Innovation of County Education Research Management in the Perspective of Knowledge Management Theory

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Abstract: There is a natural relationship between educational research management and knowledge. This paper discusses the knowledge attributes, basic concepts and innovative paths of county educational research management under the guidance of knowledge management theory.

Keywords: Knowledge management theory; County; Educational research management

"County-based" is the system of compulsory education management in China. County education research management most directly touch the front-line schools and teachers research. Therefore, in order to fulfill the role of educational research, the management of educational research in counties is crucial. In view of this, the author takes the knowledge management theory as the analytical framework, and explores the innovative path of county educational research management on the basis of clarifying the knowledge attributes of county educational research management, with a view to providing references for the optimization of educational research management.

1. Knowledge attributes of educational research management

Knowledge of the essence of educational research determines the scientific and effective management decisions of the educational research management department. The purpose of educational scientific research is to provide knowledge that supports, drives and leads the reform and development of education. The Opinions on Strengthening the Work of Educational Scientific Research in the New Era explicitly states that educational scientific research in the new era should "provide strong intellectual support and knowledge contribution for accelerating the modernization of education, building a strong educational country, and running a good education to the satisfaction of the people".[1] The essence of educational scientific research is knowledge creation. Educational scientific research is a cognitive activity that uses scientific theories and methods, follows certain scientific research procedures, and explains the nature of educational phenomena and their objective laws by interpreting, predicting and controlling educational phenomena and educational facts. Scientific theories and methods, scientific research procedures, the nature of the phenomenon, the objective law of the essence of knowledge, in short, educational research is the use of existing knowledge to explore and discover new knowledge activities. The results of educational scientific research are the crystallization of individual experience and collective wisdom that reflect the laws of education and teaching and have a marked effect on improving the level of teaching and the quality of education, and on achieving training goals, including experience, technology, concepts, theories, views, programs, models, ideas, and so on, and their essence is knowledge.

County educational research management is the management of the process and results of educational research of schools and teachers in the county based on national requirements, and its essence is the management of knowledge. Therefore, improving the quality of county education through knowledge management and understanding how knowledge is created and managed is the key to county educational research management.

2. The knowledge management theory perspective of the county education research management re-understanding

The theory of knowledge management first arose in the United States. Ikujiro Nonaka and Hirotaka Takeuchi extended the

discussion of knowledge management theory to the organizational level. It is very necessary to reconceptualize the management of educational research in the county by incorporating the main concepts of knowledge management theory.

County education and research management should provide support for knowledge dissemination, creation, screening and sharing. Ikujiro Nonaka defines knowledge management as the process of continuously creating new knowledge within an organization, disseminating this knowledge widely, and rapidly embodying it in new products/services, technologies and systems. [2] The management of educational research in the county should not only provide guidance for teachers' research, such as disseminating existing research theories, interpreting relevant research policies and popularizing research methods; it should also promote the creation of teachers' knowledge through case studies and other forms of research, and guide teachers to focus on problem solving to form systematic results; it should also provide a platform for teachers to disseminate knowledge within the county and even on a larger scale, and facilitate the crystallization of individual knowledge into organizational knowledge. The program should also provide a platform for teachers to disseminate knowledge within the county and beyond, leading to the crystallization of individual to organizational knowledge.

The core of county education research management is to realize the conversion of explicit and tacit knowledge through the provision of "field". According to the theory of knowledge management, knowledge creation and use is achieved through the conversion of explicit knowledge and tacit knowledge，which is the famous SECI model of dynamic transformation of knowledge. The very important function of county education research management is the knowledge innovation of schools and teachers, expanding the knowledge accumulation of the county through knowledge innovation and enhancing the development and competitiveness of county education. To achieve the sharing and transformation of knowledge between individuals, individuals and organizations, and organizations and organizations, the existence of a "field" is needed. The "field" is a dynamic common situation for sharing, creating and applying knowledge.Therefore, in order to realize knowledge transformation, the management of educational research in the county should determine the stages or modes of knowledge transformation according to the different stages of subject research and results promotion, and provide corresponding "fields" for schools and teachers.

The management of educational research in the county should adopt a middle-up-down management model. According to Ikujiro Nonaka, the middle-up-down management model is the most effective means of knowledge management within an organization. County educational research implements the policy guidelines of county education bureaus, provincial and municipal education bureaus, education academies (research and training centers), and even the national education policy guidelines upwards, and provides scientific research support for front-line schools and teachers to solve practical problems in implementing the policy guidelines downwards, so the role of county educational research management departments is crucial as they play the role of middle managers in the whole education system. The role of the county education research management department is crucial. The department should not only synthesize and express the knowledge between the upper education department and the front-line schools and teachers, but also combine the knowledge into the innovative exploration of the teachers' teaching practice.

3. The knowledge management theory in the field of county education research management path innovation

Based on the above analysis, the core of county education research management is to promote the creation of individual knowledge by schools and teachers in the county through education research activities, and to realize the transformation of individual knowledge and collective knowledge, explicit knowledge and tacit knowledge through the creation of "field". The efficient transformation of county education research management can be achieved through the following ways.

3.1 Optimizing the "top-down" management model and forming a county education research community

Comparing the 'top-down' and 'bottom-up' models of research management with the 'top-down' model , it can be seen that neither the 'top-down' nor the 'top-up' model is sufficient to mobilize the autonomous knowledge creation of individual teachers.

In the "top-down" model, there are three necessary organizations: the top organization, the middle organization and the front-line organization. The top organization refers to the highest administrative organization for the management of educational research, followed by the middle organization, and the front-line organization, which ultimately refers to the individual teacher. The core task of the top-level organization is to design a clear vision of educational research at the top-level and provide a platform for the implementation of educational research, as well as to ensure that the middle-level organization carries out educational research independently and scientifically through a series of measures, and then to promote the front-line organization's learning, imitating, applying, and creating knowledge through subject research. Middle-level organizations include school textbook offices or teaching departments, whose task is to transform the scientific research vision of high-level organizations according to the actual situation

of front-line organizations, and to form the operational theories or measures of scientific research of middle-level organizations. The task of the front-line organizations points to the most core content of educational research, i.e. the learning, application and creation of research results. In short, the management of educational research in the county should form a research community, or knowledge creation community, that is linked up and down and horizontally connected. The community is vertically linked to the county education bureau, the Academy of Education, the ETV, schools, textbooks, subject groups, teachers, and horizontally to form a synergy of teaching and research, scientific research, training, etc., and the community has the same goal and moves in the same direction.

3.2 Mobilizing individuals for knowledge creation through "mass research"

we have set up "teachers' mini-topics" which are "problematic in nature, personalized in content, popularized in method, and short in cycle". In order to fully mobilize the teachers' small topics, we have set up the "Teachers' Small Topics", which are organized in the form of subject groups, teaching and research groups, and classroom preparation groups, to explore and create new knowledge for solving practical problems in the teaching practice. In order to be able to fully mobilize the enthusiasm of teachers' small topic research, each year to carry out small topic projects, the completion of the project, awards and award-winning results of promotional activities, the award-winning honours into the teachers' evaluation and assessment of excellence assessment standards. It's the important way of knowledge conversion Project evaluation, project completion, awards, promotion process as

3.3 Taking projects and topics as a guide to bring into play the knowledge creation of task-based research groups

At present, the county can take the project or subject as the traction, the formation of task-oriented research groups, focusing on solving the implementation of policies and regional development of the practical problems faced. Mainly through four paths: First, we can regularly carry out large-scale research, finding questions in the date and activating into research topics, and then formating of task-oriented research groups; Second, the master teacher studio as a carrier, the formation of the regional subject of the backbone of the teachers' research groups; Third, schools or teachers with "the same interest" and "the same practice problems" spontaneously organize task-based research groups. The members of the research groups are not limited to front-line teachers, but are mostly headed by county teaching researchers, organically linked to the community, youth centers, e-learning centers, university experts, schools, and so on.

3.4 Returning to the essence of knowledge and optimizing the dissemination of results

The Opinions of the Ministry of Education on Strengthening Educational Scientific Research in the New Era also clearly states that it is necessary to promote the timely and effective transformation of the results of educational scientific research. In the knowledge management perspective of the results of the promotion, the county education research management department should optimize the promotion of results through the following three steps.

The first step is to deconstruct the knowledge elements of the results. That is, we should analyse the scientific research results as "knowledge" with "knowledge elements", and then the knowledge elements are divided into tacit knowledge and explicit knowledge. The knowledge elements are then divided into tacit knowledge and explicit knowledge. The second step is to create a field for results transformation. Focusing on the transformation of knowledge in the promotion of results, according to the characteristics of the "field", it can be divided into four types:system, activity, team, and target value. The "fields" in the promotion of results do not exist singly, but all kinds of "fields" serve the realization of the promotion goals, and at the same time interact with each other to jointly promote the transformation of knowledge. The third step is to promote the transformation of the research results from four aspects. The transformations of results are mainly realized through the standardized implementation of promotional activities, in which the transformation of knowledge is promoted through case studies, differentiation of lessons, follow-up learning, situational learning and other forms, and the design and application of explicit tools.

References:

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