A Needs-based Analysis of Information Literacy Cultivation among Contemporary University English Teachers in China

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Article Info	ABSTRACT
	The current study intends to expose and analyze a needs-based analysis of information literacy cultivation in English language teaching among contemporary university English teachers in China. Twenty English teachers from a Chinese medical university took part in the current research and were asked to answer purposefully designed questionnaires. A follow-up interview was also conducted to collect further data regarding information literacy cultivation in the English language teaching practice based on a needs analysis. The current research results have shown a strong need for information literacy cultivation in English language teaching among contemporary university English teachers, as well as a severe lack of guidance for information literacy cultivation in the English language teaching practice. The research ultimately further suggests that university teaching stakeholders, including school leaders and relevant experts, should also guide university English teachers to meet the needs of selecting proper modes of information literacy cultivation in the English language teaching sensibly and facilitate them to fully develop their teaching styles and habits as possible as they can in their English language teaching practice.

1. INTRODUCTION

Revolutionary changes are taking place in all walks of life with the advent of the information age; in the meantime, the education industry has also ushered in an information transformation (Chen et al., 2017). Educators under traditional concepts can no longer meet the needs of educational development in the new era, and teachers in the context of the information age are facing enormous challenges. The transformation of teachers' roles is also in urgent need of development. As the leading force in cultivating students in the new era, the level of their information literacy is directly related to the cultivation of students' information literacy (Fu, 2022).

Nevertheless, for most Chinese university English teachers, when it comes to information literacy cultivation in their teaching processes, even though the role of information literacy cultivation becomes much more critical, there is a severe lack of proper information literacy cultivation accessible for utilization during the students' teaching processes (Hu & Zhang, 2013). In the particular times of COVID-19, whether there is a specific type of information

literacy cultivation of the student's own or whether there is a specific sort of information literacy cultivation suitable for them to utilize, the so-called information literacy cultivation has been playing a significant role for most Chinese university English teachers in their virtual teaching practice.

Based on what is mentioned, analyzing the needs of a group of people or what is embedded in an issue can help us, as researchers, see the manifestation of the corresponding problems more clearly. With the help of research on information literacy cultivation among contemporary university English teachers, there are different requirements for informatization ability in different professional fields (Sun, 2017). The factors promoting and hindering information literacy cultivation can be discussed in combination with the characteristics of each major to provide a reference for better improving the informatization ability of contemporary Chinese university teachers. İnformation literacy cultivation in English language teaching will also be essential for contemporary university English teachers in China or learners to conduct a two-way constructional teaching mode with the teaching environment and generate the corresponding teaching habits as a whole.

"Information literacy" is usually the comprehensive ability of individuals in the information age to identify their needs and obtain, evaluate, use, and manage information effectively (Zhao et al., 2019). Information literacy includes the technical ability to analyze and comprehensively apply information critically. It also requires individuals to have a particular ethical and legal awareness and be able to use information under the premise of complying with relevant laws, regulations, and ethical norms. In short, information literacy is the critical ability of individuals to independently and effectively solve problems and make decisions when faced with a large amount of information.

To a certain extent, information literacy of contemporary university teachers also refers to the awareness, ability, and responsibility of college teachers to make full use of information technology to obtain process, use, and manage and feedback information and resources in the process of education and teaching, to discover, analyze and solve educational and teaching problems, and optimize, innovate and transform educational and teaching activities.

Thus, for most so-called language teachers, information literacy cultivation has always been an indispensable means or tool when teaching something (Frankenberg-Garcia, 2015). Globally, information literacy is a comprehensively integrated ability to effectively identify, obtain, and use information, which includes identifying information needs, and individuals can clearly understand what information they need in their studies, work, or life (Zhou & Wen, 2020).

Initially, the first necessary characteristic of information literacy is identifying information needs and effectively obtaining information. In the information society, facing the complex information environment, individuals must first clarify their information needs and know what

problems to solve or what tasks to complete. This requires a keen sense of information needs. It is strongly needed to master effective information retrieval methods and tools and to find relevant information from various sources such as libraries, databases, and the Internet (Zhong & Fang, 2022). In this process, proficient use of technical means such as keyword search and database query to improve the efficiency and accuracy of information acquisition is an essential manifestation of information literacy.

The second characteristic of information literacy is critical thinking ability and the ability to evaluate and use information. After obtaining information, individuals must evaluate its quality, reliability, and relevance. This requires critical thinking ability, distinguishing the authenticity of information, the credibility of the source of information, and selecting the most suitable information according to task requirements (Zheng, 2016).

The third necessary characteristic of information literacy is to focus on information management and ethical and legal awareness. Effective information management is essential to information literacy (Xiao, 2020). Individuals must be able to organize and store information for subsequent search and reference systematically. This includes using appropriate tools and methods to classify, tag, and archive information.

In addition, information literacy also requires individuals to have good ethical and legal awareness and to be able to comply with relevant laws and regulations and ethical norms for the use of information, including respecting copyright and protecting privacy (Wang & Fu, 2018). In the information society, the legal and compliant use of information reflects personal responsibility and helps maintain the healthy development of the information ecology.

In the teaching process, cultivating information literacy among contemporary Chinese university English teachers requires identifying and obtaining information. This helps enrich classroom content and makes teaching more lively and exciting, meeting the learning needs of different students (Kirkpatrick, 2011). By improving information retrieval and screening capabilities, Chinese university English teachers can better prepare course materials and update teaching content promptly to keep up with the times in their English language teaching practice.

Teachers need to have critical thinking, evaluate the reliability and applicability of information, and make appropriate adjustments according to the actual situation of students (Frankenberg-Garcia, 2015). For example, when selecting reading materials, teachers should not only consider the language difficulty of the materials but also evaluate their cultural background and characteristics of the times to ensure the suitability and diversity of the content. In addition, teachers need to be good at using information technology, such as teaching software, online resources, and electronic libraries, to improve teaching effectiveness and the learning enthusiasm of Chinese university students.

Information management and ethical awareness are also important aspects of cultivating information literacy among contemporary Chinese university English teachers (Gao, 2019). Teachers need to systematically organize and store teaching materials and establish an efficient resource management system to facilitate easy search and use at any time. This helps cultivate students' correct information concepts and guarantees an excellent academic atmosphere. By comprehensively improving the information literacy of contemporary Chinese university English teachers, university English teachers can be more comfortable in teaching and improve the quality of education and the learning effects of those Chinese university students (Kirkpatrick, 2011).

Information literacy cultivation in English language teaching in the new era optimizes and upgrades the traditional adult self-study mode. It uses hybrid teaching, flipped courses, and other modes to scientifically separate time and space (Wang & Fu, 2018). This allows contemporary Chinese university English teachers in their English language teaching practice to self-learn during the teaching process, adjust their time according to their actual needs and teaching habits, and complete teaching tasks without being limited by the time limit of traditional education. From a long-term perspective, information literacy cultivation in English language teaching has trans-epochal significance for changing self-taught teaching needs and teaching habits.

Needs Analysis (NA) was once denoted by Onder-Ozdemir and Pun (2020) as follows:

> "...it is a technique and method for doing research on needs through introspection, interviews, observations, and questionnaires."(Onder-Ozdemir & Pun, 2020, p.82)

Needs analysis belongs to the category of empirical investigations and studies. The needs analysis done by people is to understand the needs of the target environment, the inner needs of the targets, and the needs of the targets' expected changes in the external environment to finally find out the problems in the investigations and studies, guiding the needs-based researches as well as improving the needs-based analyses.

The theoretical framework of target needs analysis, the technical means of needs analysis, and the research and development process of needs analysis can be generally divided into several periods. In total, there are four stages, including the budding period of research (from 1500 to 1920), the rising period of research (from 1920 to 1977), the development period of research (from 1977 to 2000), and the stable period of research (from 2000 till present).

Regarding the budding period of needs analysis research (from 1500 to 1920), Song (2015) has ever pointed out that at the beginning of the 16th century, under the influence of European political changes and economic development as well as the Renaissance (from 14th century to 16th century), the dominance of Latin was threatened and was gradually replaced by French, Italian, and English. Since then, based on that particular situation, language

education has generally risen and needs analysis research has entered the budding research period.

When it comes to the rising period of needs analysis (from 1920 to 1977), Hu and Zhang (2013) pointed out that in the 1920s, the concept of "Needs Analysis (NA)" was put forward for the first time, and the needs survey was conducted for the first time as well. Thus, the research on needs analysis was continuously improved through different kinds of survey results. The clarification of the concept of needs analysis marks the official opening of the curtain of needs analysis research.

Later on, in the development period of needs analysis (from 1977 to 2000), the theoretical framework and research methods of needs analysis have gone through more than 30 years from being proposed to being fully developed. This period also includes applying needs analysis research in different disciplines. In particular, during this period, research on English teaching needs analysis was the main focus (Chen et al., 2017). The research content was complicated, and the research results were relatively wealthy, called the development period.

In the early 1990s, many Chinese experts and scholars gradually improved their understanding of needs analysis and introduced them into various research fields (Qie, 2018; Song, 2015). Most Chinese research on needs analysis is empirical research, classified into social, cultural, and educational needs analysis research. Nevertheless, there are still few results of theoretical research on needs analysis. This is because most related research tends to be superficial and mainly focuses on the mere introduction of surface research.

Nowadays, the role and characteristics of needs analysis model research and needs analysis in China are mainly reflected in the development of society, the inheritance of culture, and the innovation of education. Contemporary sociologists study the social needs of different social people through different social phenomena to propose corresponding social needs frameworks and form theoretical results. Needs analysis in cultural inheritance mainly analyzes people's needs for an ever-developing culture (Onder-Ozdemir & Pun, 2020). Specifically, in the new century, what kind of culture do people need to enrich and improve them to adapt to the trend of social development?

This is because, in education innovation, research on needs analysis is mainly related to guiding education in today's China, especially in language education (Hu, 2003; Li, 2004). Research on needs analysis is mainly related to guiding education in today's China in educational management and innovation, especially in language education (Hu & Zhang, 2013).

2.   METHODS

2.1.   Purposes of the Research

The current research intends to expose and analyze a needs-based analysis of information literacy cultivation in English language teaching among contemporary university English teachers in China. Based on what has been introduced and analyzed in the literature review, this research tries to answer the general situation and the actual need for information literacy cultivation in English language teaching among contemporary university English teachers in China.

2.2.   Research Questions of the Study

Research question No. 1:

What is the general situation of information literacy cultivation in English language teaching of contemporary university English teachers in China?

Research question No. 2:

What is the actual level of need for information literacy cultivation in English language teaching among contemporary university English teachers in China?

2.3.   Participants of the Research

The current research has selected a group of Chinese university English teachers from different professional majors with different levels of information literacy cultivation in English language teaching and with different anthropological backgrounds of distance teaching habits from a medical university in China as the research participants. The total number of the research participants is twenty.

Specifically, the selected Chinese university English teachers come from the same university, but they have different information literacy cultivation in English language teaching experiences in terms of their teaching habits in the university. Their current teaching subjects are different, and the distance teaching environments they were exposed to were also different before they entered the university. Selecting these university English teachers based on such criteria is more conducive to the research regarding the reliability and validity of this research topic.

2.4.   Locale of the Research

As mentioned earlier, the researcher has chosen a medical university from Yunnan Province, China, as the research locale. The research participants were requested to participate in the same research site from the beginning to the end. This is also aimed at providing a more convenient and objective environment for data research and analysis in the later stages of the research phases.

2.5. Research Tools

2.5.1. Questionnaires

The quantitative research instrument, questionnaires, helps to facilitate the research outcome. Questionnaires can also be regarded as a research method. In the questionnaires of this research, the quantitative research mainly aims to understand the need for information literacy cultivation in English language teaching among contemporary university English teachers in China. The research purposefully uses EXCEL 2010, ICTCLAS. 2014, and the statistical software SPSS 23.0, as well as other related tools, to further analyze and explain the results of the questionnaires.

2.5.2. Interviews

Interviews are also employed to help carry out the current research. In the current research, interviews mainly aim to understand the need for information literacy cultivation in English language teaching among contemporary university English teachers in China through what they have provided during the interview processes. The data obtained from the interviews will be coded and decoded through the qualitative statistical software of ATLAS. ti 9.0 and some categorization tools to further analyze and interpret the data drawn from the interviews.

3.   RESULTS AND DISCUSSION

3.1. What is the general situation of information literacy cultivation in English language teaching of contemporary university English teachers in China?

With the help of the questionnaires in the current research, the following are the most original and authentic results after putting all the relevant data in the current research into the quantitative statistical software of SPSS 23.0.

Based on the data in Table 1, it is clear that more than 80.0% of the research participants recognize the importance of information literacy cultivation in their English language teaching experiences. Among them, while five research participants think it is essential, 55.0% think it is crucial. It is also shown that only 10% think it is unimportant or does not matter.

Table 1 The General Situation of Contemporary University English Teachers in China's Understanding of the Importance of Information Literacy Cultivation in English Language Teaching

VALID	FREQUENCY	PERCENTAGE	RATIO	ACCU. RATIO
STRONGLY NOT IMPORTANT	0	0	0	0
NOT IMPORTANT	2	10.0	10.0	10.0
NO TO MATTER	2	10.0	10.0	20.0
IMPORTANT	11	55.0	55.0	75.0
STRONGLY IMPORTANT	5	25.0	25.0	100.0
TOTAL	20	100.0	100.0	

The high level of recognition of the importance of information literacy cultivation among contemporary university English teachers in their English language teaching experiences is confirmed by Hu and Zhang (2013) in their research on information literacy cultivation in English language teaching and language teaching habits among Chinese university English teachers. Thus, it further indicates that information literacy includes the technical ability to critically find, analyze, and comprehensively apply information. According to Zhao, Li, Shu, and Huang (2019), individuals must also have a particular ethical and legal awareness and be able to use information to comply with relevant laws, regulations, and ethical norms.

Table 2 The General Situation of the Style of Information Literacy Cultivation Utilization in English Language Teaching by Contemporary University English Teachers in China

VALID	FREQUENCY	PERCENTAGE	VALID RATIO	ACCU. RATIO
NONE	2	10.0	10.0	10.0
ONE	6	30.0	30.0	40.0
TWO OR MORE	12	60.0	60.0	100.0
TOTAL	20	100.0	100.0	

According to Table 2, it is evident that although more than 80.0% (based on Table 4.1) of the research participants believe that information literacy cultivation in English language teaching is essential, the style of application of information literacy cultivation in English language teaching is not satisfactory, with a surprising 10.0% of the research participants who even do not own at least one type of the application of information literacy cultivation in English language teaching. It is also shown that 60.0% of the research participants have more than two types of utilization of information literacy cultivation in English language teaching. In comparison, 30.0% of the research participants have just one mode of experience of information literacy cultivation in English language teaching.

This general situation of the application of information literacy cultivation in English language teaching among contemporary university English teachers in China can be recognized by Ge (2023) as well as Hu and Zhang (2013), who have ever found that the general type of utilization of information literacy cultivation in English language teaching among Chinese university English teachers is not satisfactory enough to meet the needs of the Chinese university English teachers themselves. This has further implied that globally, information literacy is a comprehensively integrated ability to effectively identify, obtain, and use information, which includes the ability to identify information needs, and individuals can clearly understand as well what information they need in their studies, work, or life (Zhou & Wen, 2020).

Table 3 The General Situation of Frequency of Information Literacy Cultivation in English Language Teaching of Contemporary University English Teachers in China

VALID	FREQUENCY	PERCENTAGE	VALID RATIO	ACCU. RATIO
NEVER	10	50.0	50.0	50.0
SELDOM	6	30.0	30.0	80.0
SOMETIMES	3	15.0	15.0	95.0
ALWAYS	1	5.0	5.0	100.0
TOTAL	20	100.0	100.0	

As to Table 3, it is clearly shown that the results are not optimistic for the frequency of information literacy cultivation in English language teaching among the research participants. Although 90.0% (based on Table 4.2) of the research participants have at least one or more types of information literacy cultivation in English language teaching, in sharp contrast, 80.0% of them do not apply information literacy cultivation in their English language teaching. Nearly 50.0% of them never utilize any information literacy cultivation in English language teaching in their teaching experiences.

The types of information literacy cultivation in English language teaching contemporary university English teachers in China choose to apply the actual needs of information literacy cultivation in English language teaching imply and have also confirmed with Sun's (2017) research on the information revolution as well as Su and Wang's (2022) early study on the specific application of information literacy cultivation in English language teaching among advanced university English language teachers. Thus, information management is essential to information literacy (Xiao, 2020). As an individual, one needs to be able to organize and store information for subsequent search and reference systematically. This includes using appropriate tools and methods to classify, tag, and archive information.

3.2. What is the actual level of need for information literacy cultivation in English language teaching among contemporary university English teachers in China?

3.2.1. Quantitative Data Analysis

The results of the current research questionnaires have once again provided robust quantitative research data to demonstrate the need for information literacy cultivation in English language teaching among contemporary university English teachers in China. The most primitive and accurate quantitative results were obtained from two statistical software, ICTCLAS and ICTCLAS. 2014 and SPSS 23.0.

Table 4 shows that most research participants (90.0%) can deal with new knowledge effectively. 25.0% of the research participants skip the new knowledge when encountering it and wait until they finish the whole article in their distance teaching. At the same time, 25.0% of the research participants chose to guess the meaning of the new knowledge based on the context and then check the meaning of it after finishing teaching the entire text.

Table 4 How Contemporary University English Teachers in China Deal with New Knowledge in the Actual Needs of Information Literacy Cultivation in English Language Teaching

VALID	FREQUENCY	PERCENTAGE	VALID RATIO	ACCU. RATIO
SKIP NEW WORDS	5	25.0	25.0	25.0
GUESS NEW WORDS	5	25.0	25.0	50.0
ADOPT RELATIVE STRATEGIES	8	40.0	40.0	90.0
HAVE NO IDEAS	2	10.0	10.0	100.0
TOTAL	20	100.0	100.0	

The results of the questionnaires also show that 50.0% of the research participants adopt the strategy of seeking help during their distance teaching since they want to understand the teaching materials fully. This has actually implied and reflected that the actual level of need of information literacy cultivation in English language teaching among contemporary university English teachers in China is pretty high, which has been identified with Hu and Zhang's (2013) research on the effect of teaching habits in distance teaching as well as information literacy cultivation in English language teaching. Such results have further indicated that information literacy cultivation in English language teaching in the new era does really optimize and upgrade the traditional adult self-study mode, and uses hybrid teaching, flipped courses, and other modes to scientifically separate time and space (Wang & Fu, 2018).

Table 5 What Purposes Contemporary University English Teachers in China Utilize Information Literacy Cultivation in English Language Teaching in the Actual Needs of the New Knowledge

VALID	FREQUENCY	PERCENTAGE	VALID RATIO	ACCU. RATIO
TO KNOW THE PRAGMATIC MEANING	6	30.0	30.0	30.0
TO KNOW THE CULTURAL MEANING	6	30.0	30.0	60.0
TO KNOW THE BASIC MEANING	2	10.0	10.0	70.0
IT DEPENDS	6	30.0	30.0	100.0
TOTAL	20	100.0	100.0	

Table 5 shows that 70.0% of the research participants would instead choose to cultivate information literacy in English language teaching for help when encountering unfamiliar or new knowledge. Specifically, 30.0% of the research participants seek help from information literacy cultivation in English language teaching when they want to know the pragmatic or cultural information of the new knowledge. Meanwhile, 10.0% of the research participants chose to apply information literacy cultivation in English language teaching just when they wanted to know the basic meaning of the new knowledge.

Based on this point, the results of Table 5 have significant implications for the development of information literacy cultivation in English language teaching. Just as Lew and de Schryver (2014) suggest, the compilation of information literacy cultivation in English language teaching literature should therefore focus on the query function of what purposes contemporary university English teachers in China apply information literacy cultivation in English language teaching in the actual needs of the new knowledge (Tong, 2022; Wang & Fu, 2018), to fully reflect and exclaim the professional characteristics as well as the excellence of contemporary information literacy cultivation in English language teaching in the new century. Thus, it profoundly implies that teachers need to have critical thinking skills, evaluate the reliability and applicability of the information, and make appropriate adjustments according to the actual situation of students (Frankenberg-Garcia, 2015). According to Gao (2019), when selecting reading materials, teachers should not only consider the language difficulty of the materials but also evaluate their cultural background and characteristics of the times to ensure the suitability and diversity of the content.

3.2.2. Qualitative Data Interpretation

Below are the most primitive and actual qualitative results obtained from the qualitative statistical software of ATLAS. ti 9.0 and some other categorization tools after putting the relevant data from the interviews into them.

One participant from the current research said in an interview in this way,

"Although I want to seek help from information literacy cultivation in English language teaching to improve my instant teaching ability, helplessly, I cannot even find a true and meaningful mode of information literacy cultivation in English language teaching."

Another participant from the current research had also mentioned in an interview that,

"...different from ordinary information literacy cultivation in English language teaching, I think many information literacy cultivation modes provided by many English language teaching stakeholders generally contain professional knowledge, which is relatively uncommon, and their particular explanations towards information literacy cultivation in English language teaching will inevitably involve their understanding philosophies. Therefore, this will significantly increase the difficulty of teaching independently."

Besides, many other interview research participants expressed their urgent need for information literacy cultivation in English language teaching. In that case, based on the situations described and the problems exposed from the interviews in the current research, it is evident that this has uncovered such a fact that, specifically, in the process of actual teaching, the majority of contemporary university English teachers in China' actual level of needs for it is relatively high.

What has to be noted is that, based on the situations described and results gained from the interviews, most information literacy cultivation learners in English language teaching had

expressed the most substantial level of need for the specific meanings of the new knowledge in the information literacy cultivation in English language teaching. Although many with information literacy cultivation experiences in English language teaching had said they could deal with the new knowledge in their information literacy cultivation English language teaching process, they had not cultivated the habit of more profound teaching (Onder-Ozdemir & Pun, 2020). It is therefore strongly suggested that the higher the need for information literacy cultivation in English language teaching is, the more emergent and significant it is for the problems to be handled.

3.3. Limitations

The current research has provided a detailed analytical interpretation of the findings regarding a needs-based analysis of information literacy cultivation in English language teaching among contemporary university English teachers in China. However, it does have two limitations. On the one hand, the number of research participants is not large enough; the amount of information literacy cultivation in English language teaching accesses among the research participants is also tiny. On the other hand, some of the results and findings depend on questionnaires and interviews, which is far from the most realistic situation.

4. CONCLUSION

In the current research, a complete understanding of information literacy cultivation in English language teaching to teaching habits cultivation goes to how, in the field of university education, information literacy cultivation in English language teaching among contemporary university English teachers in China promotes and improves the teaching efficiency of university teachers as well as the teaching habits of university English teachers or learners. Based on this educational methodology among information literacy cultivation in English language teaching teachers in Chinese universities, university English teachers' teaching habits would have been excellent in the utilization of multi-modal resources for Chinese university teachers in China. In future studies, the focus will be on conceptual understanding and knowledge mastery, attaching great importance to university English teachers' critical thinking habits and analytical application skills. At the same time, they are on the way to forming a particular teaching habit that suits them to a great extent. Reciprocally, this is true when fully understanding the needs-based analysis of information literacy cultivation in English language teaching among contemporary university English teachers in China and the cultivation of teaching habits.

5.   ACKNOWLEDGEMENTS

6.   REFERENCES

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