

A STUDY OF STRATEGIES FOR IMPROVING INFORMATION LITERACY OF UNIVERSITY TEACHERS

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Keywords: university teachers; information literacy; information technology; literacy enhancement.

Abstract. This paper analyses the current situation of university teachers' information literacy, and proposes specific strategies to improve information literacy from the aspects of improving the assessment and reward mechanism, continuously enhancing teachers' learning enthusiasm, strengthening the training and learning of new technologies and knowledge, focusing on expanding information knowledge, strengthening the implementation of teaching innovation of technology integration, and improving the skills of information application, so as to effectively promote the overall enhancement of university teachers' information literacy.

АНАЛИЗ СТРАТЕГИЙ ПОВЫШЕНИЯ ИНФОРМАЦИОННОЙ ГРАМОТНОСТИ ПРЕПОДАВАТЕЛЕЙ УНИВЕРСИТЕТА

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Ключевые слова: преподаватели вузов; информационная грамотность; информационные технологии; повышение грамотности.

Аннотация. В статье анализируется состояние сформированности информационной грамотности у преподавателей вузов и предлагаются конкретные стратегии ее повышения с точки зрения совершенствования механизма оценки и мотивации, постоянного повышения квалификации преподавателей, усиления подготовки и изучения новых технологий и знаний. Уделяется внимание расширению их информационных знаний, внедрению инноваций в области интеграции технологий и совершенствованию навыков применения информации.

The concept of information literacy was first proposed in 1974 by Paul Zekowski, President of the American Society for Information Industry (ASII), who believed that information literacy is a person's ability, including technical, cognitive and affective, which helps people to acquire, evaluate,

utilize and understand information effectively. Subsequently, many scholars have redefined information literacy on this basis. These definitions are relatively similar in that they all agree that: first, information literacy is expressed by a set of complex, integrated skills, which specifically include the ability to perceive, retrieve, analyse, use and create information; second, information literacy is not innate, but can be enhanced through education and training, thus helping individuals to become lifelong learners; and lastly, information literacy is ultimately directed towards real-world problem solving. *Information literacy* is a person's ability, including technical, cognitive and affective dimensions, which helps people to effectively acquire, evaluate, utilize and understand information.

For the division of the structural dimensions of information literacy, this paper follows the viewpoints of some Chinese scholars that the information literacy of university teachers is divided into four dimensions: information awareness, information knowledge, information competence and information ethics. Among them, information awareness refers to university teachers' sensitivity to information, which is reflected in their conscious awareness of the value of information as well as their keen judgement and analysis. For example, information awareness can reflect whether teachers' thinking logic is clear and reasonable; information knowledge can reflect whether teachers' mastery of information theory is complete and comprehensive, solid and sufficient; information ability can reflect the strength of teachers' ability to apply information to solve practical problems; and information morality can reflect the teachers' legal awareness and moral standard in the process of using information.

In this paper, university teachers in Jiangsu, Sichuan, Chongqing and Shandong were selected as the study population. When online electronic questionnaires were distributed in the four universities, the academic qualifications, titles and types of courses held by the university teachers were sampled to ensure the representativeness of the samples. A total of 50 questionnaires were distributed in the formal survey, and 45 were returned, with a recovery rate of 90%; 41 valid questionnaires were finally obtained after screening, with an effective rate of 91%. Among the valid samples, there were 5 PhDs (12.2%), 14 Master's degree holders (34.15%), and 22 Bachelor's degree holders (53.66%), making a total of 41 people.

For the measurement of university teachers' information literacy and its dimensions, this paper borrows the information literacy measurement scale of university teachers by scholar He Yonghuan. There are 27 questions in the scale, among which, information awareness includes 4 questions such as

“What do you think is the role of the Internet in university teaching activities”; information knowledge includes 4 questions such as “How much do you know about common teaching software such as Word documents, WPS, Excel tables and PPT”; information competence includes 4 questions such as “How quickly can you access teaching software? Information knowledge includes 4 questions such as “How well do you know Word documents, WPS, Excel tables, PPT and other common teaching software”; information ability includes 4 questions such as “How well can you obtain teaching information and use it flexibly”; and information ethics includes 4 questions such as “How well can you consciously abide by the code of ethics of the network”. The Cronbach’s α of information literacy is 0.86, indicating that information literacy has good internal consistency. In this paper, SPSS 27.0 was used to conduct descriptive statistical analysis and ANOVA on information literacy [1-4]. The information literacy level of Chinese university teachers is related to many factors, among which personal status is an important factor. Therefore, this study provides preliminary statistics and analyses of the current situation of Chinese university teachers and explores the correlation between information literacy through this study.

According to the research, there are 68.29% male university teachers in total, accounting for 68.29%, which is twice as much as that of female teachers; from the point of view of age, more than 60% of university teachers are under 30 years old, which can be seen that there is an obvious trend of the corresponding youthfulness of the university teachers, and that such a body of university teachers are stronger in accepting new things, and their teaching concepts and ideas are more likely to be transformed, which offers some natural advantageous conditions for the teachers in Chinese universities. This eases some obstacles and provides some natural advantages for Chinese university teachers to cultivate information literacy. This is also supported by the age of university teachers, which is less than five years for most of them.

Through this survey, it can be seen that the title of Chinese university teachers are mostly assistant professors, accounting for 60.98%, higher than 50%, the title of Chinese university teachers in general is relatively low, which may be related to the age of teaching, most of the university teachers serve for a shorter period of time, and temporarily unable to reach a higher title promotion, but also for the corresponding scientific research paper publication is relatively weak, which leads to the title selection results of the university teacher teaching. The results are not as good as those of other academic departments. In terms of academic qualifications, the highest qualifications of most university teachers are undergraduate and post-

graduate, with a total of 36 teachers, accounting for 87.81%, which shows that the proportion of teachers with postgraduate qualifications or above among Chinese university teachers is not bad.

Strategies for improving information literacy of university teachers include the following.

1) Improve the assessment and reward mechanism to continuously enhance teachers' learning motivation. The continuous learning of new technologies and knowledge requires university teachers to invest a lot of time and energy, therefore, in order to continuously enhance the motivation of university teachers to learn new technologies and knowledge and thus improve their information literacy level, it is necessary to improve the assessment and reward mechanism. It should be made clear that active participation in information technology training and the rewards (in terms of hours) that will be gained by passing the training will be given priority support in the selection of courses, teaching reform projects, and the declaration of curriculum construction, and that priority will be given to university teachers who have integrated new technologies into the teaching of their courses in the appraisal of their professional titles, so as to enhance the external driving force for their continuous learning.

2) Strengthening training and learning of new technologies and knowledge, and actively expanding their information knowledge. University teachers should continue to pay attention to the latest development of computer technology, network technology and information technology at home and abroad, and strengthen the acquisition of knowledge and training and learning of technologies such as artificial intelligence, big data and block-chain. On the basis of this knowledge, they should study how to deeply integrate these technologies with the teaching of the subjects they teach to carry out pedagogical reforms and effectively expand their information knowledge. In this regard, university teachers can either apply to participate in information technology training organized by their schools, local education departments and their relevant authorities, or independently participate in the professional courses of their universities in computer science, information management or big data applications, etc., in order to improve their information knowledge according to their actual situation and shortcomings.

3) Strengthening the implementation of technology-integrated pedagogical innovations to enhance information application skills University teachers cannot significantly enhance their information application skills if their information knowledge cannot be transformed into pedagogical innovations. Therefore, in order to better realize the information literacy

of teachers, university teachers should always uphold the “technological view” in actual teaching, and timely apply appropriate new technologies and knowledge to all aspects of course teaching. For example, they can combine online teaching platforms to carry out flipped classroom teaching, use mobile teaching apps to design teaching activities such as checking in before class, question and answer, theme discussion, rating and voting, and learn about students’ learning and topics of concern according to the platform data. These teaching innovations based on technology integration can not only significantly improve their information application skills, but also enhance the information identity and innovative thinking of university students. In addition, university teachers can use their own technology and knowledge to select, process and create the content needed for teaching innovation, guide students to solve relevant technical problems, and guide them to actively use new technologies to acquire and learn interdisciplinary expertise.

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