete the above table and return it to me by email?

Your support in this research will be highly appreciated.

Yours sincerely

Angel Leung Yuet Ha

Appendix J: The letter to the principal (Chinese)

尊敬的校長：

我是一位由諾丁漢大學和香港大學專業進修學院合辦的教育博士研究生。我研究的主題是“資訊素養技能：香港小學教師對發展中的學校圖書館主任角色的觀感”。本研究旨在蒐集香港小學教師對學校圖書館主任角色的看法。自 1998 年以來，香港小學獲准增聘一名文憑教師，出任學校圖書館主任一職。爲了蒐集學校對學校圖書館主任角色的看法，從香港特別行政區政府教育局家庭與學校合作事宜委員會 2010 年學校名單中隨機選出貴校，茲誠邀閣下襄助，約邀願意參與本研究的非學校圖書館主任老師回答問卷。他/她們或會被邀請於他們方便的時間接受本人進一步面談訪問。

貴校將從老師參與研究、深思學校圖書館主任的角色及培養學生自學技能的需要中獲益，並可提高資訊素養技能對學生的影響的認識，同時可於裝備學生資訊素養技能時提高教與學，爲教師培養學生資訊素養技能的專業發展作出貢獻。

研究以不記名方式進行，閣下的個人資料絕對保密。

非學校圖書館主　電郵地址

任老師姓名

1

2

3

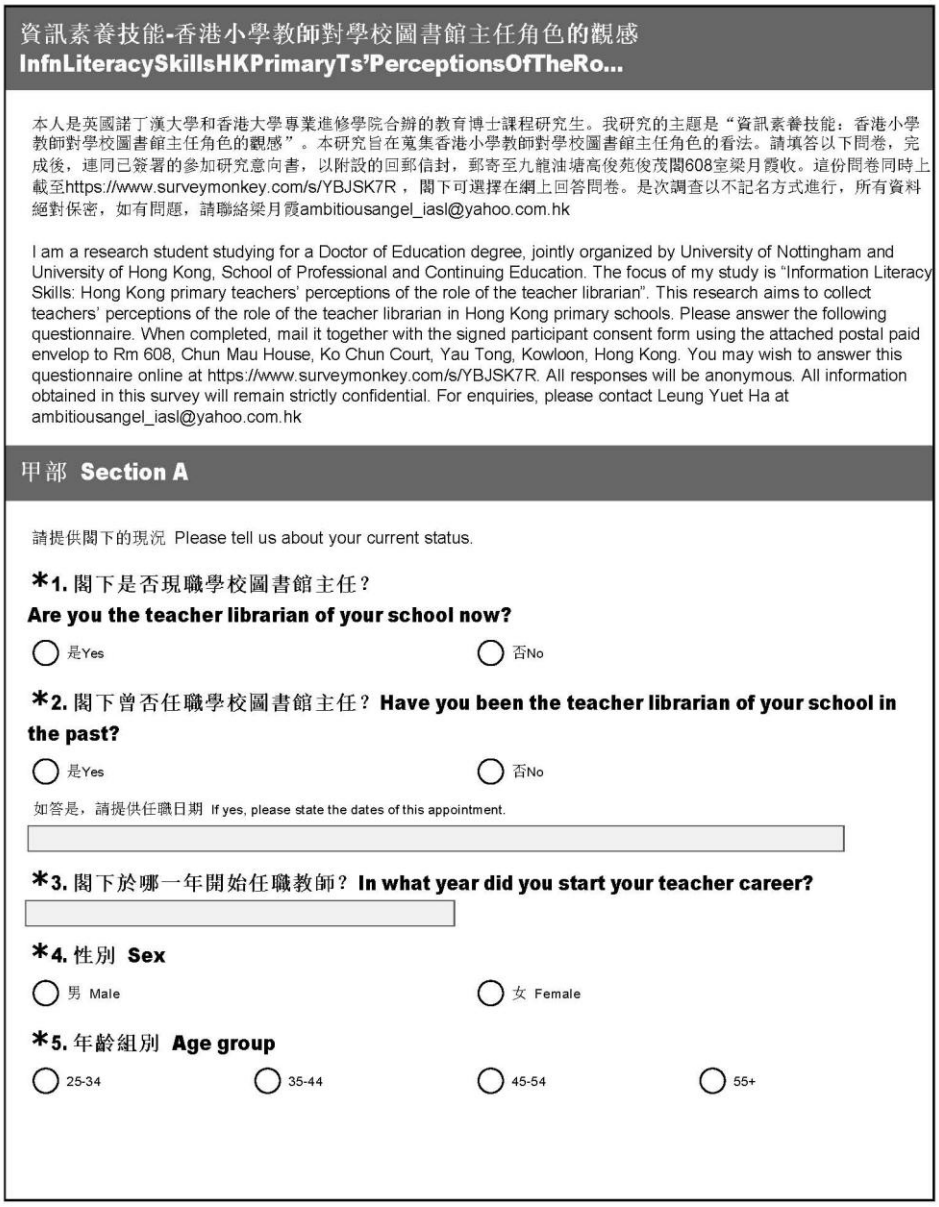
4

感謝閣下完成上表並電郵 ambitiousangeliasl_iasl@yahoo.com.hk 或以附設的回郵信封郵寄給我。感謝閣下支持本研究！

此致

梁月霞

Appendix K: The questionnaire for piloting (Bilingual)



資訊素養技能-香港小學教師對學校圖書館主任角色的觀感
InfnLiteracySkillsHKPrimaryTs'PerceptionsOfTheRo...

本人是英國諾丁漢大學和香港大學專業進修學院合辦的教育博士課程研究生。我研究的主題是“資訊素養技能：香港小學教師對學校圖書館主任角色的觀感”。本研究旨在蒐集香港小學教師對學校圖書館主任角色的看法。請填答以下問卷，完成後，連同已簽署的參加研究意向書，以附設的回郵信封，郵寄至九龍油塘高俊苑俊茂閣608室梁月霞收。這份問卷同時上載至https://www.surveymonkey.com/s/YBJSK7R，閣下可選擇在網上回答問卷。是次調查以不記名方式進行，所有資料絕對保密，如有問題，請聯絡梁月霞ambitiousangel_iasl@yahoo.com.hk

I am a research student studying for a Doctor of Education degree, jointly organized by University of Nottingham and University of Hong Kong, School of Professional and Continuing Education. The focus of my study is "Information Literacy Skills: Hong Kong primary teachers' perceptions of the role of the teacher librarian". This research aims to collect teachers' perceptions of the role of the teacher librarian in Hong Kong primary schools. Please answer the following questionnaire. When completed, mail it together with the signed participant consent form using the attached postal paid envelop to Rm 608, Chun Mau House, Ko Chun Court, Yau Tong, Kowloon, Hong Kong. You may wish to answer this questionnaire online at https://www.surveymonkey.com/s/YBJSK7R. All responses will be anonymous. All information obtained in this survey will remain strictly confidential. For enquiries, please contact Leung Yuet Ha at ambitiousangel_iasl@yahoo.com.hk

甲部 **Section A**

請提供閣下的現況 Please tell us about your current status.

*1. 閣下是否現職學校圖書館主任？
Are you the teacher librarian of your school now?

◯ 是Yes ◯ 否No

*2. 閣下曾否任職學校圖書館主任？**Have you been the teacher librarian of your school in the past?**

◯ 是Yes ◯ 否No

如答是，請提供任職日期 If yes, please state the dates of this appointment.

*3. 閣下於哪一年開始任職教師？**In what year did you start your teacher career?**

*4. 性別 **Sex**

◯ 男 Male ◯ 女 Female

*5. 年齡組別 **Age group**

◯ 25-34 ◯ 35-44 ◯ 45-54 ◯ 55+

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*6. 曾任教科目 **Subjects taught**

- ☐ 中國語文 Chinese
- ☐ 英國語文 English
- ☐ 數學 Mathematics
- ☐ 常識 General Studies
- ☐ 視藝 Arts
- ☐ 音樂 Music
- ☐ 體育 P.E.
- ☐ 普通話 Putonghua

其他。請註明。 Other. Please specify.

乙部 **Section B**

*7. 自**1998**起，每所官立及資助小學獲准增聘一名文憑教師，出任學校圖書館主任一職，閣下是否同意是項增聘？ **Since 1998, an additional teaching post for undertaking the duties of a teacher librarian has been provided in aided primary ordinary schools. To what extent do you agree with such provision?**

- ◯ 非常同意 Strongly agree
- ◯ 同意 Agree
- ◯ 不肯定 Not sure
- ◯ 不同意 Disagree
- ◯ 非常不同意 Strongly disagree

***8.** 自**1998**年起貴校有學校圖書館主任以來，教與學有否改變？請選擇適合貴校的陳述，可選多於一項。

Has the presence of the teacher librarian in your school since 1998 made any difference to the teaching and learning? Please choose the statements which apply to your school. You may choose more than one.

☐ 1. 教與學維持不變。Teaching and learning remain unchanged.

☐ 2. 有改變。但不肯定改變是否因學校圖書館主任而產生。Yes, there have been changes but I'm not sure whether they have been due to the impact of the teacher librarian.

☐ 3. 科任老師與學校圖書館主任共同策劃利用切題的學校圖書館資源的學習活動及課業。Learning activities and assignments have been planned co-operatively by the subject teacher and the teacher librarian using relevant resources from the school library.

☐ 4. 在專題研習中，學生被引導於學校圖書館搜尋資訊以解答專題研習的問題。In project learning, students are guided to search for information from the school library to answer the project questions.

☐ 5. 圖書館課並非編定於上課時間表中，而是因應需要而編定。Library lessons can be scheduled when the need arises instead of when a "library lesson" was timetabled.

☐ 6. 圖書館、研究及閱讀技巧再不是脫離實踐，而是從學科背景中學習。Library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.

☐ 7. 學生學會自行從學校圖書館搜尋相關資訊解難。Students learn how to solve a problem on their own by searching for relevant information from the school library.

☐ 8. 學校圖書館主任按要求提供教與學資源。Teaching and learning resources are provided by the teacher librarian on request.

其他。請註明。Other. Please specify.

丙部 **Section C**

***9.** 下列哪項是學校圖書館主任的職責，請選擇適合貴校的陳述，可選多於一項。？ **Which of the following is the responsibility of the teacher librarian? Please choose the statements which apply to your school. You may choose more than one.**

☐ 1. 與科任老師聯繫，提供課程和課外活動相關的閱讀資源。Work with subject teachers to provide curriculum and extra-curricula activity-related reading resources.

☐ 2. 與科任老師聯繫，提升課程和課外活動相關的閱讀。Work with subject teachers to promote curriculum and extra-curricula activity-related reading tasks.

☐ 3. 利用學校圖書館藏，培訓老師和學生的資訊搜尋技能。Develop teachers' and students' information searching skills in the use of the school library collection.

☐ 4. 評估學校圖書館藏是否能支援課程。Evaluate the school library collection in terms of relevancy to support the curriculum.

☐ 5. 訓練學生圖書館助理員和圖書館助理員，以協助管理學校圖書館。Train student librarians and library assistants to assist in managing the school library.

☐ 6. 教導學生如何遵守使用資訊的道德和負責任地使用資訊。Teach students how to use information in an ethical and responsible way.

其他。請註明。Other. Please specify.

***10.** 在貴校，誰與科任老師聯繫，提供課程和課外活動相關的閱讀資源？ **In your school, who works with the subject teachers to provide curriculum and extra-curricula activity-related reading resources?**

☐ 學校圖書館主任 The teacher librarian ☐ 另有其人 Another person ☐ 沒有人 No one ☐ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***11.** 在貴校，誰與科任老師聯繫，提升課程和課外活動相關的閱讀？ **In your school, who works with the subject teachers to design curriculum and extra-curricula activity-related reading tasks?**

☐ 學校圖書館主任 The teacher librarian ☐ 另有其人 Another person ☐ 沒有人 No one ☐ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***12.** 在貴校，誰利用學校圖書館藏，培訓老師和學生的資訊搜尋技能？ **In your school, who develops teachers' and students' information searching skills in the use of the school library collection?**

☐ 學校圖書館主任 The teacher librarian ☐ 另有其人 Another person ☐ 沒有人 No one ☐ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***13.** 在貴校，誰評估學校圖書館藏是否能支援課程？ **In your school, who evaluates the school library collection in terms of its relevancy to support the curriculum?**

☐ 學校圖書館主任 The teacher librarian ☐ 另有其人 Another person ☐ 沒有人 No one ☐ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***14.** 在貴校，誰訓練學生圖書館助理員和圖書館助理員，以協助管理學校圖書館？ **In your school, who trains student librarians and library assistants to assist in managing the school library?**

☐ 學校圖書館主任 The teacher librarian ☐ 另有其人 Another person ☐ 沒有人 No one ☐ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***15.** 在貴校，誰教導學生如何遵守使用資訊的道德和負責任地使用資訊？ **In your school, who teaches students how to use information in an ethical and responsible way?**

☐ 學校圖書館主任 The teacher librarian ☐ 另有其人 Another person ☐ 沒有人 No one ☐ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***16.** 在一些學校，增聘的學校圖書館主任職位由兼職非教學文員助理擔任時，下列哪陳述適用？ **In schools where the additional post of the teacher librarian is filled by part-time non-teaching clerical assistants, which of the following applies?**

☐ 1. 增聘的學校圖書館主任擔任普通科任老師的職責。The person holding the additional teacher librarian post fulfils the role of an ordinary subject teacher.

☐ 2. 增聘的學校圖書館主任擔任部份於第9題列出的學校圖書館主任的職責，他/她的其餘時間用於教授普通科目。The person holding the additional teacher librarian post partly fulfils the role of the teacher librarian as stated in Question 9. The rest of the time, he/she is devoted to ordinary subject teaching.

☐ 3. 我不知道增聘的學校圖書館主任是如何調配。I am not sure how the person holding the additional post of the teacher librarian is deployed.

其他。請註明。Other. Please specify.

丁部 Section D

***17.** 請評定 閣下對資訊素養技能的理解程度。**Please assess your own level of understanding concerning Information Literacy Skills:**

◯ 絕對理解 Excellent level of understanding

◯ 非常理解 Good level of understanding

◯ 理解 Satisfactory level of understanding

◯ 不太理解 Poor level of understanding

◯ 不理解 No understanding

***18.** 請闡述閣下所理解的"資訊素養技能"**Please specify in your own words what you understand by the term 'Information Literacy Skills'.**

***19.** 在資訊年代，資訊素養技能是必需的。你同意嗎？ **Information Literacy Skills are necessary in the information age. Please show the extent of your agreement.**

◯ 非常同意 Strongly agree ◯ 同意 Agree ◯ 不肯定 Not sure ◯ 不同意 Disagree ◯ 非常不同意 Strongly disagree

請列出原因 Give reasons for your answer.

丁部 Section E

***20. 你同意下列陳述嗎？Please show the extent of your agreement with the following statements.**

	非常同意 Strongly agree	同意 Agree	不肯定 Not sure	不同意 Disagree	非常不同意 Strongly disagree
科任老師培養學生的資訊素養技能時不需與學校圖書館主任協作。Teachers are able to develop students' Information Literacy Skills without the collaboration of the teacher librarian.	○	○	○	○	○
基礎的師資培訓已訓練閣下教授資訊素養技能。Your initial teacher training course prepared you to teach Information Literacy Skills.	○	○	○	○	○
閣下需要進一步的資訊素養技能的專業發展。You have further professional development needs in terms of Information Literacy Skills.	○	○	○	○	○

戊部 Section F

***21. 下列哪項有助閣下利用學校圖書館主任的技能？可選多於一項。Which of the following do you think would help you to utilize the skills of the teacher librarian. You may choose more than one.**

- ☐ 1. 認識學校圖書館主任的角色。Awareness of the role of the teacher librarian.
- ☐ 2. 認識資訊素養技能。Awareness of Information Literacy Skills.
- ☐ 3. 發展閣下的資訊素養技能。Developing your personal Information Literacy Skills.
- ☐ 4. 培養學生資訊素養技能的能力。The ability to develop students' Information Literacy Skills.

其他。請註明。Other (please specify)

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22. 請闡述閣下對學校圖書館主任的角色的其他意見(如有)。**Are there any other comments you wish to make concerning the role of the teacher librarian?**

己部 **Section G**

聯絡資料 Contact details

23. 如閣下願意接受面談訪問，以便進一步討論香港學校圖書館主任的角色，請提供姓名及電郵地址如下。**If you are willing to attend a face to face interview to further discuss the role of the teacher librarian in Hong Kong schools, please provide your name and email address below**

姓名 Name

電郵地址 Email address

感謝閣下的合作，抽空完成問卷。Thank you very much for your time and cooperation in completing this survey!

Appendix L: Piloting Work Report of Quantitative Data Collection

Information Literacy Skills: Hong Kong Primary Teachers' Perceptions of the Role of the Teacher Librarian

Pilot Work Report as at 6th April 2012

Introduction & Background

Since 1998, an additional teaching post for undertaking the duties of a teacher librarian has been provided in aided primary ordinary schools. The government has been spending extra yearly educational expenses on training and employing teacher librarians. There is a need to look at the primary teachers' perceptions of the role of teacher librarian to provide a solid basis for the development of teacher librarians and to determine trends.

Information Literacy is an integral part of the entire curriculum reform in Hong Kong (EMB, 2005, p.9). "Only when teachers understand that information literacy must begin with them, is an information literate school community possible" (Henri, Hay and Oberg, 2002, p.2). There is a need to look at the Information Literacy Skills awareness of primary teachers.

A pilot study was therefore conducted in 3 primary schools as a feasibility study for a survey study in primary schools in Hong Kong.

Objectives

The objectives of the pilot work were:

1. Determining the appropriateness of the following survey instruments in the light of the analysis of the result of the pilot work:

The email to principals

The Information Sheets to the principals and non-teacher-librarian teachers

The questionnaire

2. Trialing the logistics of the survey

Method, time and sample size

Three schools including one government school and two subsidized schools were invited for inclusion in the pilot study. The study was communicated by two assistants when they worked as substitute teachers in these schools during November 2011 to February 2012. They are a retired teacher and a retired teacher librarian. The objectives of the pilot study were communicated to each principal and the following survey instruments were handed over to them by the assistants:

The email to principals

The Information Sheet for principals

4 Information Sheets for non-teacher-librarian teachers

5 Participant Consent Forms
4 Questionnaires

Bilingual questionnaires were once used. The background, introduction and the URL of the questionnaire did not appear on the paper questionnaires. Principals are expected to email the names and email addresses of 4 participating teachers to the researcher so that the researcher can email the URL of the electronic questionnaire to the participants for answering online if they choose so.

Results and implications
Principals never signed the consent forms or emailed to the researcher. They assigned intermediate teachers to identify participating teachers. Teachers found the questionnaire too lengthy and there was too much information to be read.

The researcher edited the questionnaire to monolingual of Chinese only and printed on both sides of the paper making it looks less lengthy. The background, introduction and the URL of the questionnaire were added at the beginning of the questionnaire so that participating teachers could always access and answer it online if they choose so. One signed consent form by the principal was chased back afterwards.

A total of twelve teachers of all subjects answered the questionnaire. All answered on paper. Only 9 signed consent forms were received. 5 of them were chased back by the assistants after they had answered and mailed back the questionnaires to the researcher. One is willing to be interviewed in the future and provided her name and email address. It did not take much time for the researcher to transfer all data from the printed questionnaire manually into the bilingual online questionnaire for data analysis and report writing.

The data collected from the following questions addressed the research questions and subsidiary research questions below:
Hong Kong primary teachers' perceptions of the role of the teacher librarian and how these have developed.

Q7. All teachers agree with the additional teaching post for undertaking the duties of a teacher librarian.

Q16. 54.5% teachers are not at the position to know how the additional teaching post is deployed.

Q22. Four out of twelve made additional comments concerning the role of the teacher librarian. All are positive.

1.2.An examination of developments that have taken place since the initial setting up of the programme.

Q8. Different schools have different development since the presence of the teacher librarian.

Q8.3. In 66.7% schools, slightly more than half of the schools, learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library.

The researcher would like to know how these happen in the face to face interview by asking, “Please provide examples of working with the teacher librarian to plan learning activities and assignments using relevant resources from the school library (if any)”.

Q8.4. In 66.7% school, slightly more than half of the schools, students are guided to search for information from the school library to answer the project questions during project learning.

The researcher would like to know how these happen in the face to face interview by asking, “Please provide examples of students being guided to search for information from the school library to answer the project questions during project learning.”

Q8.5. In 33.3% schools, library lessons can be scheduled when the need arises instead of when a “library lesson” was timetabled. It tells that the library lessons in the rest of the schools are scheduled without taking into consideration the instant need to use the library.

The researcher would like to find out the patterns of library timetables in the face to face interview by asking, “Would you please describe the library lesson timetable in your school in terms of instant needs to use the library?”

Q8.6. In half of the schools, library and other research and reading skills will no longer be isolated experience but will be learnt in a subject context.

The researcher would like to know how these skills are learnt in the face to face interview by asking, “How are library and other research and reading skills learnt in your school?”

2.2. How teacher librarians develop best practice within the school curriculum.

Q8.7.In half of the schools, students learn how to solve a problem on their own by searching for relevant information from the school library.

The researcher would like know how this is learnt in the face to face interview by asking, “How do students learn to solve a problem on their own by searching relevant information from the school library?”

Q9.3. 58.3% slightly more than half of the teacher librarians develop teachers’ and students’ information searching skills in the use of the school library collection.

The researcher would like know how this is learnt in the face to face interview by asking, “How does the teacher librarian develop teachers’ and students’ information searching skills in the use of the school library collection? Give examples whenever you can.”

Q9.4. 66.7% teacher librarians evaluate the school library collection in terms of its relevancy to support the curriculum.

The researcher would like know how this happens in the face to face interview by asking, “How does the teacher librarian evaluate the school library collection in terms of relevancy to support the curriculum?”

Q9.6. Less than half of the teacher librarians teach students how to use information in an ethical and responsible way. It tells that it is not considered as significant for students to use information in an ethical and responsible way. Or someone else is responsible for teaching it.

The researcher would like know how this happens in the face to face interview by asking, “Are there anyone who is responsible for teaching students how to use information in an ethical and responsible way?”

2.3. Primary teachers’ perceptions on the impact of Information Literacy Skills on students.

Q19. All agreed that Information Literacy Skills are necessary in the information age. Eight out of twelve supported their agreement with reasons. Most of the reasons are positive and support the necessity.

2.4. Primary teachers’ perceptions on their ability to develop Information Literacy Skills amongst their students.

Q20.1. 66.6% teachers disagree that they are able to develop students’ Information Literacy Skills without the collaboration of the teacher librarian.

The researcher would like to find out the practice of developing such skills in

collaboration with the teacher librarians during the face to face interview. The following would be asked, “How do you work with the teacher librarian to develop students’ Information Literacy Skills? What is your role here?”

Q20.2. Half of the teachers (50%) disagree that the initial teacher training prepared them to teach Information Literacy Skills. There is a strong base to recommend training for teachers to teach Information Literacy Skills if Information Literacy is part of the curriculum reform.

The researcher would like to find out the part of the initial teacher training course which had prepared teachers to teach Information Literacy Skills in the face to face interview by asking, “Which part of the initial teacher training course had prepared you to teach Information Literacy Skills (If any)?”

2.5. Teachers’ views on the professional development need in terms of Information Literacy Skills.

Q18. When asked to specify using own words what teachers understand by “Information Literacy Skills”, most of them wrote at least one sentence about it. Most of the descriptions are relevant. Only one left it blank. One said that it was the first time he/she heard of it. One took it as information technology skills

Q20.3. Most of them (83.3%) agree that they have further professional development need in terms of Information Literacy Skills.

Q21.4. Most teachers (83.3%) say that the more they are able to develop students’ Information Literacy Skills, the more they will utilize the skills of the teacher librarian.

Questions need revising
Q10. to Q15. Seven out of twelve respondents have chosen more than one answer. They are considered as invalid. The online version guards the responses to one answer only but the printed version doesn’t. There is difficulty controlling careless responses on the printed version. So the researcher has changed the words used in Q10. to Q15. to clarify it. Please refer to the revised questionnaire attached. Since the choices in Q.9 are the stems of the questions Q10. to Q15., Q9. has also been revised accordingly. The above questions are addressing the subsidiary research question 2.1. The role of the teacher librarian can be filled by people of different status ranging from part-time non-teaching clerical assistants to full-time teacher librarians. What impact does this have on how teacher librarians are perceived and the roles that they can fulfill? Due to the invalid responses, the researcher cannot tell the results about this question.

Recommendation

Send the survey instruments to more schools randomly to ensure the minimum return of 40 respondents in case principals and teachers are too busy to participate.

A deadline within 2 to 3 weeks to return the questionnaire is stated so that participants prioritize it over other tasks. At the same time the assistants can have a reason to call and chase after returns.

Ask the assistants to make follow up calls to the principals to chase after the returns after the deadline.

Use colour paper for principals' documents so that they won't be mixed up with the teachers'.

The email to the principals is added on top of the Information Sheet for Principals to reduce the number of documents. Delete the part in the email requesting the principal to provide the names and email addresses of 4 participating teachers.

"By answering the questionnaire means that you are giving the consent to participate in the research" is added at the beginning of the questionnaire in case teachers are too busy to sign and mail back the Participant Consent Form.

Data from a territory wide survey would provide the perception of primary teachers on the roles of the teacher librarians and Information Literacy Skills in Hong Kong and could be used to provide a solid basis for the development of training.

Conclusion

Teachers were not interested in the study.

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Appendix M: Finalized questionnaire (Bilingual)

資訊素養技能-香港小學教師對學校圖書館主任角色的觀感
InfnLiteracySkillsHKPrimaryTs'PerceptionsOfTheRo...

本人是英國諾丁漢大學和香港大學專業進修學院合辦的教育博士課程研究生。我研究的主題是“資訊素養技能：香港小學教師對學校圖書館主任角色的觀感”。本研究旨在蒐集香港小學教師對學校圖書館主任角色的看法。請填答以下問卷，完成後，連同已簽署的參加研究意向書，以附設的回郵信封，於__月__日前郵寄至九龍油塘高俊苑俊茂閣608室梁月霞收。這份問卷同時上載至https://www.surveymonkey.com/s/8DL8P5Y，閣下可選擇在網上回答問卷。是次調查以不記名方式進行，所有資料絕對保密。填答並寄回本問卷表示願意參予本研究。如有問題，請聯絡梁月霞 ambitiousangel_iasl@yahoo.com.hk

I am a research student studying for a Doctor of Education degree, jointly organized by the University of Nottingham and the University of Hong Kong, School of Professional and Continuing Education. The focus of my study is "Information Literacy Skills: Hong Kong primary teachers' perceptions of the role of the teacher librarian". This research aims to collect teachers' perceptions of the role of the teacher librarian in Hong Kong primary schools. Please answer the following questionnaire. When completed, mail it together with the signed participant consent form using the attached postal paid envelope to Rm 608, Chun Mau House, Ko Chun Court, Yau Tong, Kowloon, Hong Kong, on or before _____. You may wish to answer this questionnaire online at https://www.surveymonkey.com/s/8DL8P5Y. All responses will be anonymous. All information obtained in this survey will remain strictly confidential. Answering the questionnaire online means that you have read the consent form and are giving your consent to participate in the research. For enquiries, please contact Leung Yuet Ha at ambitiousangel_iasl@yahoo.com.hk

甲部 Section A

請提供閣下的現況 Please tell us about your current status.

***1. 閣下是否現職學校圖書館主任？**
Are you the teacher librarian of your school now?

◯ 是Yes ◯ 否No

***2. 閣下曾否任職學校圖書館主任？ Have you been the teacher librarian of your school in the past?**

◯ 是Yes ◯ 否No

如答是，請提供任職日期 If yes, please state the dates of this appointment.

***3. 閣下於哪一年開始任職教師？ In what year did you start your teaching career?**

***4. 性別 Sex**

◯ 男 Male ◯ 女 Female

***5. 年齡組別 Age group**

◯ 25-34 ◯ 35-44 ◯ 45-54 ◯ 55+

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***6. 曾任教科目 Subjects taught**

- ☐ 中國語文 Chinese
- ☐ 常識 General Studies
- ☐ 體育 P.E.
- ☐ 英國語文 English
- ☐ 視藝 Arts
- ☐ 普通話 Putonghua
- ☐ 數學 Mathematics
- ☐ 音樂 Music

其他。請註明。 Other. Please specify.

乙部 Section B

***7. 自1998起，每所資助小學獲准增聘一名文憑教師，負責執行學校圖書館主任的職務，閣下是否同意是項增聘？ Since 1998, an additional teaching post for undertaking the duties of a teacher librarian has been provided in aided primary ordinary schools. To what extent do you agree with such provision?**

◯ 非常同意 Strongly agree ◯ 同意 Agree ◯ 不肯定 Not sure ◯ 不同意 Disagree ◯ 非常不同意 Strongly disagree

8. 自1998年起貴校有學校圖書館主任以來，教與學有否改變？請選擇適合貴校的陳述，可選多於一項。

Has the presence of the teacher librarian in your school since 1998 made any difference to the teaching and learning? Please choose the statements which apply to your school. You may choose more than one.

- ☐ 1. 教與學維持不變。Teaching and learning remain unchanged.
- ☐ 2. 有改變。但不肯定改變是否因學校圖書館主任而產生。Yes, there have been changes but I'm not sure whether they have been due to the impact of the teacher librarian.
- ☐ 3. 科任老師與學校圖書館主任共同策劃利用切題的學校圖書館資源的學習活動及課業。Learning activities and assignments have been planned co-operatively by the subject teacher and the teacher librarian using relevant resources from the school library.
- ☐ 4. 在專題研習中，學生被引導於學校圖書館搜尋資訊以解答專題研習的問題。In project learning, students are guided to search for information from the school library to answer the project questions.
- ☐ 5. 圖書館課並非編定於上課時間表中，而是因應需要而編定。Library lessons can be scheduled when the need arises instead of when a "library lesson" was timetabled.
- ☐ 6. 圖書館、研究及閱讀技巧再不是脫離實踐，而是從學科背景中學習。Library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.
- ☐ 7. 學生學會自行從學校圖書館搜尋相關資訊解難。Students learn how to solve a problem on their own by searching for relevant information from the school library.
- ☐ 8. 學校圖書館主任按要求提供教與學資源。Teaching and learning resources are provided by the teacher librarian on request.

其他。請註明。Other. Please specify.

丙部 Section C

***9. 下列哪項是學校圖書館主任的職責，請選擇適合貴校的陳述，可選多於一項。？ Which of the following is the responsibility of the teacher librarian? Please choose the statements which apply to your school. You may choose more than one.**

☐ 1. 確認、採購、管理、推介及供應與課程及課外活動相關的、供學生閱讀的資料 Identifies, procures, manages and supplies reading materials for students relevant to the curriculum and extracurricular activities

☐ 2. 與科任老師進行協作教學，從中辨識、評估及修訂學校圖書館藏，提供與課程及課外活動相關的、供學生閱讀的資料 Co-teaches with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricula activity-related reading materials for students

☐ 3. 利用學校圖書館藏，培訓老師和學生的資訊搜尋技能及資訊素養技能 Developes teachers' and students' information searching skills and information literacy skills in the use of the school library collection

☐ 4. 事先檢查學校圖書館藏相關資源的程度，與科任老師共同策劃課堂活動及學習單元的課業 Plans co-operatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library

☐ 5. 訓練學生圖書館助理員和圖書館助理員，以協助管理學校圖書館。Train student librarians and library assistants to assist in managing the school library.

☐ 6. 教導學生如何遵守使用資訊的道德和負責任地使用資訊。Teach students how to use information in an ethical and responsible way.

其他。請註明。Other. Please specify.

***10. 在貴校，誰獨立負責確認、採購、管理、推介及供應與課程及課外活動相關的、供學生閱讀的資料？ In your school, who is mainly responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities? Please select only one option.**

◯ 學校圖書館主任 The teacher librarian

◯ 另有其人 Another person

◯ 沒有人 No one

◯ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***11.** 在貴校，誰獨立負責與科任老師進行協作教學，從中辨識、評估及修訂學校圖書館藏，提供與課程及課外活動相關的、供學生閱讀的資料？ **In your school, who is mainly responsible for co-teaching with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricula activity-related reading materials for students? Please select only one option.**

- ◯ 學校圖書館主任 The teacher librarian
- ◯ 另有其人 Another person
- ◯ 沒有人 No one
- ◯ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***12.** 在貴校，誰獨立負責利用學校圖書館藏，培訓老師和學生的資訊搜尋技能及資訊素養技能？ **In your school, who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection? Please select only one option.**

- ◯ 學校圖書館主任 The teacher librarian
- ◯ 另有其人 Another person
- ◯ 沒有人 No one
- ◯ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***13.** 在貴校，誰獨立負責事先檢查學校圖書館藏相關資源的程度，與科任老師共同策劃課堂活動及學習單元的課業？ **In your school, who is mainly responsible for planning co-operatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library? Please select only one option.**

- ◯ 學校圖書館主任 The teacher librarian
- ◯ 另有其人 Another person
- ◯ 沒有人 No one
- ◯ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***14.** 在貴校，誰訓練學生圖書館助理員和圖書館助理員，以協助管理學校圖書館？ **In your school, who mainly trains student librarians and library assistants to assist in managing the school library? Please select only one option.**

- ◯ 學校圖書館主任 The teacher librarian
- ◯ 另有其人 Another person
- ◯ 沒有人 No one
- ◯ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***15.** 在貴校，誰教導學生如何遵守使用資訊的道德和負責任地使用資訊？ **In your school, who mainly teaches students how to use information in an ethical and responsible way? Please select only one option.**

- ◯ 學校圖書館主任 The teacher librarian
- ◯ 另有其人 Another person
- ◯ 沒有人 No one
- ◯ 我不知道 I am not sure

如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.

***16.** 在一些學校，增聘的學校圖書館主任職位由兼職非教學文員助理擔任時，下列哪陳述適用？ **In schools where the additional post of the teacher librarian is filled by part-time non-teaching clerical assistants, which of the following applies?**

- ◯ 1. 增聘的學校圖書館主任擔任普通科任老師的職責。The person holding the additional teacher librarian post fulfils the role of an ordinary subject teacher.
- ◯ 2. 增聘的學校圖書館主任擔任部份於第9題列出的學校圖書館主任的職責，他/她的其餘時間用於教授普通科目。The person holding the additional teacher librarian post partly fulfils the role of the teacher librarian as stated in Question 9. The rest of the time, he/she is devoted to ordinary subject teaching.
- ◯ 3. 我不知道增聘的學校圖書館主任是如何調配。I am not sure how the person holding the additional post of the teacher librarian is deployed.

其他。請註明。Other. Please specify.

丁部 Section D

***17.** 請評定 閣下對資訊素養技能的理解程度。**Please assess your own level of understanding concerning Information Literacy Skills:**

- ◯ 絕對理解 Excellent level of understanding
- ◯ 非常理解 Good level of understanding
- ◯ 理解 Satisfactory level of understanding
- ◯ 不太理解 Poor level of understanding
- ◯ 不理解 No understanding

***18.** 請闡述閣下所理解的"資訊素養技能"**Please specify in your own words what you understand by the term 'Information Literacy Skills'.**

***19.** 在資訊年代，資訊素養技能是必需的。你同意嗎？ **Information Literacy Skills are necessary in the information age. Please show the extent of your agreement.**

◯ 非常同意 Strongly agree ◯ 同意 Agree ◯ 不肯定 Not sure ◯ 不同意 Disagree ◯ 非常不同意 Strongly disagree

請列出原因 Give reasons for your answer.

丁部 **Section E**

***20.** 你同意下列陳述嗎？ **Please show the extent of your agreement with the following statements.**

	非常同意 Strongly agree	同意 Agree	不肯定 Not sure	不同意 Disagree	非常不同意 Strongly disagree
1. 科任老師培養學生的資訊素養技能時不需與學校圖書館主任協作。Teachers are able to develop students' Information Literacy Skills without the collaboration of the teacher librarian.	○	○	○	○	○
2.基礎的師資培訓已訓練 閣下教授資訊素養技能。Your initial teacher training course prepared you to teach Information Literacy Skills.	○	○	○	○	○
3.閣下需要進一步的資訊素養技能的專業發展。You have further professional development needs in terms of Information Literacy Skills.	○	○	○	○	○

戊部 Section F

***21.** 下列哪項有助閣下利用學校圖書館主任的技能？可選多於一項。**Which of the following do you think would help you to utilize the skills of the teacher librarian? You may choose more than one.**

- ☐ 1. 認識學校圖書館主任的角色。Awareness of the role of the teacher librarian.
- ☐ 2. 認識資訊素養技能。Awareness of Information Literacy Skills.
- ☐ 3. 發展閣下的資訊素養技能。Developing your personal Information Literacy Skills.
- ☐ 4. 培養學生資訊素養技能的能力。The ability to develop students' Information Literacy Skills.

其他。請註明。Other (please specify)

22. 請闡述閣下對學校圖書館主任的角色的其他意見(如有)。**Are there any other comments you wish to make concerning the role of the teacher librarian?**

己部 Section G

聯絡資料 Contact details

23. 如閣下願意接受面談訪問，以便進一步討論香港學校圖書館主任的角色，請提供姓名及電郵地址如下。**If you are willing to attend a face to face interview to further discuss the role of the teacher librarian in Hong Kong schools, please provide your name and email address below**

姓名 Name	
電郵地址 Email address	

感謝閣下的合作，抽空完成問卷。Thank you very much for your time and cooperation in completing this survey!

Appendix N: Survey Summary

InformationLiteracySkills-HongKongPrimaryTeachers'PerceptionsOfTheRoleOfTheTeacherLibrarian

SurveyMonkey

1. 閣下是否現職學校圖書館主任？ Are you the teacher librarian of your school now?

	Response Percent	Response Count
是Yes	4.0%	3
否No	96.0%	72
answered question		75
skipped question		0

2. 閣下曾否任職學校圖書館主任？ Have you been the teacher librarian of your school in the past?

	Response Percent	Response Count
是Yes	4.0%	3
否No	96.0%	72
如答是，請提供任職日期 If yes, please state the dates of this appointment.		3
answered question		75
skipped question		0

3. 閣下於哪一年開始任職教師？ In what year did you start your teaching career?

	Response Count
	75
answered question	75
skipped question	0

4. 性別 Sex

	Response Percent	Response Count
男 Male	28.0%	21
女 Female	72.0%	54
	answered question	75
	skipped question	0

5. 年齡組別 Age group

	Response Percent	Response Count
25-34	25.3%	19
35-44	50.7%	38
45-54	20.0%	15
55+	4.0%	3
	answered question	75
	skipped question	0

6. 曾任教科目 Subjects taught

	Response Percent	Response Count
中國語文 Chinese	62.7%	47
英國語文 English	44.0%	33
數學 Mathematics	66.7%	50
常識 General Studies	**77.3%**	**58**
視藝 Arts	45.3%	34
音樂 Music	17.3%	13
體育 P.E.	21.3%	16
普通話 Putonghua	36.0%	27
資訊科技 Information Technology	42.7%	32
宗教 Religion	21.3%	16
其他。請註明。 Other. Please specify.	1.3%	1
	answered question	**75**
	skipped question	**0**

7. 自1998起，每所資助小學獲准增聘一名文憑教師，負責執行學校圖書館主任的職務，閣下是否同意是項增聘？ Since 1998, an additional teaching post for undertaking the duties of a teacher librarian has been provided in aided primary ordinary schools. To what extent do you agree with such provision?

	Response Percent	Response Count
非常同意 Strongly agree	40.0%	30
同意 Agree	54.7%	41
不肯定 Not sure	4.0%	3
不同意 Disagree	0.0%	0
非常不同意 Strongly disagree	1.3%	1
answered question		75
skipped question		0

8. 自**1998**年起貴校有學校圖書館主任以來，教與學有否改變？請選擇適合貴校的陳述，可選多於一項。 **Has the presence of the teacher librarian in your school since 1998 made any difference to the teaching and learning? Please choose the statements which apply to your school. You may choose more than one.**

	Response Percent	Response Count
1. 教與學維持不變。Teaching and learning remain unchanged.	14.9%	11
2. 有改變。但不肯定改變是否因學校圖書館主任而產生。Yes, there have been changes but I'm not sure whether they have been due to the impact of the teacher librarian.	27.0%	20
3. 科任老師與學校圖書館主任共同策劃利用切題的學校圖書館資源的學習活動及課業。Learning activities and assignments have been planned co-operatively by the subject teacher and the teacher librarian using relevant resources from the school library.	43.2%	32
4. 在專題研習中，學生被引導於學校圖書館搜尋資訊以解答專題研習的問題。In project learning, students are guided to search for information from the school library to answer the project questions.	58.1%	43
5. 圖書館課並非編定於上課時間表中，而是因應需要而編定。Library lessons can be scheduled when the need arises instead of when a "library lesson" was timetabled.	12.2%	9
6. 圖書館、研究及閱讀技巧再不是脫離實踐，而是從學科背景中學習。Library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.	29.7%	22
7. 學生學會自行從學校圖書館搜尋相關資訊解難。Students learn how to solve a problem on their own by searching for relevant	47.3%	35

information from the school library.			
8. 學校圖書館主任按要求提供教與學資源。Teaching and learning resources are provided by the teacher librarian on request.		**71.6%**	**53**
其他。請註明。Other. Please specify.		8.1%	6
		answered question	**74**
		skipped question	**1**

9. 下列哪項是學校圖書館主任的職責，請選擇適合貴校的陳述，可選多於一項。？
Which of the following is the responsibility of the teacher librarian? Please choose the statements which apply to your school. You may choose more than one.

	Response Percent	Response Count
1. 辨識、採購、管理、推介及供應與課程及課外活動相關的、供學生閱讀的材料 Identifies, procures, manages, promote and supplies reading materials for students relevant to the curriculum and extracurricular activities	86.7%	65
2. 與科任老師進行協作教學，從中辨識、評估及修訂學校圖書館藏，提供與課程及課外活動相關的、供學生閱讀的材料 Co-teaches with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricula activity-related reading materials for students	57.3%	43
3. 利用學校圖書館藏，培訓老師和學生的資訊搜尋技能及資訊素養技能 Developes teachers' and students' information searching skills and information literacy skills in the use of the school library collection	50.7%	38
4. 事先检查學校圖書館藏相關資源的切合程度，與科任老師共同策劃課堂活動及學習單元的課業 Plans co-operatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library	33.3%	25
5. 訓練學生圖書館助理員和圖書館助理員，以協助管理學校圖書館。Train student librarians and library assistants to assist in managing the school library.	**94.7%**	**71**
6. 教導學生如何遵守使用資訊的道德和負責任地使用資訊。		

Teach students how to use information in an ethical and responsible way.		48.0%	36
其他。請註明。Other. Please specify.		4.0%	3
		answered question	75
		skipped question	0

10. 在貴校，誰主要負責辨識、採購、管理、推介及供應與課程及課外活動相關的、供學生閱讀的材料？請只選一項 In your school, who is mainly responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities? Please select only one option.

		Response Percent	Response Count
學校圖書館主任 The teacher librarian		70.7%	53
另有其人 Another person		12.0%	9
沒有人 No one		0.0%	0
我不知道 I am not sure		17.3%	13
如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.			10
		answered question	75
		skipped question	0

11. 在貴校，誰主要負責與科任老師進行協作教學，從中辨識、評估及修訂學校圖書館藏，提供與課程及課外活動相關的、供學生閱讀的材料？請只選一項 **In your school, who is mainly responsible for co-teaching with the subject teachers to identify, evaluate and revise the school library collection to supply the curriculum and extra-curricula activity-related reading materials for students? Please select only one option.**

	Response Percent	Response Count
學校圖書館主任 The teacher librarian	61.3%	46
另有其人 Another person	10.7%	8
沒有人 No one	12.0%	9
我不知道 I am not sure	16.0%	12
如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.		8
answered question		75
skipped question		0

12. 在貴校，誰主要負責利用學校圖書館藏，培訓老師和學生的資訊搜尋技能及資訊素養技能？請只選一項 **In your school, who is mainly responsible for developing teachers' and students' information searching skills and information literacy skills in the use of the school library collection? Please select only one option.**

	Response Percent	Response Count
學校圖書館主任 The teacher librarian	50.7%	38
另有其人 Another person	17.3%	13
沒有人 No one	13.3%	10
我不知道 I am not sure	18.7%	14
如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.		13
answered question		75
skipped question		0

13. 在貴校，誰主要負責事先檢查學校圖書館藏相關資源的切合程度，與科任老師共同策劃課堂活動及學習單元的課業？請只選一項 **In your school, who is mainly responsible for planning co-operatively with subject teachers classroom activities and assignments on units of study by first checking to see the extent of relevant resources in the library? Please select only one option.**

	Response Percent	Response Count
學校圖書館主任 The teacher librarian	46.7%	35
另有其人 Another person	6.7%	5
沒有人 No one	26.7%	20
我不知道 I am not sure	20.0%	15
如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.		5
answered question		75
skipped question		0

14. 在貴校，誰主要負責訓練學生圖書館助理員和圖書館助理員，以協助管理學校圖書館？請只選一項 **In your school, who mainly trains student librarians and library assistants to assist in managing the school library? Please select only one option.**

	Response Percent	Response Count
學校圖書館主任 The teacher librarian	93.3%	70
另有其人 Another person	1.3%	1
沒有人 No one	1.3%	1
我不知道 I am not sure	4.0%	3
如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.		1
answered question		75
skipped question		0

15. 在貴校，誰主要負責教導學生如何遵守使用資訊的道德和負責任地使用資訊？請只選一項 **In your school, who mainly teaches students how to use information in an ethical and responsible way? Please select only one option.**

	Response Percent	Response Count
學校圖書館主任 The teacher librarian	21.3%	16
另有其人 **Another person**	**61.3%**	**46**
沒有人 No one	0.0%	0
我不知道 I am not sure	17.3%	13
如選擇"另有其人"，請註明。If you have ticked "Another person", please specify.		48
	answered question	**75**
	skipped question	**0**

16. 在一些學校，增聘的學校圖書館主任職位由兼職非教學文員助理擔任時，下列哪一項適用？ **In schools where the additional post of the teacher librarian is filled by part-time non-teaching clerical assistants, which of the following applies?**

	Response Percent	Response Count
1. 增聘的學校圖書館主任擔任普通科任老師的職責。The person holding the additional teacher librarian post fulfils the role of an ordinary subject teacher.	14.7%	11
2. 增聘的學校圖書館主任擔任部份於第9題列出的學校圖書館主任的職責，他/她的其餘時間用於教授普通科目。The person holding the additional teacher librarian post partly fulfils the role of the teacher librarian as stated in Question 9. The rest of the time, he/she is devoted to ordinary subject teaching.	24.0%	18
3. 我不知道增聘的學校圖書館主任是如何調配。I am not sure how the person holding the additional post of the teacher librarian is deployed.	**50.7%**	**38**
其他。請註明。Other. Please specify.	10.7%	8
	answered question	**75**
	skipped question	**0**

17. 請評定 閣下對資訊素養技能的理解程度。**Please assess your own level of understanding concerning Information Literacy Skills:**

		Response Percent	Response Count
絕對理解 Excellent level of understanding		0.0%	0
非常理解 Good level of understanding		14.9%	11
理解 Satisfactory level of understanding		**51.4%**	**38**
不太理解 Poor level of understanding		32.4%	24
不理解 No understanding		1.4%	1
		answered question	**74**
		skipped question	**1**

18. 請闡述閣下所理解的"資訊素養技能"**Please specify in your own words what you understand by the term 'Information Literacy Skills'.**

	Response Count
	74
answered question	**74**
skipped question	**1**

19. 在資訊年代，資訊素養技能是必需的。你同意嗎？ **Information Literacy Skills are necessary in the information age. Please show the extent of your agreement.**

	Response Percent	Response Count
非常同意 Strongly agree	40.5%	30
同意 Agree	52.7%	39
不肯定 Not sure	5.4%	4
不同意 Disagree	0.0%	0
非常不同意 Strongly disagree	1.4%	1
請列出原因 Give reasons for your answer.		72
answered question		74
skipped question		1

20. 你同意下列陳述嗎？ Please show the extent of your agreement with the following statements.

	非常同意 Strongly agree	同意 Agree	不肯定 Not sure	不同意 Disagree	非常不同意 Strongly disagree	Rating Count
1. 科任老師培養學生的資訊素養技能時不需與學校圖書館主任協作。Teachers are able to develop students' Information Literacy Skills without the collaboration of the teacher librarian.	5.5% (4)	16.4% (12)	**41.1% (30)**	31.5% (23)	5.5% (4)	73
2.基礎的師資培訓已訓練 閣下教授資訊素養技能。Your initial teacher training course prepared you to teach Information Literacy Skills.	2.7% (2)	**32.9% (24)**	28.8% (21)	30.1% (22)	5.5% (4)	73
3.閣下需要進一步的資訊素養技能的專業發展。You have further professional development needs in terms of Information Literacy Skills.	6.8% (5)	**57.5% (42)**	26.0% (19)	9.6% (7)	0.0% (0)	73
					answered question	**73**
					skipped question	**2**

21. 下列哪項有助閣下利用學校圖書館主任的技能？可選多於一項。**Which of the following do you think would help you to utilize the skills of the teacher librarian? You may choose more than one.**

	Response Percent	Response Count
1. 認識學校圖書館主任的角色。Awareness of the role of the teacher librarian.	78.1%	57
2. 認識資訊素養技能。Awareness of Information Literacy Skills.	58.9%	43
3. 發展閣下的資訊素養技能。Developing your personal Information Literacy Skills.	41.1%	30
4. 培養學生資訊素養技能的能力。The ability to develop students' Information Literacy Skills.	58.9%	43
其他。請註明。Other (please specify)	0.0%	0
answered question		73
skipped question		2

22. 請闡述閣下對學校圖書館主任的角色的其他意見(如有)。**Are there any other comments you wish to make concerning the role of the teacher librarian?**

	Response Count
	10
answered question	10
skipped question	65

23. 如閣下願意接受面談訪問，以便進一步討論香港學校圖書館主任的角色，請提供姓名及電郵地址如下。**If you are willing to attend a face to face interview to further discuss the role of the teacher librarian in Hong Kong schools, please provide your name and email address below**

	Response Percent	Response Count
姓名 Name	100.0%	5
電郵地址 Email address	100.0%	5
answered question		5
skipped question		70

Appendix O: An example of thematic analysis using a matrix of an excel file

“Teachers' perception on the role of the teacher librarian _Positive”

Teachers' perception on the role of the teacher librarian: Teach Information Literacy Skills

Interviewee 1	
Interviewee 2	
Interviewee 3	
Interviewee 4	teach them to learn from reading some of the ways that enable them to learn independently. look for those books teachers need to conduct extended reading and to help children enhance their self-learning ability.(Q1)
Interviewee 5	help provide some information for students as to how to collect data, how to find and apply information.(Q1)
Interviewee 6	promote library books teaching...coordinate teaching subjects associated with the Library Book Teaching. to teach ... information literacy.(Q1)

Appendix P: The fifteen themes emerged from the data collected in the face to face interview and their relationship with the questionnaire survey data

Interview Data Theme One: Teachers' description and suggestion of the teacher librarian role

Sub-themes	No. of R	Cross validated by questionnaire survey data
Develops the school's overall reading.	9	QQ22, 5/10 (50%) respondents suggested the same.
Integrates reading into the curriculum and teaches skills.	9	QQ22, I/10(10%) respondents suggested the same.
They are teachers professionally trained with library knowledge. (In 1998, interested teachers applied for the teacher librarian post in school. Successful applicants attended a professional training course before taking the job. Disagree with teacher librarian's role to be fulfilled by non-teaching clerical staff.)	33	QQ22, 1/10 (10%) suggested teacher librarians use their knowledge and skills, with the resources of the library, to empower teachers and students to obtain useful information at work and study.
The legislated teacher librarian role is not known explicitly to all.	4	QQ21, Most (78.1%) respondents thought that the awareness of the role of the teacher librarian would help them to utilize the skills of the teacher librarian.
Good to have a dedicated teacher who became a teacher librarian, managed the library and worked with teachers to promote reading.	2	In QQ9, 94.7% respondents chose "Train student librarians and library assistants to assist in managing the school library." as the teacher librarian's role. 86.7% chose "Identifies, procures, manages, promotes and supplies reading materials for students relevant to the curriculum and extracurricular activities". In QQ10, 70.7% selected the teacher librarian who is responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities.
The government did not set job limitation.	2	N.A.
Supports the curriculum, learning and teaching.	2	QQ22, 4/10 (40%) respondents suggested the same, of which 1/10 (10%) added especially in supporting the application of learning and teaching information.
Teacher librarians should join the community libraries to guide students' use of community resources.	1	N.A.
Dedicated full-time.	12	In QQ22, 1/10 (10%) respondents suggested reducing his/her duties to teach other subjects.
	74	

Interview Data Theme Two: Agree with the 1998 legislated teacher librarian role

items (a) to (j)

Sub-themes	No. of Responses	Cross-validated by questionnaire survey data
These are the most basic work.	4	N.A.

Interview Data Theme Three:Disagree with the 1998 legislated teacher librarian role items (a) to (j).

Sub-themes	No. of Responses	Cross-validated by questionnaire survey data
Some items are outdated and need to be replaced by new ones.(b) coordinating the management of the class libraries. It has been 12 years since 2000. Classroom libraries have been allocated to the Central Library. Books are not systematically borrowed There is a classroom furnished with English books.(d) supporting the implementation of the Chinese and English Extensive Reading Schemes. The Chinese and English Extensive Reading Scheme have been handed over to the Subject Panel Heads. Now, to match with the curriculum development, they need to find more information to develop the school's teaching plan and reading to learn. They have to teach students information literacy skills.	6	N.A.
They seldom advise the School Head and other teachers on matters concerning the central library and the class libraries.	1	N.A.
It is questionable for them to take any other appropriate duties as required by the Head of School.	4	N.A.
These mostly are administrative aspect not necessarily done by a teacher at that time.	3	N.A.
	14	

Interview Data Theme Four:Agree with the 2002 legislated teacher librarianrole as a reading resource and programme coordinator

Sub-themes	No. of R	Cross-validated by questionnaire survey data
Work with subject teachers to source and provide teaching and reading materials needed by teachers and students.	19	In QQ 9 the second largest group (86.7%) chose "Identifies, procures, manages, promotes and supplies reading materials for students relevant to the curriculum and extracurricular activities" as the responsibility of the teacher librarian. In QQ10 most 70.7% respondents selected the teacher librarians who are responsible for identifying, procuring, managing, promoting and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities.

Good because learning through reading (a key task in the education reform) and Library Book Teaching had been strongly emphasized.	6	In QQ8, 71.6% respondents chose this as one of the changes in teaching and learning since the presence of the teacher librarian.
	25	

Interview Data Theme Five: Disagree with the 2002 legislated teacher librarian role as a reading resource and programme coordinator

Sub-themes	No. of R	Cross-validated by questionnaire survey data
The role of subject panel heads and teacher librarians need to be adjusted since the presence of the teacher librarian.	1	N.A
Teacher librarians may not have the sole responsibility.	7	In QQ10, 9/75 (12%) respondents said that there is another person mainly responsible for identifying, procuring, managing and supplying reading materials for students which are relevant to the curriculum and extra-curricular activities.
	8	

Interview Data Theme Six: Agree with the 2002 legislated teacher librarian role as an information and media specialist

Sub-themes	No. of R	Cross-validated by questionnaire survey data
We need a specialized teacher who teaches information literacy skills solely.	7	N.A
This is something that s/he is doing in my school.	5	In QQ15 the second largest group (21.3%) selected “the teacher librarian” who mainly teaches students how to use information in an ethical and responsible way.
We need to develop students' information skills.	2	In QQ 19 most (52.7%) respondent agree that that information literacy skills are necessary in the information age. The second largest group (40.5%) strongly agree. 23/75 (31%) gave reasons to support their agreement. The third largest group (5.4%) were not sure.
	14	

Interview Data Theme Seven: Disagree with the 2002 legislated teacher librarian role as an information and media specialist

Sub-themes	No. of R	Cross-validated by questionnaire survey data
It is the responsibility for all teachers to teach information literacy skills, however training is not necessary.	2	N.A
This can be fulfilled by non-teaching clerical staff.	1	N.A
This is not the case in my school.	6	In QQ15 the most (61.3%) respondents selected “another person” who mainly teaches students how to use information in an ethical and responsible way.
Information literacy skills should not be taught solely by the teacher librarian.	24	N.A
	33	

Interview Data Theme Eight: Disagree with the 2002 legislated teacher librarian role as a teaching partner

Sub-themes	No. of R	Cross-validated by questionnaire survey data
S/he has to teach a subject, so is involved. Not because s/he is the teacher librarian. Partly done.	1	N.A
(Library Studies) is not a subject, scarcely touches on the assessment.	4	N.A
Not teacher librarian's sole responsibility. The Primary School Mistress of Curriculum Development has greater responsibility.	6	N.A
The responsibilities of the teacher librarian and the Primary School Mistress of Curriculum Development were confused.	2	N.A
	13	

Interview Data Theme Nine: Agree with the 2002 legislated teacher librarian role as a curriculum facilitator

Sub-themes	No. of Responses	Cross-validated by questionnaire survey data
Good to match the students' learning and teachers’ teaching.	6	N.A

Interview Data Theme Ten:Disagree with the 2002 legislated teacher librarian role as a curriculum facilitator

Sub-themes	No. of R	Cross-validated by questionnaire survey data
S/he does so in the subject s/he is asked to teach, not for other subjects.	1	N.A
Not the sole responsibility of the teacher librarian.	8	N.A
Not from any of the teacher librarian's role because the school's project learning and life-wide learning activities are coordinated by the Primary School Mistress of Curriculum Development.	3	N.A
	12	

Interview Data Theme Eleven: Negative perspectives

Sub-themes	No. of R	Cross-validated by questionnaire survey data
Our teacher librarian finds difficulty in implementing the four roles legislated in 2002. Too much and confusing.	4	N.A
In schools where the teacher librarian has more than one hat, there are demands for the teacher librarian, but do not provide full support.	1	N.A
Library Studies does not have a curriculum guideline.	1	N.A
	6	

Interview Data Theme Twelve: Principals' perceptions in teachers' eyes

Sub-themes	No. of R	Cross-validated by questionnaire survey data
Inconsistent administrative arrangement. (In some schools, the principals think that how much teacher librarians think they can do is that much. The most important thing is able to manage the library and support the learning and teaching. In other schools, the PSMCD is under him/her, very messy.)	1	In Q22, 1/10 said that the school management has not yet established the library function in learning and teaching, so they appoint teacher librarians to take subject teaching jobs.

Interview Data Theme Thirteen (1): Teachers' information literacy skills ─ understand information skills as

Sub-themes	No. of R	Cross-validated by questionnaire survey data
Information Technology ability to use a computer, Tablet PC and software.	2	N.A
Searching skills to type the website &\ keywords on the Internet to search for information.	4	N.A
The skill of absorbing the information after reading it.	1	N.A
	7	

Interview Data Theme Thirteen (2): Teachers' information literacy skills ─ understand information technology skills as

Sub-themes	No. of R	Cross-validated by questionnaire survey data
The ability to master the computer and software, applying online/library resources to homework, such as Powerpoint presentation, video shot.	1	N.A
Higher order, more specialized and technical skills compared with information skills.	2	N.A
Similar to information literacy skills. Using online/library information properly.	1	N.A
	4	

Interview Data Theme Thirteen (3): Teachers' information literacy skills ─understand information literacy skills as

Sub-themes	No. of R	Cross-validated by Questionnaire survey data
The skill of making good use of the resources & observe copyright. (Q50:1, 2, 4, 5, 6), (Q53:6) The skill to select & apply information. (Q50:6)	7	In QQ18,19/53 (36%)related to copy right issues, 12/53 (23%) related to making good use of the information from the resources and observing copyright
The skill to identify the credibility of the information. (Q50:2)	1	In QQ18, 8/53 (15%)related to identifying the credibility of the information
Personal analysis of the matter, the standpoint one holds, taking on alternatives & be critical. Literacy is associated with the person's inner, human &conduct. (Q50:3)Information Literacy skills are neutrality, not to be radical, not to be unilateral. Be smooth & macroscopic.(Q51:3)	2	N.A

Interview Data Theme Thirteen (4): Teachers' information literacy skills ─ the way of developing information literacy skills

Sub-themes	No. of R	Cross-validated by Questionnaire survey data
I learn from my teacher, the printing press and the Internet. My teacher reminded me to pay attention to copyright, refer to someone else's material and avoid plagiarism. I learn the importance of literacy from the printing press and on the Internet.	3	N.A

I learn by doing. I do not deliberately develop. I base on my own needs to do homework and to find information. I do not have a formal teacher who teaches me information literacy.	1	N.A
In the courses I attend, I continuously hear that actually something is wrong in some ways. I alert.	2	N.A
The teacher librarian gives us some information for teaching and promotion among children. When we promote to our children, we will know. S/he also shares the materials s/he receives/ when s/he was trained during our staff meetings.	1	N.A
	7	

Interview Data Theme Fourteen: Teachers' responses regarding information literacy skills

Sub-themes		No. of R	Cross-validated by questionnaire survey data
Teachers develop their own information literacy skills in relation to students need.		11	In QQ19, 23/75 gave reasons to support their agreement that information literacy skills are necessary in the information age.
It is the responsibility for all teachers to teach information literacy skills. The following kinds of training requirement are needed for them to be able to do that.	coupled with the ability of teachers to use information technology, "what is information literacy?", "how to teach students knowledge in this area?"	1	In QQ20.3 most (57%) respondents agree that they have further professional development needs in terms of information literacy skills.
	The teacher librarian or teacher who gets his/her training, can share with us when s/he comes back.	2	
	Workshops by the Education Bureau for colleagues to attend and know what to pay attention to. Circulate a memo. Then we will all know about what we have to comply with the Code.	1	
	Skills needed when encountering copyright issues. How to tell whether one is able to use the information correctly?	1	
		16	

Interview Data Theme Fifteen: Examples of the answers to question number eight in the questionnaire ─ Since the establishment of the teacher librarian……

Sub-themes	No. of R	Cross-validated by questionnaire survey data

Learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library.	5	N.A
Library lessons can be scheduled when the need arises instead of when a library lesson was timetabled.	1	N.A
Teaching and learning resources are provided by the teacher librarian on request.	11	N.A
In project learning, students are guided to search for information from the school library to answer the project questions.	8	N.A
Library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.	2	N.A
	27	

Appendix Q: Reasons supporting the answers to questionnaire question 19 about teachers' agreement to "Information literacy skills are necessary in the information age"

No	Give reasons for your answer.
1	(skipped)
2	Has become an indispensable part of life.
3	(skipped)
4	(skipped)
5	(skipped)
6	(skipped)
7	(skipped)
8	(Skipped)
9	(skipped)
10	(skipped)
11	(skipped)
12	(skipped)
13	1. Respect others. 2. To protect oneself.
14	(skipped)
15	(skipped)
16	(skipped)
17	(skipped)
18	(skipped)
19	(skipped)
20	(skipped)
21	(skipped)
22	The wealth of information is part of life.
23	This is the age information flood, related skills and attitudes are necessary.
24	(skipped)
25	(skipped)
26	Facing the era of information explosion, people must know how to use the appropriate information.
27	(skipped)
28	Work more efficiently.
29	It has great impact on student moral education.
30	(skipped)
31	To cope with the information developed world, people should make good use of it.
32	Do not want to cause "crime" due to "convenience".
33	Opportunities for the need of using information technology in daily life and classroom learning are increasing. Unable to grasp the information literacy skills will inevitably create obstacles for learning, will most likely be eliminated by the information age.
34	(skipped)
35	Protection of intellectual property rights.
36	(skipped)
37	Now it is too easy to receive all kinds of information, people must know how to distinguish and choose the true and beneficial.
38	(skipped)
39	Information overflows. Students need to identify information that suits their needs.
40	(skipped)
41	The online world is the same as the real world. It reflects personal behavior and quality. Each person should be responsible for their own actions.

Mutual respect intellectual property rights, legal exchange and share, so as to promote good development.
(skipped)
(skipped)
(skipped)
In the Information Age, information literacy has become part of the overall quality of the man, with some information literacy skills, people can think and research independently in a complex environment, and can improve the quality of work and life.
(skipped)
(skipped)
(skipped)
(skipped)
The conditions of the citizens of the world.
(skipped)
(skipped)
(skipped)
(skipped)
(skipped)
With the popularity of the Internet, information is readily handy. How to get useful and substantial information from the overwhelming information becomes very important.
The integration of global knowledge and the information of the world as a whole has a direct impact on the lives of everyone. Grasping correctly the substantial process of searching information is very important.
(skipped)
(skipped)
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(skipped)
(skipped)
(skipped)
(skipped)
Lacking this skill will become blindly and will be utilized to create a force. It may eventually contribute to cyber bullying.
(skipped)
(skipped)
Changes in society.
Avoid breaking the law, to educate the importance of respecting intellectual property rights.
This is a matter of personal morality, everyone must learn to respect others.
In information age, literacy makes the society safer.

Appendix R: Interview questions (bilingual)

Good morning/Good afternoon/Good evening/Hello, Miss/Mr____, I am a research student studying for a Doctor of Education degree, jointly organized by the University of Nottingham and the University of Hong Kong, School of Professional and Continuing Education. The focus of my study is "Information Literacy Skills: Hong Kong primary teachers' perceptions of the role of the teacher librarian". This research aims to collect teachers' perceptions of the role of the teacher librarian in Hong Kong primary schools. Thank you very much for your time answering the questionnaire and thank you for sparing the time today to be interviewed. The interview is audio-taped in order that an accurate transcription of your answers to the interview questions is obtained. To help you understand and remember the questions so that repeating is not necessary, the script of the questions is here for your reference during the interview. Shall we start now? There are altogether 8 main questions. Some are subdivided into smaller questions.

早晨/午安/晚安_____老師。我是一位由諾丁漢大學和香港大學專業進修學院合辦的教育博士研究生。我研究的主題是"資訊素養技能：香港小學教師對學校圖書館主任角色的觀感"。本研究旨在蒐集香港小學教師對學校圖書館主任角色的看法。非常多謝閣下抽空填答問卷，並非常感謝閣下撥冗接受面談訪問，這次訪問會被錄音以確保閣下對面談問題的答覆得以準確地抄錄。爲了協助閣下明瞭及記憶問題及無需重覆問題，已把問題列印，以便閣下於訪問時參閱，訪問現在開始，是次訪問共有 8 道總問題，部份再細分爲若干子問題。

Q1. In the questionnaire, you agreed that the government provided an additional teaching post for undertaking the duties of a teacher librarian in aided ordinary primary schools. What do you know about this role? How would you describe the role of the teacher librarian in your school?

在問卷中，閣下同意政府於每所資助小學增聘一名文憑教師，負責執行學校圖書館主任的職務。據你所知，這職務的角色是什麼？你如何形容貴校的學校圖書館主任的作用？

Q2. (If the respondents can't describe the above, the researcher continues to Q2. The researcher listens to how the interviewee responds in order to decide on the appropriate/next question chosen from the following set of stem questions)

Could you say something about the teacher librarian's role in coordinating and managing reading materials and curriculum-related resources to support the development of reading and of learning through reading. This is one of the 4 roles under the current 2002 legislation, in addition to planning and managing the daily operations of the school library. The following questions might help you:

香港特別行政區教育局課程發展議會(2002)基礎教育課程指引(以下簡稱 2002 課程指引)指出的學校圖書館主任除了計畫和管理學校圖書館的日常運作外，同時扮演四個角色，其中之一是"統籌及管理閱讀材料和與課程相關的資源，以支援

學生閱讀及從閱讀中學習”。請談論一下這角色，可參考以下提示(如適用)：

Q2.1.1. Is this something that he/she is doing in your school?

貴校的圖書館主任是否正在這樣做？

Q2.1.2. Should this be solely the responsibility of the teacher librarian?

這應否純粹是圖書館主任的責任？

Q2.1.3. What is your response to it?

你有什麼反應？

Q2.1.4. Is this a good use of the resources in schools? Please give reasons.

這是否很好地利用學校的資源？請說明理由。

Q2.1.5. Do you think that this can be fulfilled by non teaching clerical staff? Please give reasons. If the answer is “Yes”, the researcher continues to ask, how do they support the curriculum?

你認爲，這是否可以由非教學文員擔任呢？請說明理由。如果答案是“是”，研究人員繼續詢問，他們是如何支援課程的呢？

Q2.1.6 Would you like the post of the teacher librarian to be used in different ways? Please specify.

你喜歡圖書館主任的職位以其他模式運用嗎？請詳細說明。

Could you say something about the teacher librarian’s role in developing students' information skills and attitudes in using information from all formats and contexts appropriately and ethically. This is one of the 4 roles under the current 2002

legislation, in addition to planning and managing the daily operations of the school library. We all know that information literacy skills are really important part of the curriculum.

2002 課程指引指出的學校圖書館主任除了計畫和管理學校圖書館的日常運作外，同時扮演四個角色，其中之一是“培養學生的資訊技能和態度，使他們能恰當地運用各種形式和情境的資訊，並符合道德操守”。大家都知道，資訊素养是课程的非常重要的一部分。請談論一下這角色，可參考以下提示(如適用)：

Q2.2.1. Do you think that we need a specialized teacher who teaches information literacy skills solely? Please give reasons.

你認爲我們需要一個專門的老師獨自教授資訊素養技能嗎？請說明理由。

Q2.2.2. Who do you think has the responsibility for developing students' information literacy skills and attitudes in using information?

你認爲誰有責任培養學生的資訊素養技能和使用資訊的態度？

Q2.2.3. Should this be solely the responsibility of the teacher librarian?

這應否該純粹是學校圖書館主任的責任？

Q2.2.4. Should this be the teacher librarian in relation to another teacher who has the responsibility for information skills?

這應否是學校圖書主任與另一位負責資訊技能的老師共同的責任？

Q2.2.5. Is this the responsibility for all the teachers? If so, what then is the training requirement needed for all the teachers to be able to do that?

這是否所有老師的責任？如果是，那麼，需要些什麼培訓，致令全體教師都能夠做到這一點？

Q2.2.6. Is this something that he/she is doing in your school?

貴校的圖書館主任是否正在這樣做？

Q2.2.7. What is your response to it?

你有什麼反應？

Q2.2.8. Is this a good use of the resources in schools? Please give reasons.

這是否很好地利用學校的資源？請說明理由。

Q2.2.9. Do you think that they can be fulfilled by non teaching clerical staff? Please give reasons. If the answer is “Yes”, the researcher continues to ask, “and you are expecting them to be information specialists, how do they support the curriculum and classroom teaching?”

你認爲，這是否可以由非教學文員擔任呢？請說明理由。如果答案是“是”，研究人員繼續詢問，他們是如何支援課程的呢？

Q2.2.10. Would you like the post of the teacher librarian to be used in different ways? Please specify.

你喜歡圖書館主任的職位以其他模式運用嗎？請詳細說明。

Could you say something about the teacher librarian’s role in supporting the studies in Key Learning Areas, teaching and assessment. This is one of the 4 roles under the current 2002 legislation, in addition to planning and managing the daily operations of the school library.

2002 課程指引指出的學校圖書館主任除了計畫和管理學校圖書館的日常運作外，同時扮演四個角色，其中之一是“支援各學習領域的學習、教學與評估。”請談論

一下這角色，可參考以下提示(如適用)：

Q2.3.1. Is this something that he/she is doing in your school?

貴校的圖書館主任是否正在這樣做？

Q2.3.2. Should this be solely the responsibility of the teacher librarian?

這應否純粹是圖書館主任的責任？

Q2.3.3. What is your response to it?

你有什麼反應？

Q2.3.4. Is this a good use of the resources in schools? Please give reasons.

這是否很好地利用學校的資源？請說明理由。

Q2.3.5. Do you think that this can be fulfilled by non teaching clerical staff? Please give reasons. If the answer is “Yes”, the researcher continues to ask, how do they support the curriculum?

你認爲，這是否可以由非教學文員擔任呢？請說明理由。如果答案是“是”，研究人員繼續詢問，他們是如何支援課程的呢？

Q2.3.6 Would you like the post of the teacher librarian to be used in different ways? Please specify.

你喜歡圖書館主任的職位以其他模式運用嗎？請詳細說明。

Could you say something about the teacher librarian’s role in working with teachers to identify student needs, required curriculum content, appropriate information resources to develop school-based curriculum strategies such as project learning and life-wide learning activities. This is one of the 4 roles under the current 2002 legislation, in

addition to planning and managing the daily operations of the school library.

2002 課程指引指出的學校圖書館主任除了計畫和管理學校圖書館的日常運作外，同時扮演四個角色，其中之一是“與教師協作，因應學生的需要、課程內容要求，選取合適的資訊資源，發展校本課程策略 (例如專題研習和全方位學習活動) 。”請談論一下這角色，可參考以下提示(如適用)：

Q2.4.1. Is this something that he/she is doing in your school?

貴校的圖書館主任是否正在這樣做？

Q2.4.2. Should this be solely the responsibility of the teacher librarian?

這應否純粹是圖書館主任的責任？

Q2.4.3. What is your response to it?

你有什麼反應？

Q2.4.4. Is this a good use of the resources in schools? Please give reasons.

這是否很好地利用學校的資源？請說明理由。

Q2.4.5. Do you think that this can be fulfilled by non teaching clerical staff? Please give reasons. If the answer is “Yes”, the researcher continues to ask, how do they support the curriculum?

你認爲，這是否可以由非教學文員擔任呢？請說明理由。如果答案是“是”，研究人員繼續詢問，他們是如何支援課程的呢？

Q2.4.6 Would you like the post of the teacher librarian to be used in different ways? Please specify

你喜歡圖書館主任的職位以其他模式運用嗎？請詳細說明。

Q3. (For interviewees who started teaching before 1998 適用於 1998 年前開始任教的受訪者)

You have been teaching since 1994. If we go back to when the teacher librarian post was

first introduced to schools in 1998 when you saw the introduction of the teacher librarian.

閣下自____年以來一直在教學。如果我們回到 1998 年當學校圖書館主任的職位首次推出而你看到引進學校圖書館主任時。

3.1.1. Can you remember how that was received in your school?

你還記得當時貴校如何接收這職位嗎？

3.1.2. What did you think about it at the time?

你當時怎樣看待這職位？

Could you please look at the points below from (a) to (g) which are the roles set by the government in 1998.

請看看以下（a）至（j）各項由政府於 1998 年設定的角色

3.1.3. Do you think these are important?

你認爲這些重要嗎？

3.1.4. Do these represent good description of the role of the teacher librarian?

這些項目是否很好地說明了圖書館主任的作用？

Are there any additional points you would like to see in these job descriptions from

(a) to (j)?

除了（a）至（j）的工作指引外，你有沒有任何想增加的項目？

(For interviewees who started teaching after 1998 適用於 1998 年後開始任教的受訪者)

I realized that you weren't teaching in 1998. Below from (a) to (j) are what the teacher librarian had to do back in 1998.

據悉閣下於 1998 年仍未任職老師。下面從（a）至（j）項是學校圖書館主任於 1998 年必須做到的職責。

(a) managing the central library;管理學校的中央圖書館

(b) co-ordinating the management of the class libraries;統籌課室圖書館的管理

(c) selecting, acquiring, processing, maintaining and circulating library books and other resource materials for the central library and the class libraries; 負責中央及課室圖書館書籍和其他有關的學習材料之購買、編目、整理、保存及借閱

(d) supporting the implementation of the Chinese and English Extensive Reading Schemes; 協助推行中文和英文廣泛閱讀計劃

(e) co-ordinating the efforts of teaching staff in planning and organizing library programmes to support and enrich the school curriculum;協助教師策劃及推行圖書館活動，使學校之課程更爲充實

(f) planning and developing reading programmes in consultation with subject teachers;

協助科任教師策劃及推行閱讀活動

(g) co-ordinating the conducting of library periods to equip pupils with basic library skills; 統籌圖書館課的教學，以訓練學生的基本圖書館技能

(h) serving on committees related to the acquisition and use of the library resources; 出任校內圖書及其他參考資料購置事宜委員會之委員

(i) advising the School Head and other teachers on matters concerning the central and the class libraries; and 就學校中央及課室圖書館事宜，向校長及其他教師作出建議，及

(j) any other appropriate duties as required by the Head of School. 校長指定之其他工作

3.2.1. What is your response to them?

你有什麼反應？

3.2.2. Do you think these are important?

你認爲這些重要嗎？

3.2.3. Do these represent a good description of the role of the teacher librarian?

這些項目是否很好地說明了圖書館主任的作用？

Are there any additional points you would like to see in these job descriptions from (a) to (j)?

除了（a）至（j）的工作指引外，你有沒有任何想增加的項目？

Q4

Q4.1. Do you think that the teacher librarian can do all of the above roles?

你認爲圖書館主任可以做到上述所有各項嗎？

Q4.2. Should people be appointed to the post of a teacher librarian on a full time or part time contract? Please give reasons.

圖書館主任的聘用合約應該是全職還是兼職？請說明理由。

Q4.3. Do you think the role of the teacher librarian is unique? Would it be possible for another person within the school to fulfill the duties of this role? Please give reasons.

你認爲圖書館主任的作用是否獨特？在學校裏，可否由另一人完成這個角色的職責？請說明理由。

Q5. I'm going to refer to the answers to the questionnaire. In relation to (each of the bulletin points below if applicable), would you please now add further information to this picture and tell me why you think that?

以下的問題是參考調查問卷的答案而設的。請你就有關（下列每一項，如適用）提供進一步的資料，並告訴我爲什麼你認爲是這樣呢？

learning activities and assignments have been planned cooperatively by the subject teacher and the teacher librarian using relevant resources from the school library.

科任老師與學校圖書館主任共同策劃利用切題的學校圖書館資源的學習活動及課業。

in project learning, students are guided to search for information from the school library to answer the project questions.

在專題研習中，學生被引導於學校圖書館搜尋資訊以解答專題研習的問題。

library lessons can be scheduled when the need arises instead of when a library lesson was timetabled.

圖書館課並非編定於上課時間表中，而是因應需要而編定。

library and other research and reading skills will no longer be isolated experiences but will be learnt in a subject context.

圖書館、研究及閱讀技巧再不是脫離實踐，而是從學科背景中學習。

students learn how to solve a problem on their own by searching for relevant information from the school library.

學生學會自行從學校圖書館搜尋相關資訊解難。

teaching and learning resources are provided by the teacher librarian on request.

學校圖書館主任按要求提供教與學資源。

Q6.

Q6.1. How do you compare the following 3 terms: information skills, information literacy skills (in this research title) and information technology skills?

你如何比較下列三個項目：資訊技能，資訊素養技能（在本研究的標題中）和資訊技術技能？

Q6.2. How do you develop your own information literacy skills?

你如何發展自己的資訊素養技能？

Q6.3. Do you think your own development is taken alongside with the work you need to do with your students?

你認爲自己發展時，是否考慮到工作上及你的學生的需要？

Q6.4. Have those skills developed in conjunction with your teaching of such skills to your students?

那些技能的發展，有否配合把它們教給你的學生？

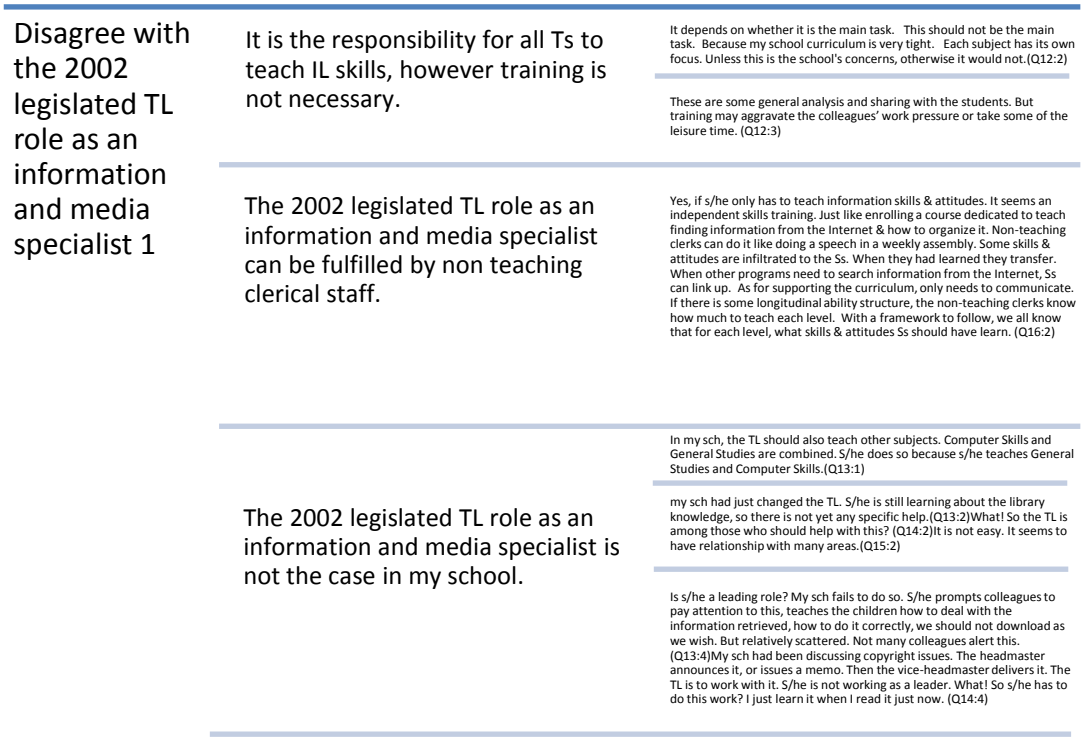
Q7. What advice would you give to teacher training courses for the preparation of teachers in teaching Information Literacy Skills?

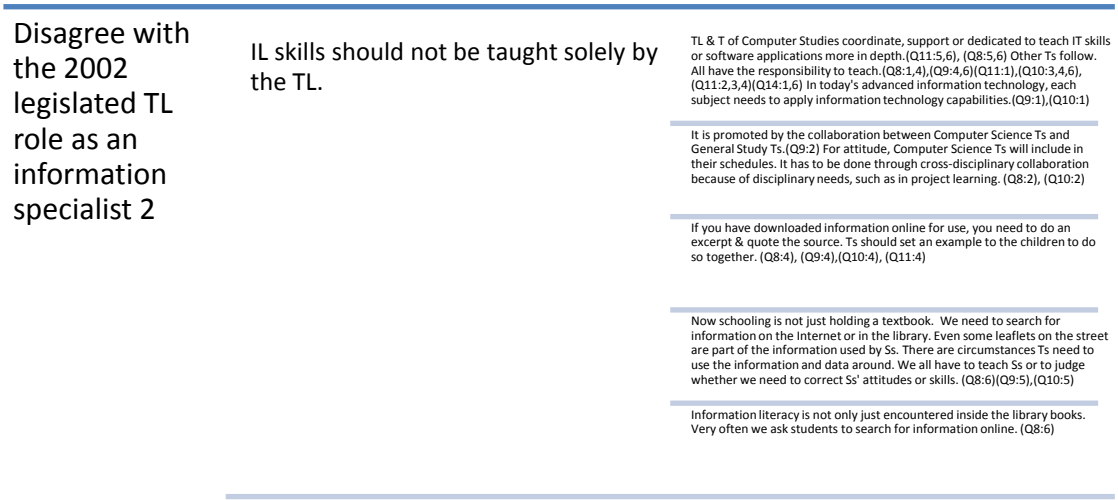
在裝備教師教授資訊素養方面，你有什麼建議給教師培訓課程，？

Q8. Are there any supplementary comments you wish to make concerning the role of the teacher librarian since you last responded?

自從上次填答問卷後，你有什麼關於學校圖書館主任的角色的補充意見？

Appendix S: Hierarchy diagrams showing the relationship between themes, sub-themes, motifs and snippets.





Disagree with the 2002 legislated TL role as an information and media specialist 3	It is the responsibility for all Ts to teach IL skills. The following kinds of training requirement are needed for them to be able to do that.	coupled with the ability of Ts to use information technology, "what is information literacy?", "how to teach Ss knowledge in this area?"(Q12:1)
		In today's heavy teaching, Ts cannot afford to attend courses frequently. In my school experience, different subject Ts go out to attend lectures. The message will be disseminated in our school's own sharing sessions & staff meetings. The TL who gets his/her training, can share with us when s/he comes back.(Q12:6)
		some workshops by the Education Bureau for colleagues to attend. Let colleagues know what to pay attention to. Also it can be attended by a T, and comes back to share with other colleagues. Or simply circulate a memo. Then we will all know about what we have to comply with the Code.(Q12:4)
		First Ts have to correct the concept - make use of information & library materials are duties of the TL or the Information Technology T. Now learning is not a T only responsible for a subject. When Ts are on the Internet, endless information appears. How should we apply the information & do screening? When encountering copyright issues, some skills are needed. Some places need to pay attention to. We should not casually use someone's information. How to tell whether one is able to use the information correctly? If Ts are aware of these, they are willing to share the work to help Ss learn.(Q12:5)

Appendix T: Open ended responses to questionnaire question 18 (bilingual)

Q18	請闡述閣下所理解的"資訊素養技能"Please specify in your own words what you understand by the term ‘Information Literacy Skills’. - Open-Ended Response
1	是一種使用互聯網的態度，及有否積極參與不同的有關電腦科技的技能。Is an attitude of using the Internet, and whether actively participating in various computer-related technology skills.
2	運用資訊技能能力及資訊道德責任。The ability and skills to use information and information ethics and responsibility.
3	(skipped)
4	有關版權問題、有關使用電腦的態度，如避免沉迷、網上欺凌等。Copyright issues, attitudes about using the computer, such as avoid indulging, cyber bullying, etc.
5	(skipped)
6	分析資料的技能、搜尋資料技能、正確使用資料的態度。Information analyzing skill, inform+BJ47ation searching skill, the correct attitude of using information.
7	(skipped)
8	(skipped)
9	(skipped)
10	對如何有效尋找資訊、利用資訊及判斷資訊的能力。The ability to find

information effectively, use information and determine information.

11 獲取、運用、篩選資訊的方式(技能)，當中涉及的態度之素養。The way (skills) of accessing, using and selecting information, involving the attitude related literacy.

12 (skipped)

13 (skipped)

14 能合理並取得同意，在遵守道德規範的情況下，轉載或使用資訊。 Reprint or use information reasonably, with consent and in the case of compliance with the code of ethics.

15 (skipped)

16 能與時並進運用資訊科技協助各種工作，達致更有效率的過程，更有成效的結果。Can keep abreast of the use of information technology to assist in a variety of work, the process of achieving a more efficient, more effective result.

17 一種使人能夠更有效地選擇、尋找及評估傳統或網上資源的技巧。A skill enabling people to more effectively select, find and evaluate traditional or online resources.

18 (skipped)

19 尊重知識版權。Respect for intellectual property rights.

20 恰當及從正途方式搜尋資料，亦是研習的主要技能。Searching information appropriately from the right path. It is also the key research skills.

21 使用資訊或提供資訊時的正確態度和技能。The correct attitude and skills of using and providing information.

22 當學校提出有關"資訊素養"的學習範疇時，其內容涵蓋"技能"與"態度"兩部分。"技能"指運用資訊科技的能力和技巧；"態度"則指使用資訊科技時應有的態度和操守，例如：尊重知識產權。When the school propose information literacy learning areas, it covers the two parts of the "skills" and "attitude". "Skills" refers to the capabilities and skills of using information technology ;"attitude" refers to the attitude and conduct while using information technology, such as: respect for intellectual property rights.

23 (skipped)

24 使用資訊科技的道德操守。Using information technology ethics.

25 如何善用資訊。How to make good use of the information.

26 (skipped)

27 知道何時需要資訊、從哪裡獲得，並能分辨及評估資訊的內容。Know when information is needed, where to get, and be able to distinguish and evaluate the content of the information.

28 運用電腦軟件、器材的能力、接收不同資訊的能力。The ability to use computer software and equipment, the ability to receive different information.

29 正當、正確地運用資訊科技的能力。Legitimate, correct use of information technology capabilities.

30 (skipped)

31 1. 網絡世界上的發言等要互相尊重、合法、對言論負責。2. 不作網上侵權行爲。3. 不作網上罪行，如黑客。 Speech on the online world should respect each other, legitimate and be responsible. 2. Don't commit online infringement. 3.

Don't commit cyber crimes, such as hackers.

32 資訊素養技能包括知識、態度和技能，使用者有了資訊素養的知識，包括軟件使用和疑難解決，便能運用，從而協助學習和教學，最後使用者定要有正確運用軟件及硬件的態度。Information literacy skills, including knowledge, attitudes and skills. Users with information literacy knowledge, including software usage and problem solving, will be able to use to assist in learning and teaching. Finally, users should have a correct attitude towards the use of software and hardware.

33 懂得用基本文字處理，例如 microsoft word, excel, ppt, etc。Know how to use the basic text processing, for example, microsoft word, excel, ppt, etc.

34 如何正確地/合法地運用資訊作學習用途。How to correctly / legally use information for learning purposes.

35 (skipped)

36 使人能夠更有效的選擇、尋找及評估傳統或網上資源。Enable people to more effectively select, find and evaluate traditional or online resources.

37 在資訊科技方面所持的道德態度。The moral attitude held by the Information Technology.

38 (skipped)

39 確認所需資訊、尋獲資訊、評估資訊及應用資訊的能力。The ability to identify the required information, found the information, evaluate and apply the information.

40 了解資訊科技的功用和效能。Learn about the usefulness and effectiveness of

information technology.

41 有素養地運用資訊，符合一般的道德標準。Educational use of information, in line with the general ethical standards.

42 從知識、技能和態度建立個人應用資訊，成爲守法的使用者。Establish the personal use of information from the knowledge, skills and attitudes to become law-abiding users.

43 懂得利用不同的途徑取得資訊、並懂得用正確的途徑和正確運用資訊。Know how to use different ways to get information, and know how to use the right approach and the correct use of information.

44 (skipped)

45 善用、守法、具道理規範、負責任的態度。To make good use, law-abiding, truth and norms, and responsible attitude.

46 懂得搜尋、理解、綜合/篩選所需資訊，並得適當地運用。Know how to search, understand, synthesize/ screen required information, and use as appropriate.

47 1. 資訊保安。2. 不虛言。Information security. 2. No falsehoods.

48 (skipped)

49 尋找資料，評估資訊，然後應用。Find information, evaluate information, and applications.

50 資訊素養是把資訊轉化成意義、理解及新意念的過程，要求學生明白使用資訊的背後理念，掌握尋找資訊的實質程序。Information literacy is the process of transforming information into meaning, understanding and new ideas. It requires students to understand the rational behind the use of the information and

to grasp the substantial process of information searching.

51 (skipped)

52 個人認爲，資訊素養技能是現代社會必備技能之一，有助對信息的有效接收及辨識。Personally I think that information literacy skills is one of the essential skills of modern society, will help to effectively receive and identify information.

53 1. 能協作教師備課，製作課件。2. 能直接傳授知識給學生。 1. Assist teachers in lesson preparation, production of teaching materials. Impart knowledge directly to students.

54 不清楚。Unclear.

55 善用資訊資源，用於吸取知識，並不能妨害他人。Make the best use of information resources for the acquisition of knowledge, and not prejudice others.

56 (skipped)

57 (skipped)

58 能選擇合適的資訊，有適當的引用，不抄襲。Select the appropriate information. Appropriate reference without plagiarism.

59 適當地運用資訊，尊重版權。Appropriate use of information, respect for copyright.

60 資訊素養技能即確認所需資訊，然後尋獲資訊，再評估資訊是否可靠，然後能夠應用資訊的技能。Information Literacy Skills means the skills to identify the required information, and then found the information, and then evaluate the reliability of the information, and then be able to apply the information.

61 (skipped)

62 上載網頁版權。Upload webpage copyright.

63 尊重知識產權。Respect for intellectual property rights.

64 適切使用資訊科技於日常生活及學習。Appropriate use of information technology in daily life and learning.

65 使用資訊科技的道德要求，尊重知識版權。The ethics of using information technology, respect for intellectual property rights.

66

67 1. 尊重知識產權。 2. 不參與網上欺凌。 3. 保障網上私隱。1. A respect for intellectual property rights. 2 Does not participate in online bullying. 3. To protect online privacy.

68 分辨資訊的真僞；如何取得引用權；發佈資訊的方法；私隱的處理；知識產權的處理等。To distinguish authenticity of the information; how to obtain the referencing right; dissemination of information; privacy processing; intellectual property treatment, etc.

69 如何運用電腦、網上資料的能力及正確態度。The ability to use a computer and online information, and the correct attitude.

70 (skipped)

71 尋找及使用"資訊"需要留意版權問題、道德問題。We should pay attention to copy right and ethical issues when searching and using "information".

72 能運用資訊科技，以搜尋資料，但須道德、合法運用。Able to use information technology to search information subject to ethical and lawful use.

73 搜集資訊的能力。 Information searching and collecting skill.

74 利用資訊科技找資料進行學習。Using information technology to search for information to learn.

75 尊重知識產權。Respect for intellectual property rights.