

Enhancement of College English Teachers' Information Literacy in Information Environment

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Abstract

The 21st century is an era of knowledge and information. Modern science and technology based on information technology has inspired profound changes in the world, including college education. Information literacy is an intrinsic element that often plays an important role in teaching and school management. In the information age, how to improve college teachers' information literacy has become a major issue in the development of college education. This paper focuses on the study of college English teachers' information literacy. It first studies the basic connotation of information literacy of college teachers which covers information awareness, information knowledge, and information ability. Then this paper takes college English teachers in North China Electric Power University as the research object, and adopts questionnaire survey and literature research to analyze the current situation of the information literacy of college English teachers. Based on the analysis of the basic connotation of teachers' information literacy, and the current situation of college English teachers' information literacy, this paper puts forward three strategies for improving college English teachers' information literacy: enhancing college English teachers' self-development consciousness, making use of group dynamics, and perfecting modern information technology training system.

Keywords: college English teachers, connotation, current situation, information literacy, strategy

1. Introduction

The 21st century is an era of knowledge and information. Modern science and technology based on information technology has inspired profound changes in the world, including college education. In order to meet the development requirements of the information society, it is an urgent and important task to use information to drive the modernization of education, promote the leapfrog development of teacher education and actively promote the construction of teacher education information (Ministry of education, 2002). Teachers who play an important role in educational activities will inevitably receive a huge impact from information technology. The improvement of teachers' information literacy not only directly affects the whole process of education informatization, but also is an inevitable requirement to conform to the development of information society and the trend of curriculum reform and promote quality education. The same is true for college English teachers. The application of modern information technology in college English teaching not only makes teaching methods modernized, diversified and convenient, but also promotes changes in teaching concepts, teaching contents and teaching methods. *The College English Teaching Guide in China* has emphasized the importance of information technology many times. In terms of curriculum setting based on teaching objectives, the Guide points out that colleges and universities should incorporate online courses into the curriculum setting, attach importance to online course construction, and put relevant courses on the online teaching platform so that classroom teaching and online learning can be seamlessly connected and integrated. In the form of college students' English proficiency test, a college English test bank should be built and computer and network-based tests should be promoted. From the perspectives of college English teachers' information literacy, this paper makes a series of questionnaires. Survey results show that although teachers have strong information awareness and information needs, they do not have a clear understanding of the connotation of information literacy, and their requirements for the level of information literacy are low, and their ability to obtain and use information needs to be improved. Therefore, college English teachers should keep pace with the times, keep up with the development of new technology, continuously improve their awareness, knowledge and ability of using information technology, and integrate and reasonably apply information technology to the specific classroom teaching design and

implementation.

“Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning” (The Association of College and Research Libraries, 2000). In 1898, the Presidential Committee on Information Literacy defined information literacy as a set of skills, which require an individual to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information (American Library Association, 1898)”. Zurkowski (1974), the president of the American Information Industry Association put forward the term “Information Literacy”: Techniques and skills for solving problems by using a large number of information tools and sources. He created a new way of understanding the concept of information literacy and the requirements of the emerging information age. Doyle (1992) defined it as the ability to access, evaluate and use information from a variety of sources in the National Forum of Information Literacy. In January of 2000, the Information Literacy Competency Standards for Higher Education were approved and in February of 2004, the American Association for Higher Education and the Council of Independent Colleges endorsed them. The Standards dictate that an information literate person determines the nature and extent of information needed, accesses the needed information effectively and efficiently, evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system, uses information effectively to accomplish a specific purpose, understands many of the economic, legal, and social issues surrounding the use of information, and accesses and uses information ethically and legally (The Association of College and Research Libraries, 2000).

Based on the above concepts, combined with the particularity of college English teaching, the information literacy of college English teachers can be shown as information awareness, information knowledge, and information ability.

English teachers’ information awareness refers to teachers’ inherent demand for various educational and teaching information and their sensitivity to teaching information, especially information related to English teaching (Tan, 2008). Teachers could consciously combine all kinds of information obtained with teaching. English teachers’ information knowledge means that teachers should have general educational information theory and understand the basic knowledge of informatics, such as the main sources of information, basic characteristics and whether the information is valuable or not (Peng & Zhang, 2013). Teachers should also be familiar with multimedia teaching systems, understand electronic information resources related to teaching, master information retrieval knowledge and methods, and have certain information security knowledge. English teachers’ information ability refers to their ability to judge, collect, analyze, summarize, process, generate and disseminate information. English teachers’ information ability is an important factor in teachers’ information literacy structure. As the receiver and transmitter of information, teachers’ information ability is directly related to the effect of college English teaching (Li, 2019).

2. Discussion

This paper conducts a sample survey of 44 English teachers in North China Electricity Powder University (Hereinafter referred to as NCEPU) through a series of questionnaires. The results of this survey show that English teachers in NCEPU have a certain awareness of information, but their information knowledge and ability are not sufficient. Teachers’ application of teaching equipment, such as computer, internet, and multimedia fell into medium level.

2.1 College English Teachers’ Information Awareness

From the following table, it can be seen that those who agree with question 1 account for 75% of the total number of people surveyed. Those who agree with question 3 account for 81.2% of the total number of people surveyed. 95.45% teachers will choose appropriate teaching software and network resources to assist and improve teaching. The teachers who are very happy to learn and use the new teaching software, teaching platform or teaching system provided by the school (e.g. some APP such as ketangpai, or intelligent correction, Ucampus etc.) and the teachers who often encourage or organize students to use online materials to study and live make up 72.73% of the total number of people surveyed respectively. These data show that in information era, college English teachers’ information awareness have developed. They could keep pace with the times on educational concept, deeply know the importance of the information technology in English teaching, fully agree with the new technology and information education mode used in classroom teaching, and are conscious about that information literacy plays a critical role in teachers’ teaching improvement and professional development.

However, the survey also suggests that there exist problems. For example, when asked in the face of numerous

and complicated mass information, whether you will feel at a loss and do not know how to choose the valuable information, the teachers whose answers are “yes” make up 68.18% which means the teachers lack sensitivity to teaching information.

Based on the above analysis, college English teachers have acquired certain information awareness, but they still need developing.

Table 1. Survey on information awareness of college English teachers

Questions	Choice (%)
1. Information literacy is the core of lifelong learning. It enables people to effectively acquire, evaluate, apply and create information, thus realizing their personal, social, professional or educational goals.	A. definitely disagree (0) B. partly agree (15.91) C. definitely agree (79.55) D. don't know (4.55)
2. To obtain more effective and valuable information conveniently, it is a basic requirement to understand the principles of information technology (such as computer principles, network principles, etc.).	A. definitely disagree (2.27) B. partly agree (20.45) C. definitely agree (75) D. don't know (2.27)
3. In today's society, information is within reach, which provides excellent opportunities for teachers' teaching improvement and professional development.	A. definitely disagree (0) B. partly agree (13.64) C. definitely agree (81.82) D. don't know (4.55)
4. In the information society, a large number of information and information technologies provide a better teaching environment and technical support for English teaching.	A. definitely disagree (0) B. partly agree (15.91) C. definitely agree (81.82) D. don't know (2.27)
5. Information-based teaching is impacting and affecting the traditional teaching theory, teaching mode and learning mode, bringing new requirements and challenges.	A. definitely disagree (2.27) B. partly agree (20.45) C. definitely agree (75) D. don't know (2.27)
6. In the information society, information literacy is the basic literacy of teachers.	A. definitely disagree (0) B. partly agree (13.64) C. definitely agree (86.36) D. don't know (0)
7. Teachers have good information literacy, which is the need to cultivate high-quality, compound and innovative talents.	A. definitely disagree (0) B. partly agree (4.55) C. definitely agree (95.45) D. don't know (0)
8. In teaching, English teachers must make full use of information technology to obtain effective information, which can not only better serve their own teaching, but also help teachers' professional development.	A. definitely disagree (0) B. partly agree (6.82) C. definitely agree (93.18) D. don't know (0)
9. Teachers should choose appropriate teaching software and network resources to assist and improve teaching.	A. definitely disagree (0) B. partly agree (4.55) C. definitely agree (95.45) D. don't know (0)
10. In the face of numerous and complicated mass information, I sometimes feel at a loss and do not know how to choose the valuable information I want.	A. definitely disagree (4.55) B. partly agree (27.27) C. definitely agree (68.18) D. don't know (0)
11. I am very happy to learn and use the new teaching software, teaching platform or teaching system provided by the school (e.g. ketangpai, or intelligent correction, Ucampus etc.).	A. definitely disagree (2.27) B. partly agree (25) C. definitely agree (72.73) D. don't know (0)

12. I often encourage or organize students to use online materials to study and live.	A. definitely disagree (4.55)
	B. partly agree (20.45)
	C. definitely agree (72.73)
	D. don't know (2.27)

2.2 College English Teachers' Information Knowledge

This survey focuses on teachers' knowledge of information sources and information tools. Teachers should be familiar with multimedia teaching systems, understand electronic information resources related to teaching, master information retrieval knowledge and methods, and have certain information security knowledge. However, from Table 2, it can be seen that the information knowledge of college English teachers is completely insufficient. Teacher's knowledge of information is limited to some superficial knowledge. Besides the application of some teaching platform and daily electronic equipment, teachers lack knowledge of information sources and information tools. 68.18% teachers are not proficient in using computer word processing (office software), spreadsheet (excel), presentation (PPT) and other software. 34.09% teachers have little knowledge about web design and production, and network maintaining, and 54.55 teachers even have no knowledge about that at all. Therefore, teachers' information knowledge needs strengthening.

Table 2. Survey on information knowledge of college English teachers

Questions	Choice (%)
1. I am proficient in using computer word processing (office software), spreadsheet (excel), presentation (PPT) and other software.	A. definitely disagree (2.27)
	B. partly agree (68.18)
	C. definitely agree (27.27)
	D. don't know (2.27)
2. I am familiar with web design and production, and know how to maintain the network.	A. definitely disagree (54.55)
	B. partly agree (34.09)
	C. definitely agree (0)
	D. don't know (11.36)
3. I will pay attention to computer network viruses and set up firewalls to protect my computer and network security.	A. definitely disagree (20.45)
	B. partly agree (38.64)
	C. definitely agree (31.82)
	D. don't know (9.09)
4. I know how to protect important information in computers, such as encryption, watermarking, hiding, etc.	A. definitely disagree (40.91)
	B. partly agree (36.36)
	C. definitely agree (6.82)
	D. don't know (15.91)
5. I have some knowledge of computer hardware and know how to maintain the system.	A. definitely disagree (38.64)
	B. partly agree (36.36)
	C. definitely agree (11.36)
	D. don't know (13.64)
6. I can use the school's teaching platform (e.g. class hall school, etc.) to release information to students, assign homework, set up a test bank, organize tests and evaluations, etc.	A. definitely disagree (2.27)
	B. partly agree (34.09)
	C. definitely agree (56.82)
	D. don't know (6.82)
7. I am familiar with the operation of some daily electronic equipment, such as cameras, cameras, televisions and computers.	A. definitely disagree (4.55)
	B. partly agree (27.27)
	C. definitely agree (68.18)
	D. don't know (0)

2.3 College English Teachers' Informationability

Table 3 shows that college English teachers can basically master some information technology tools, such as ppt and the teaching platform provided by the school. They could combine the technology with multimedia teaching equipment and apply it to assisting daily work. However, teachers are still quite weak in the development of online courses, web page production and massive open online course production, and there are also great

deficiencies in information retrieval technology, information development and sharing.

Table 3. Survey on information ability of college English teachers

Questions	Choice (%)
1. When doing scientific research, I can skillfully use some professional databases (e.g. Wanfang, VIP, Du Xiu, ERIC, science direction, etc.) to search for needed information for scientific research activities.	A. definitely disagree (13.64) B. partly agree (56.82) C. definitely agree (20.45) D. don't know (9.09)
2. I can skillfully use information retrieval technology (e.g. advanced search) to find suitable information.	A. definitely disagree (13.64) B. partly agree (52.27) C. definitely agree (27.27) D. don't know (6.82)
3. I can skillfully use search tools (e.g. web browser, search engine, online library catalog, etc.) to find the information I need.	A. definitely disagree (9.09) B. partly agree (34.09) C. definitely agree (50) D. don't know (6.82)
4. I will sort out the acquired information according to a certain classification so as to organize my information base in an orderly way.	A. definitely disagree (20.45) B. partly agree (45.45) C. definitely agree (25) D. don't know (9.09)
5. I can use some software (such as Photoshop, Adobe Premiere, etc.) to process images, audio and video.	A. definitely disagree (29.55) B. partly agree (54.55) C. definitely agree (11.36) D. don't know (4.55)
6. I will publish the useful information I found on the internet, such as Baidu library and bean net, to share with others.	A. definitely disagree (40.91) B. partly agree (36.36) C. definitely agree (13.64) D. don't know (9.09)
7. I will use network platforms (such as QQ, MSN, WeChat, Feixin, Blog, etc.) to chat, exchange and share information with friends, peers and some like-minded people.	A. definitely disagree (6.82) B. partly agree (15.91) C. definitely agree (72.73) D. don't know (4.55)
8. I often use multimedia and network to carry out teaching practice and scientific research activities (e.g. lesson preparation, teaching, homework, communication between teachers and students, etc.)	A. definitely disagree (2.27) B. partly agree (20.45) C. definitely agree (75) D. don't know (2.27)
9. Although I can't often help students solve problems face to face due to practical and space inconvenience, I often use the Internet, telephone and other communication with students to solve their learning problems.	A. definitely disagree (2.27) B. partly agree (18.18) C. definitely agree (77.27) D. don't know (2.27)

Table 4 demonstrates that most of college English teachers regard insufficient personal information technology capabilities (86.36%) and lack of relevant training(84.09%)as an obstacle for them to integrate information technology into teaching. 52.27% teachers have not attended information technology training before joining the job, and 61.36% teachers seldom attend information technology training after being a college English teacher.

Table 4. Survey on the training of college English teachers

Questions	Choice (%)
1. What is the difficulty in integrating information technology into teaching? (multiple choice)	A. Insufficient personal information technology capabilities (86.36) B. Heavy teaching task (75) C. Backward school computer, network, information platform software and hardware (52.27) D. Lack of relevant training (84.09) E. other factors (6.82)
2. Have you attended information technology training before joining the job?	A. often (0) B. seldom (40.91) C. unclear (6.82) D. no (52.27)
3. Have you attended information technology training after joining the job?	A. often (6.82) B. seldom (61.36) C. unclear (2.27) D. no (29.55)
4. Has your school organized relevant information technology training (e.g. on network security, how to use teachers' teaching platform, etc.) or provided corresponding help?	A. often (6.82) B. seldom (68.18) C. unclear (20.45) D. no (4.55)
5. Do you think the school should give teachers information technology training frequently	A. very necessary (31.82) B. necessary (59.09) C. don't care (4.55) D. unnecessary (4.55)
6. If you think it is necessary for the school to strengthen teachers' information technology training, what kind of training do you want? (multiple choice)	A. Use of Office Software (65.91) B. information retrieval (86.36) C. MOOC production (79.55) D. network security (63.64) E. others (6.82)

3. Conclusion

The survey shows that college English teachers have great deficiencies in information knowledge, especially in information ability. While information technology ability is the core accomplishment of high-quality teachers in the new era and an important part of college English teachers' professional development. Information literacy of college English teachers needs to be improved urgently. Based on above analysis, this paper puts forward the following strategies to improve teachers' information literacy:

3.1 Enhancing College English Teachers' Self-Development Consciousness

College English teachers should take the initiative to learn information technology and face the foreign language teaching reform in the information age with an open, inclusive and positive attitude. To better to apply information education to college English teaching, the first thing to do is develop college English teachers' self-development consciousness. Only by doing so can teachers initiatively learn and reflect when facing the changes and challenges of the external environment. Schools should also give certain policies and material support in the application of information-based teaching to create a good working environment for teachers, so that teachers can actively participate in the reform of information-based teaching.

3.2 Making Use of Group Dynamics

The strength of the group is greater than that of the individual, and the group and the individual interact and depend on each other. It is an effective method to drive the individual to change through the strength of the group. The mutual communication and cooperation in information between teachers, teachers and technicians, teachers and students will provide the greatest group motivation and guarantee for the promotion of teachers' information literacy. As far as students are concerned, students have strong practical ability and are relatively easy to accept new things. Teachers can let students participate in the discussion on how to integrate information technology into the classroom, and can also let them join the development and utilization of some courseware

and online courses, so as to achieve the goal of teaching mutually beneficial.

3.3 Perfecting Modern Information Technology Training System

In order to better realize the goal of college English classroom reform in information-based era, improving the training of modern educational science and technology should be set priority so as to boost the teachers' ability of integrating information technology into English classroom.

Today is an era of developed information technology. Rich information resources provide good conditions for the development of English teachers. College English teachers should fully realize their shortcomings, strive to improve their information literacy and better adapt to the changes in teaching environment, thus promoting the development of college English education.

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Note.

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