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Understanding the lack of student engagement in Chinese library science undergraduate education

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Abstract

This research study aimed to investigate the lack of student engagement in Chinese library science (LS) undergraduate education. Specifically, this study aimed to identify and understand the causes of the lack of student engagement and to articulate effective and pragmatic resolving strategies. This study adopted an inductive approach and a single case study design. The LS program at Wuhan University was employed as the case study, in which 29 full-time students were interviewed using a semi-structured question script. A thematic analysis of the interview transcripts pointed to 11 causes of the lack of student engagement. The conceptualisation of the research findings suggested revising the existing LS curricula and maintaining dynamic and interactive relationships among three main determinants of student engagement: curricular design, students' individual interests, and career prospects. This study provides a perspective on the development and survival of LS education in China and shares important lessons and experiences for LS educators and policy makers across international borders.

Keywords

library science education, undergraduate students, student engagement, China

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Key determinants of the lack of student engagement in undergraduate library education in China are curriculum, career prospect and individual interests.

Introduction

Contemporary with the rapid development and universal adoption of information technologies, information is becoming crucial to societal and economic development (Malekabadizadeh, 2009; Derakhshan et al., 2015). Many scholars (e.g. Juznic and Urbanija, 2003; Jin and Bouthillier, 2012; Derakhshan et al., 2015) advocate that librarians should become leaders in promoting technology implementation and adoption, and educators in helping users attain appropriate information skills and be able to access available information and knowledge resources.

These emerging roles and responsibilities of librarians have brought new demands and challenges to library science (LS) education and to library and information schools (iSchools). Chu (2010) claims that these changes have greatly influenced how LS programs are delivered and how librarians are trained. In recent years, LS education has experienced tremendous changes. New subjects and courses, such as digital libraries, information literacy, knowledge management, information architecture, data management and analytics, have been added to LS curricula (Chu, 2010). However, as asserted by Khoo et al. (2009), the development and structure of LS

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education in a country is closely related to the country's historic, social, political and economic backgrounds.

The Chinese LS education system was originally developed by imitating models from the West nearly a century ago. According to Khoo et al. (2009) and Fan (2006), the history of modern LS education in China can be dated back to 1913, in which year an American librarian, Harry Clemens, taught the first LS course at Nanjing University. In 1920, Mary Elizabeth Wood, an American librarian and missionary, founded the Boone Library School, which was the first LS school in China and today has become the School of Information Management in Wuhan University. Thereafter, two more LS departments were established at Shanghai Citizen University and Nanjing University, respectively in 1925 and 1927. In the 1950s, immediately after the establishment of the People's Republic of China, a more formalised and structured LS education was developed across the country following the education system in the former Soviet Union. Since the 1980s, government decisions for market-economic reform and opening-up resulted, not only in dramatic changes in the country, but also in rapid and major development of Chinese LS education through the formation of collaborative relationships with US and European LS schools (Khoo et al., 2009). At present, there are 44 LS schools in China, which provide LS degrees at bachelor's, master's and doctoral levels (Chen et al., 2008).

In the current LS education structure in China, to obtain a bachelor's degree students need to develop a significant and holistic LS knowledge structure and experience in library work through completing a number of LS specialised courses over the span of 4 years (Xiao et al., 2007; Chen et al., 2009). The LS master's education usually takes 2–3 years. Students are required not only to complete a series of intensified LS courses, but also to obtain basic LS research skills and experience (Chen et al., 2008). At the top of the LS education hierarchy, doctoral programs are heavily research-oriented. Candidates are expected to undertake a research project independently in 3 years and are mandated to publish several (usually four to six) research articles, which can be either in Chinese or in English (Wang and Yan, 2006; Zhao and Zhang, 2013).

Nevertheless, it has been widely noticed and discussed that LS undergraduate students in China have consistently demonstrated a general lack of interest in the LS courses and are insufficiently engaged in LS learning and practical sessions (e.g. Wu and Chu, 1997; Xiao, 2004; Xu et al., 2015). Many LS educators and researchers have claimed a variety of possible reasons, ranging from lacking personal interest to a non-conducive social environment (Yang and Hong, 2013; Wang et al., 2013; Tan, 2014).

Despite wide recognition and awareness of the severity of this problem, no systematic efforts have been made to explore and resolve the lack of student engagement in LS undergraduate education, nor have any effective strategies been developed and implemented. This paper reports on a research study which aimed to explore, identify and understand the causes of the lack of student engagement in Chinese LS undergraduate education. It is expected that through systematic research and analysis, pragmatic strategies can be formulated to enhance student engagement. Finally, although this paper focuses on Chinese LS education, it shares some useful lessons, experiences and suggestions for the development of LS educational programs in other countries.

Background and relevant works

In this research study, relevant works in two areas were reviewed: student disengagement in higher education and lack of student engagement in Chinese LS education. The review aimed not only to provide a theoretical basis for data collection and analysis in the remainder of the research but also to acquire theoretical and contextual sensitivities.

Student engagement in higher education

Student engagement is developed on the premise that "the amount of time and energy students put forth is positively linked with the desired outcomes of undergraduate education" (Kuh, 2009). It has been widely discussed and is generally believed that the more a student is involved and engaged in academic work and activities, the higher the level of the student's knowledge acquisition, psychosocial development and general cognitive development; the student is also more likely to have positive behaviours, a sense of belonging to a community or an academic field, and higher levels of achievement, such as enjoyment in learning, high scores, peer recognition and high attendance rate (Pascarella and Terenzini, 1991; Smith, 2005; Zepke and Leach, 2010; Taylor and Parsons, 2011).

The field of student engagement was first explored by Alexander Astin (1984), based on his theoretical

propositions on the involvement of university students. He defined student engagement as "the amount of physical and psychological energy that student devotes to the academic experience". Astin (1984) points out five tenets for the theory of student engagement:

- Engagement requires the investment of physical and psychological energy.
- Students can be engaged at different degrees along a continuum; one can be fully engaged, or not engaged at all.
- Engagement has both qualitative and quantitative aspects.
- The quality and quantity of student engagement in an educational program are directly related to the amount of learning and development.
- The effectiveness of an educational practice is closely related to its ability to increase student engagement.

For some time now, educators, researchers and policy makers have advocated that student engagement should be considered an essential aspect of meaningful learning. In recent decades, researchers in various disciplines have attempted to investigate and implement several means of better engaging their undergraduate students (e.g. Smith et al., 2005; Kuh and Gonyea, 2009; Zepke and Leach, 2010; Walker and Pearce, 2014).

Lack of student engagement in Chinese LS education

According to the existing literature, the lack of engagement of LS undergraduate students in China has been discussed for almost 20 years. A number of Chinese LS researchers and educators claim that students are generally not interested in LS and do not see themselves as able to have a prosperous career working in libraries (Liu, 2001; Quan et al., 2010; Yang and Hong, 2013; Wang et al., 2013). Many LS researchers (Liu, 2001; Xin, 2003; Li, 2006; Xiao et al., 2007; Tan, 2014) further pointed out that the lack of interest and lack of engagement are reflected in the processes of university application in China.

Entrance into Chinese universities is solely determined by an applicant's score in the Chinese National Matriculation Examination (CNME), commonly known as *Gaokao*. CNME usually is administered over the course of 3 days and consists of a set of nationwide standardised tests. All university applicants must not only undertake three mandatory tests (Chinese, mathematics and English), but also choose between two integrated tests. Specifically, science and engineering applicants need to take the integrated test that combines physics, chemistry and biology, whereas art and humanities applicants need to take the one that integrates history, geography and political education. In 2016, a total of 9.42 million university applicants took the CNME.

University applicants can apply to a maximum of six undergraduate programs in six different universities, according to their CNME scores and personal interests. Universities choose eligible applicants based on the ranking of CNME scores, from the highest downward until all positions are filled. Thus, an applicant needs to carefully choose from a wide range of universities and undergraduate programs. Applications typically include the most desired, highly popular and competitive programs in highly ranked universities, but also several less popular programs, which may be considered less desirable but are nonetheless offered in prestigious universities.

Unfortunately, LS programs are often less popular and seen as less desirable by prospective students. Quan et al. (2010) investigated LS undergraduate programs in 29 Chinese universities, indicating that only 24.4% students selected LS as their first choice, whilst the majority become LS students simply because their applications to other programs were denied. Xiao (2004) and Wang (2009) share a different perspective. They assert that the lack of student engagement results from a general perception that working in a library is not socially respectable or well paid in China, whereas social status and economic growth and income are greatly valued.

Through an extensive search and review of the literature, it has become clear that, although the lack of student engagement has been widely debated, the existing discussion is mainly based on personal perception, experience and understanding, while the lack of student engagement in Chinese LS undergraduate programs has not been systematically explored, understood or resolved.

Research methodology and processes

Research aim and questions

The main aim of this paper is to explore, identify and understand the causes of the lack of student engagement in Chinese LS undergraduate education.

Accordingly, the following research questions were formulated:

- What are the causes of the lack of student engagement in Chinese LS undergraduate education?
- How are these causes related?
- What strategies can be devised to promote student engagement?

These research questions were employed not only to overarch the research design and the selection of research methods but also to guide the processes of data collection and analysis.

Research design

To achieve the research aim and respond to the research questions, this study adopts an inductive qualitative research design, which combines critical literature review, case study, and data collection and analysis.

Critical literature review. The induction process started with a critical review of existing relevant literature. The literature review aimed to provide a theoretical basis and lens for the data collection and analysis in the remaining research. Therefore, the literature review retrieved, selected and analysed articles in two main areas: (a) student disengagement in higher education, and (b) lack of student engagement in Chinese LS education.

The review generated two theoretical narratives as synthesised and presented in section 2, and two major conclusions. First, there is a lack of coherent and systematic research investigation to identify the causes of the lack of student engagement in Chinese LS undergraduate education. Second, because there is no existing theory, this study needed to take an inductive approach that would allow a theory to emerge from the data collected.

Moreover, in terms of the theoretical lens to be used in this study, the Model of Student Engagement developed by Jones (2009) was adopted. The model can be used to understand student motivation and is used by instructors to design courses that will promote student engagement in learning (Jones, 2009). According to this model, student engagement can be assessed by the following dimensions:

- Empowerment: Refers to the amount of perceived control that students have over their learning. A key principle of empowerment is that individuals enjoy activities when they believe that they have control over some aspect of them. Empowerment includes the following constructs: the difficulty of the content, the ability of the students and the extent of students' prior experiences related to the content.
- Usefulness: Ensures that students understand why the content is useful. Students are more motivated when they have clear goals and have long-range behavioural projects to obtain those goals than when they have only short-term goals (Simons et al., 2004; Jones, 2009). There are two constructs for usefulness: expectancy and utility value. A subject area or course would have a high utility value for a student if it was needed to fulfil a degree requirement or if it was seen as useful for his or her desired future occupation.
- Success: Jones (2009) claims that course design should enable students to achieve success if they obtain the knowledge and skills and put forth the effort required. Students need to believe that they can succeed if they invest time and effort into the course. Success is related to self-perceptions of competence and includes constructs such as self-concept, self-efficacy, self-worth, goal orientation and expectancy value.
- Interest: A psychological state that consists of an affective component of positive emotion ('liking' something) and a cognitive component of concentration (engagement). Student interest is closely related to student engagement in a course or in an educational program (Hidi and Renninger, 2006). Jones (2009) points out that there are mainly two different types of interest: firstly, situational interest, which is similar to curiosity, is of temporary value, environmentally activated, and context specific; secondly, individual interest, which is of enduring personal value, internally activated, and topic specific.
- Caring: Some studies have reported that caring relationships with faculty are very important for students (Levett-Jones, 2009; Jones, 2009). Reeve (1996) defines that caring relationships are linked to the exhibition of affection (liking, appreciation and enjoyment of the student), concern, attunement (understanding, sympathy), dependability (availability when needed), interest in and detailed knowledge

about the student and the dedication of resources (such as time, interest, aid, energy and emotional support).

These five dimensions were adopted as preliminary themes and formed a framework that was used in orienting the processes of data gathering (interview) and analysis (thematic analysis) (Yin, 1994; Saunders et al., 2002). However, it is important to highlight that the use of this framework was not meant as theoretical bias but rather as a lens for the processes of data collection and analysis (Zhou et al., 2016). Therefore, these themes were handled as high-level propositions and evolved continuously by using constant comparison against the emergent theory (Zhou and Nunes, 2012).

Case study. An inductive case study approach was adopted as the overarching research methodology. Case study approaches are very common and widely used research strategies in library and information sciences. A case study enables the investigation of contemporary phenomena in real-life contexts and is often used to explore and understand complex and localised human activity systems and social environments (Yin, 2003; Zhou and Nunes, 2016). The case study approach is generally accepted as a qualitative research method and is particularly suitable for generating answers to 'why', 'how' and 'what' questions (Eisenhardt, 1989; Saunders et al., 2002; Zhou et al., 2008).

Moreover, considering it is almost impossible to establish a theory that would compass all LS schools and programs in China, a single case study research design was adopted. Furthermore, due to a lack of knowledge base, the single case study aimed to explore and provide a first set of insights into this problem, instead of aiming at formulating a formal theory with strong generalizability (Benbasat et al., 1987; Eisenhardt, 1989; Saunders et al., 2002). It was expected that the case study findings could not only serve as a theoretical basis for further research, but also offer practical implications and suggestions to promote and encourage student engagement in Chinese LS education.

In this research, the LS undergraduate program provided by the School of Information Management (SIM) at Wuhan University is adopted as the case study. SIM is the oldest, largest and strongest institution in LS research and education in China. Through nearly 100 years of development, the LS undergraduate program at SIM has developed and fully established a program curriculum, which consists of mandatory and selective foundation courses (required by the university), as well as mandatory and selective LS courses.

Table 1. Mandatory foundation courses included in the LS Undergraduate Program at Wuhan University.

Course Schedule	Course Names	Credits
First Year	Collegiate English I	3
	Collegiate English II	3
	Computer Basic and Operation	2
	Physical Education I	1
	Physical Education II	1
	Fundamentals of Law and Morals	3
	Politics I	1
	Politics II	3
Second Year	Physical Education III	1
	Physical Education IV	1
	Politics III	2
	Politics IV	4
	Collegiate English III	2
	Collegiate English IV	2

All LS undergraduate students need to take the mandatory foundation courses and earn all the necessary credits. As shown in Table 1, these courses are arranged at the first and second year of the LS undergraduate education. Although these courses are not directly related to LS, they are considered as fundamental to developing appropriate social and political perspectives, as well as the physical and mental attributes which are rather essential to becoming a library professional.

In addition to these mandatory foundation courses, students are expected to earn 25 credits from a spectrum of selective foundation courses in 4 years, which include 2 credits from the Leadership Development Course Cluster, 2 credits from the Development of Worldview Course Cluster, 2 credits from the Arts and Appreciation Course Cluster, 9 credits from the Mathematics and Statistics Course Clusters, 4 credits from the Humanities and Social Science Course Clusters, 4 credits from the Natural Science and Engineering Course Clusters and 2 credits from the Communication and Writing Course Clusters.

Furthermore, students are required to obtain a total of 64 credits from LS mandatory courses, as shown in Table 2.

As listed in Table 2, it can be seen that the majority of the courses are arranged at the first 3 years. These

Table 2. LS mandatory courses in the LS Undergraduate Program at Wuhan University.

Course Schedule	Course Names	Credits
First Year	Introduction to Information Management	3
	Collegiate Mathematics F	4
	Basics in Computer Programming (Theory)	2
	Basics in Computer Programming (Practice)	1
	Principles of Database Design (Theory)	2
	Principles of Database Design (Practice)	1
	Introduction to Information Economics	2
	Information Organisation	2
	Library and Information Sciences Development: International Perspective	2
	Foundations of Library Science	3
Second Year	Information Retrieval	3
	Information Organization (Theory)	2
	Information Organization (Practice)	1
	Development of Library Information Resources	3
	Information Description (Theory)	3
	Information Description (Practice)	1
Third Year	Library and Information Centre Management	3
	Information Users and Library Services	3
	Intellectual Property Management	3
	Library Science Research Methods	3
	Introduction to Digital Library	3
	Information System Design and Application	3
	Information Analytics and Decision Making	3
Fourth Year	Internship	4
	Thesis	4

courses include not only learning and practice about library management and services but also necessary training sessions and skill development for the operation and implementation of information technologies that are fundamental to library work. It is necessary to note that in the fourth year, all students need to participate in internship for at least three months. It is expected that through internship, students can participate in real library work and obtain first-hand understanding and experience. Moreover, all LS students need to perform a small-scale research investigation individually, based on which students are required to complete a 20,000-word thesis and to pass thesis oral defence.

Table 3. LS selective courses in the LS Undergraduate Program at Wuhan University.

Course Schedule	Course Names	Credits
Second Year	Webpage Design and Development	2
	Data Structure and Analytics Based on Java Language	2
	Librarianship Professional English	2
	Library Systems Design and Maintenance	2
	History of Chinese Books and Libraries	2
	Introduction to Bibliography	2
Third Year	Introduction to Knowledge Management	2
	Data Management	2
	Bibliometrics	2
	Library Promotion	2

In addition to mandatory courses, all students must earn at least 20 LS selective course credits, as shown in Table 3.

In order to earn a bachelor's degree in LS, a student needs to attain at least 140 credits. A total of 193 students are currently enrolled in the LS undergraduate program full-time.

Data collection and analysis. Twenty-nine students who are currently enrolled in the LS undergraduate program at Wuhan University were approached and interviewed. In fact, the interview informants were invited by LS student representatives, not by the research team. The main concern was that, due to the high power- and hierarchical-distance culture in China, it was perceived that students could feel pressed to participate and thus were unlikely to express their personal views, feelings, perceptions, experiences and criticisms truthfully, when they were asked and interviewed by their professors and course instructors (Hofstede and Hofstede, 2005). Therefore, the research team sought help from four student representatives, one from each year of study. They were asked to disseminate a short invitation note on their informal discussion groups on QQ and WeChat (two very popular social networking platforms used by

Table 4. Demographic profile of participants.

	Number of Participants	Percentage
Male	13	44.8%
Female	16	55.2%
First Year Student	8	27.6%
Second Year Student	9	31.0%
Third Year Student	10	34.5%
Fourth Year Student	2	6.9%
Overall	29	

Chinese university students). All the student informants contacted the research team voluntarily. The demographic profile of the interview participants is presented in Table 4.

The interviews were performed by the research assistant (second author of this paper) in the research team. All interviews were performed using semi-structured interview scripts and open-ended questions. The interview questions were derived from the literature review; in particular, Jones's (2009) Model of Student Engagement. The final question script contained two ice-breaking questions, 16 questions and a conclusion question. All informants were interviewed from April to July 2016 and interviews lasted approximately 30-60 minutes.

Thematic analysis was used to assess the interview data. Thematic analysis is widely accepted as a systematic process of coding and representing data (King and Horrocks, 2010; Chen et al., 2011). In this research, Jones's (2009) Model of Student Engagement was adopted as the analytical lens and provided potential themes for the emergent theory. Moreover, interview data were examined and interpreted, coded, and compared against the potential themes. Specifically, two analytical techniques were employed – namely, coding and comparative analysis.

Coding was practised by applying three types of codes to the data: open coding, axial coding, and selective coding, as suggested by Strauss and Corbin (1998). Open coding was applied to identify specific concepts in data. Open coding breaks data down into discrete fragments, closely and thoroughly examined for similarities and differences. Axial coding was used to develop vertical relationships, which interconnect properties, concepts and subcategories around the axis of a theme. Finally, the practice of selective coding focused on identifying horizontal relationships among the themes and on checking and verifying the emerging research findings against the interview data (Strauss and Corbin, 1998).

Comparative analysis is a symbol of social science research and is essential to the analysis of qualitative data. In this study, two types of comparison have been performed (Strauss and Corbin, 1998). The first type of comparison was used to compare incidents in data, looking for similarities and differences. This type of comparison was exercised when performing open and axial coding. The second type was practised at an abstract level and constantly compared emerging codes against the theoretical themes in Jones's (2009) Model of Student Engagement. This type of comparison was performed in the processes of axial and selective coding.

Computer-assisted qualitative data analysis software, ATLAS.ti 7, was used to facilitate the exercise of coding and comparative analysis. The analysis of interview data pointed to four main themes and 11 causes of the lack of student engagement in LS education.

Research findings

Student engagement in the LS Program at Wuhan University

A severe lack of student engagement was revealed in the interview data collected. In general, as claimed by several student informants, "[their] attendance in classes and participation of learning activities are embarrassingly low" (Interview 21:4), and they are not only "not interested in the program and the course" (Interview 14:11), but also "not active and hold a pessimistic view about the program" (Interview 9:13). Some students even claimed "wanting to transfer out" (Interview 6:11).

As shown in the interviews, "LS students can be generally divided into three groups according to their levels of engagement" (Interview 6:4). The majority of the students, as the first group, are "generally insufficiently engaged in the programs" (Interview 6:4). Additionally, there are two small but polarised student groups: one shows very high levels of engagement, whilst the other group is almost entirely disengaged. The interviewed students claimed that the level of engagement is closely related to "personal interests" (Interview 4:11), which could include "interest in learning LS" (Interview 24:3) and "interest in working in a library after graduation" (Interview 21:7).

> "Personal interests [in learning LS] are closely related to the career expectation of a student. For a large number

of students, we do not really see ourselves working in a library. Therefore, we are not very much interested in the most of the courses'' (Interview 17:8).

''I want to learning something that is of my personal interests and has practical value to me. I want to be a computer programmer and therefore use the most of my time on that. I minimize the use of time on LS courses. I only aim to achieve the lowest course requirement to get the course credits'' (Interview 6:6).

The data analysis pointed to 11 causes of the lack of student engagement in the LS undergraduate program at Wuhan University. Moreover, the causes identified have emerged in four main themes: empowerment, usefulness and success, interests and caring. The causes and themes that emerged are presented and discussed in the following sections.

Causes of the lack of student engagement

Empowerment. The data analysis revealed that the LS students are inadequately empowered and have a relatively low perceived control over their learning. Specifically, the analysis pointed to four causes of the lack of student engagement:

1. Lack of student-centric view
2. Fragmented course structure
3. Lack of clear education objectives
4. Lack of challenge in course content

As shown in Tables 1, 2 and 3, and as confirmed by the interview data, the LS undergraduate program investigated includes a very comprehensive and large mandatory course system. On top of obtaining a minimum of 20 selective course credits, LS students need to study 39 mandatory courses (14 university mandatory foundation courses and 25 mandatory LS courses). Many interviewed LS students claimed that ''a student-centric view has not been presented'' (Interview 14:10), because the LS curricular is ''too broad [inclusive] and overly rigid'' (Interview 14:5) to encourage self-inquiry, exploration, as well as in-depth learning about a particular course or subject. Some students claimed that ''it can be perceived that the LS curricular is designed by those professors thinking 'what a student should learn', rather than 'what a student want to learn in order to become a competitive library professional'" (Interview 24:11).

Many interviewed LS students claimed that the existing LS curriculum is ''overly fragmented'' (Interview 3:13) and ''missing clear objectives'' (Interview 15:6). In the curriculum design, the LS courses can be generally divided into ''two categories: LS theoretical courses, and LS technological courses'' (Interview 5:11). As stated by one of the informants, the main concern is that ''not only there is no clear relationship between the two categories, but also no evident interconnection between the individual courses'' (Interview 9:6). Also, as asserted by several student interviewees, ''the lack of education objectives has severely impacted on students' interests in the program'' (Interview 9:6). It is perceived through the data analysis that, without practical, affirmative and systematic education objectives, the LS undergraduate program can be seen as ''confusing and lacking direction'' (Interview 15:11).

''I would not consider myself as a good student, [. . .] and only want to pass the exams. The LS theoretical courses are relatively easy. We just need to use a few days to remember the key points in the textbook and on the lecture slides. Technological courses are comparably harder; we need to put more time for the exams. But, I feel a bit embarrassed to say that I remember nothing after exams. There is a huge problem in the LS undergraduate program'' (Interview 5:17).

As is apparent from the data analysis, these courses do not seem to present enough challenges for the interviewed students. For instance, a few interviewees stated that ''the theoretical courses in general are quite easy'' (Interview 12:10); ''you can get decent exam scores after really intense preparation for just 2 days'' (Interview 21:14). Technological courses are probably comparably harder, since ''we [arts and humanities students] do not have technological and mathematical backgrounds'' (Interview 12:10). Nevertheless, ''you can easily pass the course exams, if you put a little effort'' (Interview 12:10). In this case, students could have felt ''lacking necessary motivation and lacking a sense of achievement and accomplishment'' (Interview 9:10), thus becoming increasingly disengaged.

''Generally speaking, our courses are not challenging. On one hand, for those theoretical courses, you just need to work really hard to remember the course content, or use a few days to write a course essay. You can get really high scores if you work a bit harder. On the other hand, those technological courses, such as Collegiate Mathematics, Programming Language Java and Statistics SPSS, are more difficult. You need to pay more attention in lectures and more efforts after class'' (Interview 9:10).

Usefulness and success. As emerged from the data analysis, the perceived usefulness of LS education is closely related to the perception of potential career opportunities and success after graduation. Specifically, three causes of the lack of student engagement have emerged from the analysis of interview data:

1. lack of utility value
2. absence of clear connection with career development
3. narrow librarianship job opportunities.

During interviews, several informants pointed out that the utility values of the LS courses are not clearly presented and could have resulted in the lack of student engagement. For instance, interviewed students stated "a course should be related to the library works in reality" (Interview 7:9) and "what specific skills one can acquire through finishing a course" (Interview 25:9). In addition, students are likely to be more engaged if a course can demonstrate both theoretical and practical values, which can be of potential benefits to students' career progression after graduation. For instance, a student provided the following statement:

> "We always want to know what we can gain from a course. We would be more interested in courses in which the instructors can tell us how the learning could be reflected in real practices and how the course could help me to progress in my work and career" (Interview 25:9).

Therefore, not only the utility value of individual courses but also their links to future career development should be clearly demonstrated and explained, either orally in class, or written in the course description and portfolio. If these are not made evidently clear, students could become "increasingly confused with the progression of study year after year" (Interview 14:11) and thus increasingly disengaged from the LS program.

Furthermore, the lack of student engagement is possibly related to the fact that "it is very difficult to find a librarian position nowadays in China for a university graduate [who] only holds a LS Bachelor's degree" (Interview 14:8), because libraries, in particular those major public libraries and academic libraries, "are more interested in recruiting someone who has a LS Masters degree or even a PhD" (Interview 14:8). Therefore, students are probably trying to gain knowledge of and working experience in other fields that are more closely related to their own personal career expectations and interests (e.g. accounting, computer science, software engineering), rather than completely engaging in LS learning. Thus, if students are unable to find librarian positions, they can have a wider career perspective and alternative choices and be better prepared for growing, intensified competition in the Chinese job market.

Interests. Through the analysis of interview data, it has become clear that individual interests in LS can be an important determinant in student engagement. Specifically, two specific causes have emerged:

1. discouraging general social environment
2. lack of individual interests.

It is identified in the data analysis that student engagement in the LS undergraduate program is related to and influenced by the present Chinese general social and economic environments. Many students claimed that in the current "materialised Chinese society" (Interview 7:8), people have inevitably become concerned with "individual material gain and career success" (Interview 17:8). Therefore, it is perceived that, in this social context, becoming a librarian may not seem to be an advantageous career pathway leading to potential prominent financial success.

Moreover, the interview data reveal that working in a library may not be highly respected in the present society. As discussed by several interviewees, on the one hand, librarian positions provide "stability" (Interview 1:13) and "almost guaranteed tenured opportunities" (Interview 8:8); on the other hand, a career in librarianship could imply "one [being] not successful and under-achieving" (Interview 23:8). A few students even claimed that they feel embarrassed to tell their families and friends that "they are studying LS"; instead they declare that they are "students of information management" (Interview 18: 22).

Thus, this leads to a critical question about why students chose to apply to the LS program in the first place. This question was discussed extensively with interviewees. According to their responses, LS students can be categorised into four groups. The first group of students, specifically three students interviewed, exhibited strong interests in LS and claimed they were "[. . .] not particularly interested in other programs offered by the university" (Interview, 9:16).

> "I liked to read when I was a kid. Because I am from a small town, we do not have a library, a reading room, or something like that. When I was in the high school, a library was built not far from my school. I went to the library regularly and really liked the environment there. [Therefore] When applying university, considering my CNME scores, I chose LS after all" (Interview 19:3).

The second group of students demonstrated less interest in LS. Several interviewees claimed to have selected the LS program because it is "one of a few programs in Wuhan University ranked as number 1 nationally" (Interview 6:13). Students in the third group claimed that "the LS program requires lower CNME scores for university admission [when compared to other programs]" (Interview 2:3), and thus the LS program was often considered as "the last resort" when applications to other programs were perceived as not entirely secure (Interview 25:3).

> "My CNME score was not high enough for other programs, I selected [the LS program] as the last option. I did not think I could study business or economics programs, which I am really interested. The LS program has a long history, is highly ranked and seemed a good choice considering my conditions" (Interview 13:5).

In the final group, students claimed that their parents chose the LS program for them, despite their true individual interests. Parents considered this program as "easy to learn and not very stressful" (Interview 27:24) and were convinced that librarians have a stable and relaxing career.

> "My parents' opinion about what to learn in the university had greatly influenced on me. Well, most of us [university students] are strongly influenced by our parents. They are more experienced and always, always very protective. My parents thought working in a library leads to a simple and stable life, which as they say is important to a girl" (Interview 8:3).

Therefore, it can be perceived that a large proportion of LS students may not be truly interested in LS. Thus it is very unlikely that they are motivated to engage in LS learning.

Caring. The data analysis pointed to two causes of the lack of student engagement related to an absence of caring, supportive relationships among LS professors and students. Specifically, two causes have been identified:

1. lack of supportive relationships for learning
2. lack of after-class communication.

During interviews, when discussing the role and influences of LS professors, almost all the LS students expressed respect and spoke highly of their professors. Here are some examples:

> "Nearly all the professors and teachers are very helpful and are always patient to answer questions" (Interview 8:12).
>
> "I am sure we all are greatly influenced and encouraged by the diligent and positive attitudes of our professors towards teaching" (Interview 13:7).

It is necessary to note that this is not at all unusual in Chinese culture and highly hierarchical society, in which teachers are expected to be viewed by students as role models, of a higher status, and should always be respected and never challenged.

Nevertheless, it was revealed in the data that there is an evident lack of caring and lack of support for learning shown by professors. In fact, as indicated by the data, caring for student learning and caring for student well-being are considered to be completely different and separate undertakings, associated with different types of staff. Whilst professors and course instructors are expected to focus on teaching and learning, "all issues about living, health, career planning, internship and personal finance are supposed to be dealt by the student counselors" (Interview 9:13). In Wuhan University, there usually are two to three student counsellors in each school. Although these student counsellors are not required to have a relevant academic background, they were referred to as "the closest to students among the school staff" (Interview 10:12), as opposed to the professors. Thus students could feel that caring for learning is largely neglected. Therefore, with this in mind, students could be more engaged in the LS program if various types of supportive relationships were established pertaining to particular courses or areas of interests of students.

> "I have never talked to any of our professors after class and informally. I do not think they are obliged and responsible to help me to solve my problems. I rather talk to the counselor [name]" (Interview 27:13).

The LS students interviewed pointed out that "communication [with course instructors] mainly occur in class" (Interview 20:13), whereas "after-class communication is very limited" (Interview

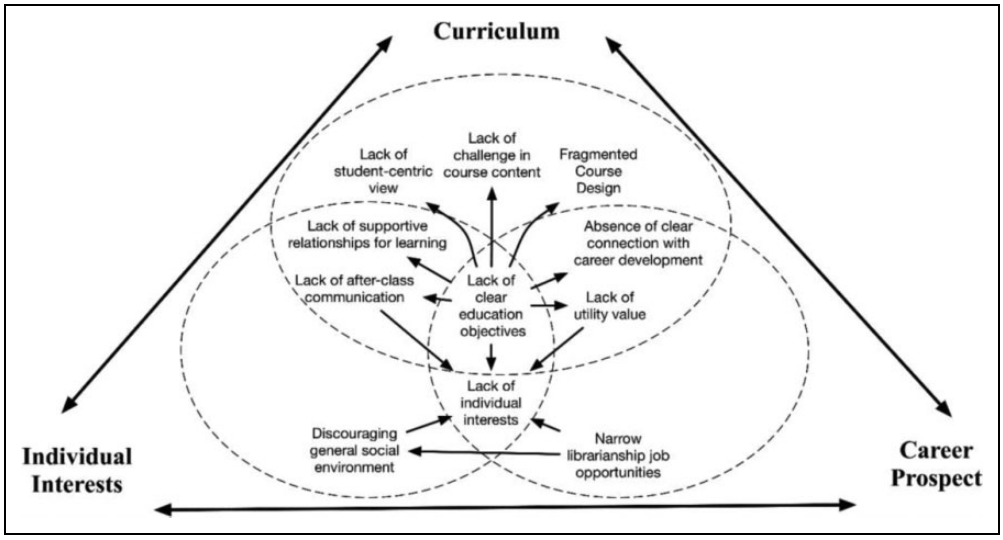

Figure 1. A conceptual model of the key determinants and causes of the lack of LS student engagement and their relationships.

10:13). After-class communication is mostly done through email, by which it is "very unlikely to have prolonged and in-depth discussion about the problem encountered, future career or research ideas" (Interview 25:13).

> "They [the LS professors] usually reply my email reasonably quick. I am greatly benefited from this. However, I noticed that all our professors are extremely busy, I do not think I should use too much of their time" (Interview 13:12).

Also, a number of interviewees expressed that they were interested in participating in after-class learning activities, specifically and namely, "find part-time internship works in a local library" (Interview 12:1), "participate research studies conducted by the professors" (Interview 12:5), "perform [their own] research investigations" (Interview 4:12) and even "publish research articles" (Interview 6:13). Evidently, these after-class interests can be effective and useful enablers not only to increase students' interests in LS but also to gain practical library working experience as well as academic research skills. However, these after-class interests have not been fully explored and used in the current LS education.

Discussion

As discussed in Section 3, a thematic analysis approach was adopted in this study to analyse the interview data collected in a case study research design. As suggested by Zhou et al. (2016), this analysis approach is particularly useful for inductive theory development and for generating a structured theoretical narrative, such as the one presented in the previous section, which has explanatory power to the research questions and the social phenomenon being investigated.

On this basis, it is expected that a conceptual model could be developed, not only to provide a theoretical basis for future research, but also to articulate pragmatic and effective resolution strategies. Therefore, the interview data were re-analysed and conceptualised to identify key determinants through understanding relationships between individual causes identified from the perspectives of the students interviewed. As a result of this analysis, a conceptual model is developed and presented in Figure 1.

As shown in Figure 1, three key determinants of the lack of student engagement in the LS undergraduate education have been identified. These key determinants are: curriculum, career prospect and individual interests. Moreover, the three determinants are interrelated:

- The analysis indicates that the LS curriculum is mutually related to the interests of individual students. The analysis showed that students could be more interested in the LS program if the curriculum demonstrates clear education structure, teaching objectives and explicit utility values. Also, students are more likely to be further engaged in the program if more after-class learning support can be provided.

- The LS curriculum and the career prospect are mutually related and influential. Specifically, it is identified that, on one hand, the curriculum should provide various career pathways that can lead to potential opportunities and competitive advantages in the job market; on the other hand, the LS curriculum should quickly respond to changes occurring in the job market and better prepare students accordingly.
- Finally, the analysis of the interview data showed that the interests of individual students and the career prospect in librarianship are mutually related and influential. As reflected in the data analysis, students are more likely to have higher degrees of engagement if clear career pathways can be established.

Figure 1 presents a cause – consequence network, which exhibits relationships between individual causes. In this network, two causes have emerged as central links, namely, lack of individual interests, and lack of clear education objectives. It has become clear that in order to increase student engagement in LS education, it is paramount to enhance student interest in LS. According to the analysis, students' individual interests are related not just to the career prospect and the general social environment, but also to the curriculum design and course structure in LS education.

The existing social environment in China has resulted in not only a lack of individual interest in LS, but also a pessimistic attitude among LS students. It is also perceived that, in addition to the general social environment, the economic environment, national and regional political decision and support, as well as technology development and acceptance, should not be overlooked when trying to understand the lack of student engagement in LS education. Nevertheless, changing the general environment is extremely difficult. It would be more effective to establish short- and medium-term changes focusing on the LS curriculum and course design. The data analysis reflected that the LS curriculum should be consistent and dynamically interacting with students' individual interests on the one hand, and the requirement and movement of the job market on the other.

Thus, and specifically, the following suggestions can be articulated based on the research findings. Firstly, a number of course clusters can be developed by interconnecting related and homogenous courses. Secondly, based on the development of course clusters, several career pathways can be identified. In this case, students can choose from a set of course clusters to pursue a particular career pathway. Thirdly, clear learning objectives for each career pathway should be identified and designed, so that students can easily know what learning objectives are achieved by completing specific course clusters. Fourthly, supportive relationships for learning among course instructors and students should be developed. It is worthwhile to mention that Wuhan University has very recently implemented an 'undergraduate supervisor policy', in which each student can choose a supervisor from the faculty team. Each faculty member is required to supervise two to four students, with frequent communication and regular meetings and a goal of enhancing student involvement in after-class learning, internship and practical training, as well as research exercises.

Conclusion

This paper reports on a research study that aimed to investigate the lack of student engagement in Chinese LS undergraduate education. The LS program at Wuhan University was adopted as a case study, in which 29 students were approached and interviewed. It has become clear from the analysis of the interview data that to increase the engagement of LS students, significant efforts should be made aiming at maintaining dynamic and interactive relationships among the curricular design, students' individual interests, and career prospect and expectation. Furthermore, it is important to develop and implement short- and medium-term changes concentrating on revising the existing LS curriculum and course design.

This paper raises important issues and delivers practical suggestions, which are not only of interest to LS educators and researchers, but also of critical importance to administrators at Chinese higher education institutions, politicians and decision makers at the Chinese Ministry of Education. Also, the research findings and theoretical propositions can provide useful implications and messages not only for LS educators in different countries around the world but also for those undergraduate programs having similar problems, such as sociology, Chinese literature and museology.

Since this paper reports on one of the early investigations into the lack of student engagement in Chinese LS undergraduate education, the conceptual model proposed can be adopted as a theoretical basis for future study and thus further examined, validated and expanded.

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