

# Factors Influencing Information Literacy Collaborative Teaching in Higher Education Institution Libraries in China

Qin Shanfang<sup>1</sup>, Ap-azli Bunawan<sup>2</sup>, Nor Erlissa Abd Aziz<sup>3</sup>

## Abstract

*With the rapid development of information technology and the in-depth promotion of informatization in higher education, the importance of information literacy education in the libraries of higher education institutions has become increasingly prominent. As an effective way of information literacy education, the cooperative teaching model has gradually attracted extensive attention. However, there are many influencing factors in the process of information literacy cooperative teaching in Chinese higher education institutions. This study aims to explore these influencing factors and systematically analyze the key factors influencing the cooperation between libraries and teachers, faculties and other departments in higher education institutions to carry out information literacy education through literature analysis, including the lack of co-teaching as part of the organization's strategic goals, the lack of support from authoritative organizations, and the lack of financial support. The results of this study will provide a theoretical basis and practical suggestions for optimizing the cooperative teaching mode of information literacy in libraries of higher education institutions in China, to promote the sustainable development of information literacy education.*

**Keywords:** *Factors, Information Literacy, Collaborative Teaching.*

## Introduction

After decades of development, the importance of information literacy education has been generally recognized. Many countries have incorporated information literacy into their education systems and achieved fruitful results. At present, cooperative teaching is one of the research hotspots in this field. The United States, Australia, Britain and other countries have successfully explored an all-round, multi-level and multi-form cooperation model in the practice of information literacy cooperative education (Gao et al., 2015; Lu, 2021). These cooperation models are divided according to the scope of cooperation, including cooperation between librarians and faculty teachers (Gihan, 2017), Collaboration among Libraries (Li & Liu, 2004), or cooperation between libraries and other institutions outside school (Fang & Yi, 2007). Nowadays, the research of information literacy cooperative teaching in library field tends to be mature. Therefore, in recent years, information literacy education cooperation has gradually transformed into cross-cultural cooperative research, such as carrying out information literacy cooperative teaching research for students from different countries and different cultural backgrounds (Griesbaum et al., 2023).

Practice has proved that cooperative teaching of information literacy in libraries is the most effective, in-depth and most beneficial educational form for the educated (Zhang et al., 2021). In particular, the cooperation between librarians and teachers is the most effective teaching method of information literacy (Lance, 2002; Zhang et al. 2021). Although many higher education institutions have adopted this method, it happens less frequently than librarians expected ((Lu, 2021; Lance et al., 2024), especially in China, the effectiveness of information literacy education is far behind that of developed countries. Therefore, it is the core of this study to find and analyze the reasons that hinder the development of information literacy cooperative teaching in libraries of higher education institutions in China.

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<sup>1</sup> Postgraduate Student, School of Information Science, College of Computing, Informatics and Mathematics, Universiti Teknologi MARA (UiTM) Selangor Branch, Puncak Perdana Campus, Section U10, 40150 Shah Alam, Selangor. MALAYSIA

<sup>2</sup> Senior Lecturer, School of Information Science, College of Computing, Informatics and Mathematics, Universiti Teknologi MARA (UiTM) Selangor Branch, Puncak Perdana Campus, Section U10, 40150 Shah Alam, Selangor. MALAYSIA, Email: ap-azli@uitm.edu.my, (Corresponding Author)

<sup>3</sup> Senior Lecturer, School of Information Science, College of Computing, Informatics and Mathematics, Universiti Teknologi MARA (UiTM) Cawangan Kelantan, Bukit Ilmu, 18500 Machang, Kelantan Darul Naim, MALAYSIA

## Literature Review

### *Definition of Information Literacy*

Up to now, there is no unified definition of the concept of information literacy. The concept of early information literacy means that information users should have the ability to find, obtain, evaluate and utilize information. After continuous revision, researchers gradually abandoned the concept of information literacy as a set of standardized abilities and began to regard it as a combination of abilities that vary from situation to situation; Other scholars have tried to redefine information literacy and classify it as meta-literacy (Yu & Wang, 2020). Meta-literacy not only pays attention to how information is inquired, obtained and utilized, but also emphasizes the blending and mutual influence between information literacy and other literacy. Until 2015, in order to adapt to the development of the times, Framework of Information Literacy of Higher Education absorbed previous studies, and understood it as students, as information consumers and creators, have the comprehensive qualities needed to successfully participate in cooperative fields, including reflective discovery of information, understanding how information is generated, evaluation and utilization of information innovation knowledge, and reasonable participation in learning communities.

### *Application of Information Literacy*

The research on information literacy education in higher education institutions has been concerned and valued by some developed countries earlier, and a series of studies and explorations have been carried out one after another, such as the United States, Britain and Australia. These countries that have made great achievements in information literacy education have many things in common. First, they set up national information literacy organizations to guide the implementation of information literacy, such as ALA, ACRL and AILF in the United States, SCOUNL and CILIP in the United Kingdom, CAUL and ALIA in Australia. The second is to formulate and publish the guiding standards for information literacy education at the national level. For example, in 2015, ACRL re-examined the standards, launched new research results, and published the "Framework of Information Literacy of Higher Education"(Association of College and Research Libraries, 2017); SCOUNL released "Information Skills for Higher Education"; ALIA has jointly published the Australian and New Zealand Information Literacy Framework: Principles, Standards and Practices. Finally, pay attention to the combination of information literacy education theory and practice, and the related research is supported by research project funds. For example, the University of Iowa in the United States uses innovative ways and technologies to implement teaching (TWIST). Participants in this project mainly include TWIST educational technicians, librarians and teachers of relevant departments. This cooperation mode, which takes teachers as content experts, librarians as information experts and educational technicians to provide technical support and training services, has become a famous "TWISTed Pairs" mode(Yang & Li, 2016).

Information literacy education in China was first implemented in higher education institutions and has made some progress since its development. The Ministry of Education issued relevant documents, requiring the popularization of information literacy education in higher education institutions across the country. For example, the Regulations for Libraries of General Higher Education Institutions (Revised) issued in 2015 clearly stated that libraries of higher education institutions should pay attention to information literacy education. Some institutions try to formulate information literacy education standards. For example, in 2005, Beijing Library Society issued the "Information Literacy Ability Index System of Higher Education in Beijing" to provide guidance for information literacy education of higher education in Beijing(Huang et al., 2019); In the same year, China Institute of Science and Technology Information issued the Evaluation Index System of Comprehensive Level of Information Literacy of Students in Higher Education Institutions(Ma, 2010). However, these standards are regional and not universal. In addition, in the cooperative teaching of information literacy, some universities try to embed information literacy into professional courses, which promotes the cooperation between librarians and professional teachers.

## Issues

Although China's information literacy education has made some progress, there is still a certain gap compared with developed countries. In the process of promoting the development of information literacy education, there are still many problems. Through comparative analysis, it is found that the biggest problem is the lack of cooperation and communication among libraries, and the information literacy education carried out by higher education institutions alone makes many educational resources unable to be fully shared(Gao et al., 2015). At present, the research on cooperative teaching of information literacy in China is still in the exploratory stage (Lu, 2021).

### *Lack of Sense of Cooperation*

Compared with developed countries, China's information literacy cooperative training started late, and there are many obstacles and challenges in the development process(Liu & Luo, 2011). Up to now, information literacy cooperative education has not been popularized in higher education institutions, and most of them are taught independently by librarians in the form of literature retrieval courses. The curriculum design is not targeted, lacks effective combination with professional courses, and the teaching effect is not ideal(Lu, 2021; Fang, 2013). According to the survey data, since 2000, libraries of higher education institutions have begun to explore new teaching methods of information literacy. After more than 20 years of steady advancement, the number of libraries integrating information literacy with professional courses is still small, accounting for only 20.7% of the total 570 higher education institutions surveyed(Wu et al., 2022) . This shows that Chinese higher education institutions do not have a deep understanding of the importance of exploring the development of information literacy education, especially under the background of highly developed information technology, and do not have a good understanding of the new connotation of information literacy given by the times(Wu Jin et al., 2022) .

### *Imperfect Cooperation Mechanism*

Libraries should focus on the overall goal of information literacy education, analyze the cooperation contents, including platform construction, equipment purchase, project research, activity planning, librarian training, technical and fund support, etc., and clarify the cooperation subjects, including relevant departments, teachers and students, researchers, data management institutions, other university libraries, library consortia, database vendors, etc., and realize the integration, sharing and utilization of superior resources through consultation and coordination of interests and division of labor with multiple units. Finally, through timely evaluation and judgment of cooperation value, cooperation problems and ways to further enhance cooperation performance, to ensure the feasibility and sustainability of cooperation (Liu, 2015), the smooth implementation of this process needs a sound cooperation mechanism to ensure. However, the lack of cooperation practice in information literacy education seriously hinders the construction of cooperation mechanism, which in turn affects the active development of cooperation practice, making the pace of cooperation in data literacy education difficult.

### *Lack of Project Support*

Cooperative training in information literacy in developed countries emphasizes the combination of theory and practice, and related research is mostly supported by project funds. The cooperative training of information literacy in the United States attaches importance to practical operation from the beginning and has always adhered to the road of combining theory with practice. For example, the library utilization course developed by Patricia Knapp and faculty teachers in the late 1950s has far-reaching influence. In contrast, in China, information literacy cooperative education lacks project financial support, and many higher education institutions carry out information literacy education alone, which makes it difficult to achieve good results(Liu & Luo, 2011).

## Method

The purpose of this study is to explore the influencing factors of cooperative teaching of information

literacy in colleges and universities by means of literature review. Through systematic retrieval, screening and analysis of relevant literature, the key factors affecting cooperative teaching mode in information literacy education are determined.

### *Document Retrieval Strategy*

Literature retrieval mainly covers the following databases: Web of Science and China Knowledge Network (CNKI). The search period is set from 2000 to 2024 to ensure that the latest research results are covered. Search keywords include "Information Literacy", "Collaborative Teaching", "Higher Education" and related synonyms.

### *Literature Screening Criteria*

Literature screening can be divided into two stages: primary screening and fine screening. According to the title and abstract, the literature irrelevant to the topic of this study is excluded. Through reading the full text, the selected literature is directly related to the influencing factors of cooperative teaching of information literacy in colleges and universities. Finally, the literature included in the analysis should meet the following criteria:

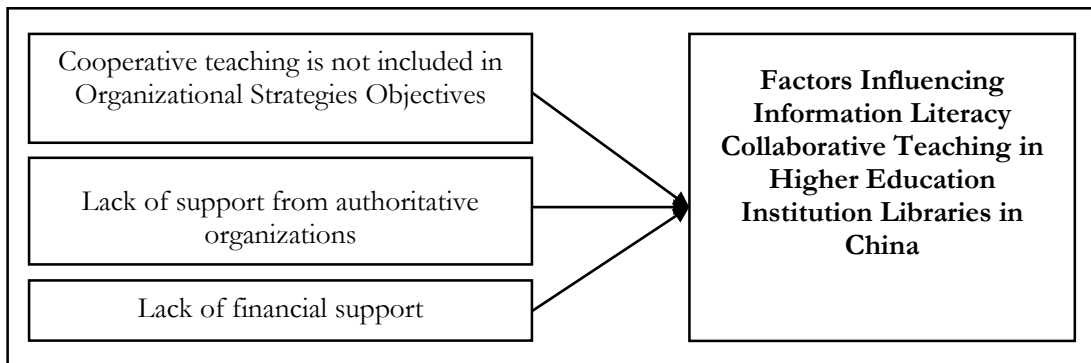
- The research topic is clearly related to information literacy education in colleges and universities.
- It involves the implementation and influencing factors of cooperative teaching mode.
- Provide empirical research data or theoretical basis.

### *Data Analysis Methods*

The content analysis method is used to code and classify the documents, and the main factors affecting the cooperative teaching of information literacy are extracted. Firstly, identify the specific factors mentioned in the literature; Then, these factors are classified as organizations, teachers, students, teaching resources and so on. Finally, the frequency statistics and frequency analysis of various factors are carried out to determine their importance and universality.

## **Findings**

The above literature review summarizes the difficulties and challenges faced by libraries in developing cooperative teaching of information literacy under the background of higher education in China. Some researchers have conducted extensive research on literature to determine the factors that affect the cooperation of information literacy among higher education institutions. Lippincott (2000) emphasizes that the factors of cooperation between librarians and subject teachers include common vision, common knowledge of technical terms, willingness to learn from partners' expertise, and acceptance of each other's differences instead of being critical. After visiting several libraries and colleges that cooperated in 2002, Ivey pointed out four elements of successful cooperation: common vision of goals, mutual respect, tolerance and trust, ability to complete tasks, and continuous communication. Through literature analysis, we find that the above factors mainly look for reasons from the perspective of partners, but besides the above factors, there are the following factors that are visualized in the next figure 1.



**Figure 1. Factors Influencing Information Literacy Collaborative Teaching**

Based on figure 1, there are three (3) factors that identified. These include the cooperative teaching is not included in Organizational Strategies Objectives, lack of support from authoritative organizations and lack of financial support. The details of these three factors are explained in the next section.

#### *Cooperative Teaching is Not Included in Organizational Strategic Objectives*

Organizational strategy is the guide of organizational development, which determines the orientation, goal and resource allocation of an organization (Daft, 1995). In the aspect of information literacy education, the organizational strategy of higher education institutions also plays a different role, which determines the orientation and development direction of information literacy education. In order to achieve the goal of information literacy education and improve students' information literacy level, higher education institutions should incorporate cooperative teaching into organizational strategies and teaching objectives, so as to guide libraries and teachers to carry out this teaching task through cooperation, because practice has proved that cooperation can improve the teaching effect of information literacy, especially the cooperation between librarians and teachers (Lance, 2002; Zhang et al., 2021). Therefore, organizational goals and strategies play a guiding and promoting role in information literacy cooperative education.

However, the actual situation is that many higher education institutions have not incorporated cooperative teaching into their teaching plans and teaching objectives, and they have not realized the importance of cooperative teaching, nor have they popularized the significance of cooperative teaching at the school level. Therefore, librarians and professional teachers lack the sense of cooperation and carry out their own teaching activities, which leads to the lack of sharing of teaching resources, thus affecting the teaching effect.

#### *Lack of Support from Authoritative Organizations*

Many scholars believe that the lack of information literacy standards at the national level is one of the major problems in information literacy education (Huang et al., 2019). Some researchers pointed out that China has not yet formulated a general information literacy education framework or related strategic guidance documents for planning, guiding and evaluating information literacy education and training (Deng, 2021). The reason is the lack of national authoritative organizations to guide information literacy education activities (Zhao, 2022). As mentioned above, American University and Research Libraries Association and American Library Association were established in the United States, National University Libraries Association (SCONUL) and British Library and Information Experts Association (CILIP) were established in Britain, and Australian University Libraries Association was established in Australia. Although China has established the Library Society of China, it has not played its due role in information literacy education and has not formed a unified cooperation mechanism to promote the coordination, cooperation and exchange among libraries of higher education institutions and other institutions.

### *Lack of Financial Support*

Funds are the basis of distributing educational resources. Adequate funds can ensure that the infrastructure is updated and upgraded and provide teachers and students with richer and more convenient learning resources and environment. For example, by investing in the construction of digital libraries and introducing advanced online learning systems, students' access to information can be expanded and learning efficiency can be improved (Jones-Jang et al., 2021).

In information literacy cooperative education, the adequacy of funds directly affects the distribution level of educational resources. For example, information equipment, electronic resources and network facilities in libraries, information technology centers and other places need a lot of capital investment. Lack of funds will lead to a lack of educational resources to meet students' growing information literacy needs.

Many scholars pointed out that libraries should actively seek cooperation to enhance their own strength, obtain more projects and financial support, and effectively promote the in-depth development of theoretical research in this field and the practical application of theoretical results (Shen, 2009; Fang, 2013). However, although the Chinese government and education departments have begun to attach importance to information literacy education, compared with foreign countries, the strength and coverage of policy support and project funding may not be extensive and in-depth.

### **Conclusion**

This study provides an overview of the research literature on cooperative teaching of information literacy in higher education and compares and analyzes the gaps in information literacy education between developed countries such as the United States, Britain and Australia and China. It is found that the challenges faced by China higher education institutions at present include lack of cooperation awareness, imperfect cooperation mechanism and lack of project support. In-depth analysis of the causes of these problems include collaborative teaching is not included in organizational strategic objectives, lack of authoritative organization support, and lack of financial support. This study helps information literacy educators to understand the factors that affect cooperative teaching, to better find solutions to problems and promote the development of information literacy education.

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