

Research on Teachers' Personal Knowledge Management Strategies in the Big Data Era

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Abstract—With the arrival of the era of big data, the amount of information is huge and the update is fast. This paper introduces the connotation of teachers' personal knowledge in the information age, analyzes the characteristics of knowledge in the era of big data, and puts forward the strategies for teachers to deal with teachers' personal knowledge management in the era of big data.

Keywords—Big Data Era; teachers, personal knowledge management

I. INTRODUCTION

Voice of China slogan: In the era of big data, every keystroke becomes a part of the massive information on the Internet; every time we broadcast news, it becomes a part of the data of this era. In the era of information explosion, facing the huge amount of information coming from all over the world, as teachers, it is an important and urgent task for us to effectively acquire, learn, digest and efficiently manage personal knowledge, to achieve the goal of rapidly improving individual comprehensive ability and promoting personal development.

II. CONNOTATION OF TEACHERS' PERSONAL KNOWLEDGE MANAGEMENT

The so-called personal knowledge management is a new concept and method of knowledge management, which can turn all kinds of personal data and information into more valuable knowledge and make it more convenient for one's work, study and life. Through the management of personal knowledge, people can develop good learning habits, enhance information literacy, improve their professional knowledge system, improve their comprehensive ability, and lay a solid foundation for the realization of personal sustainable development.

Teachers' knowledge is the necessary knowledge form, values, wisdom and skills for teachers to carry out professional activities and teaching practice. Teachers' personal knowledge is summarized by teachers in practice, which depends on the empirical knowledge of specific

concepts, beliefs and values, such as subject knowledge, student knowledge, teaching environment knowledge, etc. Teachers' personal knowledge management is an activity for teachers to acquire, accumulate, summarize and innovate personal knowledge purposefully and consciously. It is also an activity to broaden personal vision, optimize personal information and enhance personal competition. Personal knowledge management can help teachers to construct their personal knowledge system, transform teachers' tacit knowledge and personal knowledge into explicit knowledge and public knowledge, so as to enhance teachers' professional development ability. Teachers' personal knowledge management takes experience, practice and personalized knowledge as its starting point, and takes individual subjective initiative as its basic characteristics, which is of great significance to teachers' professional development.

III. KNOWLEDGE CHARACTERISTICS IN THE AGE OF BIG DATA

In today's information explosion era, big data swept the world with the potential of overwhelming mountains and seas, penetrating into the government, enterprises, education and other industries. Big data, Internet and other technologies will inevitably bring about changes in the educational system, and education will become more and more diversified and lifelong under the influence of Internet and other technologies; students' learning methods have undergone tremendous changes, traditional classroom teaching can no longer meet students' learning needs, and their strong thirst for knowledge enables them to obtain the desired knowledge through various channels with the help of various information tools. Learning is becoming more and more individualized, which is a great pressure on teachers. Teachers from the second setter of knowledge to the guide of questioning the spirit of innovation, the corresponding ability requirements also need to keep pace with the times. Information technology, such as the Internet, has become the internal driving force of change from the initial use of educational information tools to the spread of the entire teaching system. Teachers should also follow the trend and

think about how teachers can grow professionally in the tide of educational change.

Knowledge is a systematic knowledge acquired by human beings through various ways, which has been improved, summarized and condensed. With the rapid development of cloud computing, Internet of Things, big data and other information technologies, the information that has been received through various information technologies and the Internet is expanding and expanding rapidly. This information has the characteristics of value, authenticity, variability and complexity. They are all data, not random sampling; general direction, not precise guidance; correlation, not causality. They have the characteristics of large amount of data, various types, low value density, fast speed and high timeliness. The value of big data is to obtain the maximum value of data through data sharing and cross-multiplexing. In the era of big data, teachers' work is no longer simply to impart knowledge, but to diversify the forms of knowledge output and pay attention to students' personality characteristics. The unified and collective teaching will be transformed into the teaching supported by information technology. That is to say, on the premise of understanding students' cognitive ability and knowledge structure, transfer, integrate and impart knowledge. As teachers, it is necessary to adapt to the development of information technology, master relevant information technology, obtain and dig out more valuable information from huge amounts of data, and transform it into knowledge, so as to make use of it for our own use, and improve our comprehensive ability and quality.

IV. TEACHERS' PERSONAL KNOWLEDGE MANAGEMENT STRATEGIES IN THE BIG DATA ERA

Traditional knowledge management mainly manages paper learning notes or materials acquired through centralized learning. In the era of big data, the channels and methods of acquiring and managing knowledge are more diversified, the knowledge acquired is more fragmented, and the available information technology means are more convenient. Teachers can use the following strategies to improve the efficiency of knowledge management.

A. *Integration into Social Networks*

The explosive development of information technology has transformed the world into a global village, forming a huge network, which makes people feel closer and closer to each other, and links every netizen. In this network, everyone is a learner, and can acquire the knowledge they want according to their own needs. At the same time, the network also becomes an individual to a certain extent, and the platform for publishing opinions and sharing their learning experience and experience. For example, when teachers publish their research and teaching results on the Internet, peers and professionals will pay more attention to learning, increase their knowledge and broaden their horizons. Teachers, as evangelists and professionals, need to actively integrate into the large social network. With the advantage of breaking through time and space, online learning has become the best way for people to learn new knowledge. The right to choose online learning lies entirely in learners. The learning

content is chosen by learners based on their own interests. The learners can arrange their own learning time and schedule, cultivate learners' learning interest and autonomous learning ability imperceptibly, and enable learners to develop good habits of lifelong learning. In the Internet + era, new science and technology, new knowledge system and new technology are emerging one after another. Only by keeping good habits of learning, can people constantly update their professional skills and adapt to the boundless change of career. Continuous acceptance of continuing education has become the norm. Lifelong learning is necessary for every teacher, while social network is the most important way for teachers to improve themselves. Convenience is also the most necessary information environment.

B. *Joining the Learning Community*

Learning community refers to a group composed of learners and their assistants. They often communicate with each other, share various learning resources and accomplish certain learning tasks together. As a result, they form interpersonal relationships that influence and promote each other, and interact with each other through interpersonal communication, communication and sharing of various learning resources, and form a kind of sound and mutually reinforcing grassroots learning collective. It is different from traditional teaching classes and teaching organizations in that it emphasizes interpersonal psychological compatibility and communication and plays a collective dynamic role in learning.

The new generation of information technology, such as big data, cloud computing, Internet of Things, drives the network space to interconnect all things. It provides an open learning community environment for learners in different regions, cultures, disciplines and majors. With the help of modern multi-person chat tools, more and more people involved in comprehensive practice activities are building up groups by joining various levels and types of learning communities, such as QQ seminar groups. Here, members of the group can speak freely to communicate at any time, discuss their confusion in life, and solve problems in practice together. It provides opportunities and space for online members to learn and communicate all the time. In the online education forum, teachers can find the corresponding topics according to their own needs, express their views in the corresponding section, and communicate deeply with the publishers of information in the forum. Here, teachers can collect all kinds of problems in the process of educational practice and carry out them. In order to find effective solutions, in-depth discussions with educational experts, other teachers and so on should be organized and summarized. These research results can also be uploaded to the forum and shared with other teachers. Educational blogs are highly professional. Teachers can exchange and discuss subjects within the discipline, help each other, and form a teacher network learning community. It is more conducive to the research and discussion of educational subjects among teachers.

In short, joining the learning community can help teachers broaden their horizons and build a systematic

knowledge system in the learning process. This collaborative learning process is the core skill of knowledge management in the era of big data.

C. Rational Use of Knowledge Management Tools and Platforms

With the development of information technology, a large number of specialized knowledge management tools and platforms have been developed and put into use. The integrated use of these platforms or tools can help teachers to achieve efficient management of knowledge from generation, precipitation, optimization, application and innovation throughout the life cycle, and realize the fragmentation of knowledge management. For example, mind mapping visualizes thinking, uses radioactive three-dimensional structure to associate knowledge points, and connects each other like neurons in the brain, constituting a personal knowledge database, which is more convenient for memory; impression notes record every bit of inspiration, to-do list, or meeting records, project information, and keep content permanently; general question-and-answer platform such as Baidu Zhizhi Dao, Sina Love Questions, Question and Answer Cabin, Yahoo Knowledge Hall and so on. The Professional Question and Answer Platform is as small as an enterprise's customer service, and as large as an industry's expert knowledge base, which provides a communication platform for users. It is possible for people to accept the help of experts and other netizens here, and also try our best to provide effective help to other netizens. There are also many tools and platforms, such as Daoyun Writing, for the convenience of learners, both mobile and computer versions, which are simple to use, diverse in form, graphic-text collocation and comprehensive in function. Teachers should master different methods of using knowledge management tools according to their own needs, build their own knowledge system and knowledge base, use these tools to carry out arbitrary knowledge management and improve their comprehensive ability and management efficiency.

V. CONCLUSION

In the era of big data, as teachers, it will be necessary to realize the urgency and importance of keeping up with the trend of the times and the development of science and technology. Integrating new thinking, new technology and new ideas into education is the connotation of future education development. Only in this way can people continuously transform knowledge into the ability of self-sustainable development, constantly improve ourselves, and build up personalized knowledge. Understanding the system and realizing lifelong learning will never lag behind.

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