Strategies for Improving Primary School Teachers' Information-Based Teaching Ability under the Background of Internet+

Yan Ma

Ningxia National Vocational and Technical College, Wuzhong, 751100, China

ma_yan_pp1@126.com

Keywords: Internet + education; Information; Teaching ability; Education informatization 2.0

Abstract: under the background of "Internet + education", the classroom teaching environment presents the characteristics of multimedia and networking. Only those teachers who have the ability of information teaching can effectively use multimedia and networked information technology and resources to promote classroom teaching, and the teaching and learning ability of teachers will directly affect the quality and effect of classroom teaching. By analyzing the factors that influence the promotion of primary school teachers' information-based teaching ability, this paper puts forward the strategies of improving the information-based teaching ability of primary school teachers under the background of "Internet + education", which helps primary school teachers improve their information-based teaching ability, and at the same time, it also provides some references for educational departments to carry out primary school teacher training.

1. Introduction

Since Premier Li Keqiang first put forward the plan of "Internet plus action" in 2015, the state has vigorously promoted the deep integration of traditional industries with the Internet. In April 2018, the Ministry of Education issued the "2 action plan for educational informatization", which marks the entry of education informatization in China to a new stage. The "2 action plan for education informatization" is the specific implementation plan for promoting the "Internet + education", and requires the training of teachers' information-based teaching ability through the upgrading of the information technology application ability of primary and secondary school teachers throughout the country.

In the Internet+ era, teachers' information technology application ability will become the core accomplishment of high quality teachers in the new era, and the teaching and learning ability of teachers will directly affect the quality and effect of classroom teaching. General Secretary Xi said: "the foundation is not solid and the ground is shaking". Primary education is a nine-year compulsory education, and also the enlightenment stage of compulsory education. A large number of high-quality and innovative talents are needed to jointly promote and develop primary education. However, many primary school teachers have low theoretical knowledge and technical ability to carry out information teaching. In their classroom teaching, they do not know how to make use of modern educational technology to promote the reform of education and teaching, do not know how to give full play to the advantages of modern educational technology, thus seriously restricting the process of integration and innovation of information technology and education in the era of "Internet +". Therefore, under the background of "Internet + education", improving the information-based teaching ability of primary school teachers has become an important problem to be solved urgently. Educational administration departments, teacher training institutions, schools and their primary school teachers should work together to explore strategies and methods for improving the information-based teaching ability of primary school teachers.

2. The influencing factors of primary school teachers' information-based teaching ability improvement

2.1 National policies and school running Philosophy

The national policy and the school running idea are the main and fundamental factors that affect the school's informatization teaching. The policies and guidelines issued by the state can provide power for the informatization construction of schools, guide the development direction of teachers' specialization, and ensure the improvement of teachers' informatization teaching ability. However, under the examination oriented education mode in our country, the school focuses on the enrollment rate, and pays little attention to the cultivation of students' ability. In this case, it is difficult for teachers to develop their own information-based teaching ability, and in this mode, teachers' information-based teaching ability can not be fully developed, which also leads to the loss of interest of teachers. However, in recent years, the Ministry of education of our country has conducted the correct guidance to the overall education direction, thus changing the existing teaching mode, which is gradually moving towards information-based teaching.

2.2 Teachers' information-based teaching awareness and attitude

Teachers' awareness and attitude towards information-based teaching directly affect their own information-based teaching level. Under the influence of traditional education, most primary school teachers' educational ideas, ideological models and teaching methods are old and stick to the rules; teachers' awareness of independent learning is not strong, and their awareness of active learning and information technology related knowledge is weak; teachers' teaching mode is mainly indoctrination, and the source power of information technology teaching is insufficient, which leads to students' passive acceptance of knowledge. Loss of interest in learning, thus affecting the quality of teaching. Under the background of "Internet + education", teachers must change their teaching concepts, take the initiative to enhance the ability of information teaching, establish modern classroom by means of information, improve students' interest in learning, and cultivate students' ability of independent thinking.

2.3 Teachers' ability to apply modern educational technology

At present, the application ability of school teachers' educational technology can not meet the requirements of the development of school education. The low ability of teachers' information-based teaching has become a key obstacle for school to promote teaching reform. With the rapid development and application of sensor, virtual and augmented reality, 3D printing, big data analysis, online classroom and other technologies, the action plan of education informatization 2.0 proposes to "actively carry out research and demonstration of intelligent education innovation based on artificial intelligence, big data, Internet of things and other emerging technologies, relying on various intelligent devices and networks". However, the application of these new technologies in primary schools is not ideal, which leads to the superficial wisdom teaching. Most primary school teachers are weak in knowledge and skills in information teaching, and can not effectively transfer the new ideas, new methods and technologies of Internet + education to the innovative practice of information teaching. They do not know how to use modern educational technology to serve classroom teaching and optimize the educational and teaching environment. At the same time, although the school is equipped with a complete set of modern educational technology equipment, but because the enthusiasm of teachers using modern educational technology equipment is not high, the level of information technology is low, and the equipment is not fully utilized, it also causes a waste of educational resources.

2.4 Lack of digital teaching resources

The important value goal of educational informatization 2.0 is to improve the effect, efficiency and efficiency of education. Digital teaching resources are the necessary conditions to achieve this goal. The sharing of all kinds of high-quality education resources provides resource guarantee for

basic education reform, promoting the balance of education resources and promoting education equity. Appropriate application of information-based teaching resources in teaching is conducive to stimulate students' interest in learning and curiosity, enhance the interest of the classroom, flexibly apply information-based teaching resources to assist the classroom teaching, and further improve the efficiency of classroom teaching, improve the quality of the course, and achieve the optimization of the teaching process. However, the digital teaching resources that primary school teachers can use in daily teaching are relatively scarce, and the sharing degree of digital education resources is low, which can not meet the needs of teachers to carry out information-based teaching, especially in rural schools, these problems are more serious. Therefore, it is necessary to build a public service system of digital education resources, reorganize and integrate education resources, so as to promote the balanced development between schools and greatly reduce or even completely eliminate the unbalanced development of compulsory education in the region.

2.5 Lack of evaluation and incentive mechanism

It can be seen that the important influence of rules and regulations on a collective, the reasonable specification of teachers' ability, can ensure the improvement of teachers' information-based teaching ability. However, most schools have no clear requirements for teachers' information technology level, and lack of corresponding assessment and evaluation mechanism and incentive mechanism. In the process of modernization development, the requirements of teachers' information-based teaching level are constantly improving. Schools must strengthen the monitoring of teachers' ability. The most effective way is to adopt the way of system management and control, and formulate appropriate evaluation and incentive mechanism. Through the way of regular professional evaluation of teachers' abilities, teachers are encouraged to base themselves on their own abilities and constantly improve their information-based teaching abilities. Information technology is integrated into all aspects of teaching, learning, research, testing, evaluation and management, and educational and teaching concepts are constantly innovated.

3. Strategies for improving primary school teachers' information-based teaching ability under the background of "Internet + education"

3.1 Focus on team building and strengthen organizational management

3.1.1 Building the school management team

The school management team headed by the school principal is established. Based on the accurate assessment of the school information environment and the current situation of information technology teaching application, the problems and deficiencies in the promotion of information technology are analyzed and identified. Based on the characteristics of the school, according to the requirements of documents at all levels, with the core goal of using information technology to solve the real problems existing in subject teaching and information technology integration education and teaching, scientifically formulate the information development goals and plans of the school, remove the terms that hinder the application of information technology, increase the terms that are conducive to the application of information technology, and put various requirements and systems of information teaching into practice. To promote the modernization of school management and improve the level of information education and teaching.

3.1.2 Building a school service team

Select the backbone teachers with outstanding application ability of information technology by disciplines and sections, organize application-oriented management and service support teams, take the in-depth application of information technology in education and teaching as the core goal, and promote the improvement of information-based teaching ability of school teachers by carrying out competition activities, thematic discussion, collective lesson preparation, case analysis, lesson study and other activities. Support the information teaching innovation team to help the sustainable development of the school.

3.2 Strengthen mechanism construction and process management

3.2.1 Establish application mechanism

The continuous development of information technology and the in-depth integration of education promote the reform of education in China. The continuous development and innovation of teaching environment, content, tools and methods require teachers to keep pace with the times and comprehensively improve the application ability of information technology. In the opinions on the implementation of national primary and secondary school teachers' information technology application ability improvement 2.0, it is clearly proposed that we should attach importance to the development of teachers' information literacy, and build a new mechanism of teachers' information teaching ability improvement based on "school-based, classroom based, application driven, innovative and accurate evaluation". Therefore, schools should actively carry out information technology application activities, encourage teachers to use mobile app, electronic whiteboard, 101 education PPT and other information technology means to solve difficult problems in teaching and improve classroom efficiency; strengthen cooperation and docking of information platforms, integrate online and offline resources, establish linkage between disciplines, and joint research, sharing and improvement between urban and rural areas; with the help of CCTA LK and other online live platforms carry out long-distance live activities of primary school Chinese, mathematics, English and other disciplines. Other school teachers watch the whole teaching process through live classroom, and teachers can interact and exchange at any time to evaluate the teaching links; continue to improve the coverage of online learning space, deepen the application of online learning space, and actively carry out online learning space-based activities. Improve teachers' information literacy.

3.2.2 Establishing evaluation mechanism

Taking the improvement of teachers' information-based teaching ability as an important part of the development of teachers' specialization, we should put it into the teacher assessment program and establish a long-term mechanism to promote the development of teachers' information-based teaching ability. The assessment process uses the combination of quantitative evaluation and qualitative evaluation, and the combination of process evaluation and formative evaluation to carry out the assessment, focusing on the development and change of teachers' information technology ability, information-based teaching design, information-based teaching implementation, teachers' professional development, etc. Conduct quantitative evaluation on online training behavior records of teachers, including landing platform, completion degree of training activities, online learning duration, number of logs and generated resources, offline teaching and research activities and school-based teaching and research activities are evaluated qualitatively by the activity organizers according to the performance of teachers' activities, and evaluate the application of teachers' online training and school-based training by self-evaluation, mutual evaluation and others. The combination of multi subject evaluation is used to evaluate the learning process and results of teachers and to highlight the objective evaluation of teachers.

3.2.3 Establishing incentive mechanism

The competent department of the school shall formulate corresponding systems and plans, combine the application of information technology with the construction of the school system, strengthen the construction of incentive mechanism, link the participation in new technology training such as big data and artificial intelligence and the application rate of teaching, and integrate the indicators such as the teacher's intelligent education, training and daily teaching application into the basis of performance appraisal, promotion of professional titles and selection of excellent teachers. Teachers are encouraged to participate in backbone training. The school should organize and carry out information-based teaching competitions, observation courses or teaching seminars and other activities to create an information technology application atmosphere based on problem-solving for school teachers, so as to stimulate teachers' enthusiasm for information-based teaching. At the same time, teachers are encouraged to participate in all kinds of skills competitions

related to information-based teaching at all levels to promote teaching, so that teachers can continuously improve their teaching ability and level, and continue to deepen the reform of teaching design and organization, teaching implementation and evaluation.

3.2.4 Establishing platform, resource and activity guarantee mechanism

High quality resources are the basic conditions for primary school teachers to learn and the demand for basic learning services. The implementation effect of improving teachers' information-based teaching ability can be guaranteed by using the rich high-quality education resources, classroom communities, and universal space in the national and provincial education resources public service platforms. The platform supports teachers' work in education and teaching in a wide range and depth, so as to promote the balanced development between schools and solve the problem of unbalanced and insufficient high-quality education resources. In addition to the use of resources in the public service platform, we can also establish a teaching resource database within the school, so that teachers' courseware and relevant experience can be shared in the teaching resource database, so as to give teachers in the school an opportunity to learn from each other and improve their informatization level.

We will expand the channels for the supply of high-quality resources, develop live online courses in music, art, science, etc., help small village schools and teaching sites to develop sufficient and good courses, and use information technology to link rural education with high-quality resources, so as to promote the reform of rural education and the balanced and high-quality development of rural education resources. At the same time, teachers are encouraged to submit high-quality case resources through the education cloud platform, and primary schools are required to regularly recommend high-quality case resources of teachers' ability to apply information technology for learning situation analysis, teaching design, learning method guidance and academic evaluation. Through the activities of information technology application micro course competition, demonstration course selection, teaching skill competition and excellent lesson collection, high-quality course resources are selected.

3.3 Pay attention to standard construction and strengthen assessment management

The school formulates its own informatization teaching development plan, formulates and optimizes teachers' information literacy standards, determines accurate assessment content, sets clear assessment path, adopts scientific assessment methods, establishes long-term assessment mechanism, and guides teachers to complete the information technology application ability of "learning, practicing, using and evaluating" and improve learning. Based on the school-based application assessment, adhere to the combination of school-based assessment, teaching and research group team assessment and individual assessment, and incorporate the school-based application assessment into the school's team assessment and individual school-based study assessment of each teaching and research group, for collective bundling management and individual growth management. Every teacher should have the goal of personal information ability improvement, which requires that they can skillfully apply information technology to solve problems in the real education and teaching situation, and can guide students individually with the help of information technology means, so as to achieve the integration and innovation with the discipline. School based application assessment is the power to pry, influence and guide teachers to learn, practice and use. However, it is particularly emphasized that due to different starting points of teachers' information technology ability, it is impossible to reach the highest value of the ability standard. It is necessary to guide and help each teacher to improve, breakthrough and improve on the original basis, and pay more attention to whether school-based application assessment is generally recognized by teachers. , the teachers recognized that it is feasible, so as to promote teachers to carry out information-based teaching. Therefore, each school should base on its own information environment, fully consider the age structure, subject background, ability foundation, development vision and other factors of teachers, and formulate school-based assessment standards, so as to guide teachers to apply information technology to solve problems in the real teaching situation, so that information technology can effectively serve the improvement of education and

teaching quality.

3.4 Pay attention to teacher training and strengthen practical application

3.4.1 Improve the training content from the reality

Teacher training is an important way to promote teachers' professional growth and improve the quality of education. Through training, improve the application ability of teachers' information technology, promote the reform of classroom teaching; promote the reform of school teaching management system; lead and drive the reform of teachers' training methods. However, teacher training should not be carried out blindly. It is necessary to know the information technology level of primary school teachers through interview, questionnaire survey and observation teaching before the training, understand the actual training and learning needs of teachers, and then determine different centralized training contents according to different information technology levels to ensure the pertinence, continuity and effectiveness of the training, so as to make the training, application and research Integrated. Only by improving the training content from the reality and making the training purpose more clear, can teachers really learn valuable, targeted knowledge that can solve practical problems, so as to better apply information technology to teaching practice.

3.4.2 Reforming the training mode and establish an efficient training mode

We will combine the training of upgrading project 2.0 with the implementation of the national implementation opinions on improving the application ability of primary and secondary school teachers' information technology, give full play to the radiation and driving role of schools and central schools with high application ability of teachers' information technology in the region, and develop diversified teachers in the form of based on posts and learning while using, combined with the actual situation and development needs of weak rural schools. The training of information-based teaching ability, the practice of mixed school-based training, the construction of "training, application, research integration" of teacher training development ideas and new training mode. And actively explore the "double teacher teaching" mode of teacher training reform path, vigorously promote the famous teacher delivery classroom, synchronous classroom, asynchronous classroom, famous teacher classroom, famous school network classroom and other teaching modes, improve the application ability of rural teachers' information technology, and gradually narrow the gap between urban and rural teachers' ability.

There are two kinds of training methods, one is "please come in", that is, the school organized in school training, the school invited information technology teaching experts to the school for lectures, to help school teachers better understand and master the use of information technology in teaching. The other is to "go out", organize the school teachers to go out to participate in information-based teaching training, and use the way of going out to exchange to constantly improve their learning ability and application ability of technical level. In addition, ubiquitous learning and technology enhanced learning have gradually become a new form of teacher learning. At the same time, the introduction of social public welfare training projects such as the mutual plus plan and green pepper plan and the national open MOOC curriculum provides a new way and new mode for the development of primary school teachers' Information-based teaching ability.

3.4.3 Emphasis on training process management

In order to ensure the training quality and improve the training effect, "Three-stage" management is carried out in the process of training implementation to control the training quality in the whole process. Do a good job in "pre-test" before training, understand the current situation and demand through diagnosis and evaluation, formulate training content package, optimize and adjust training program and curriculum plan; do a good job in "training evaluation" during training, improve teaching behavior and improve training effectiveness through online evaluation and offline practice evaluation; do a good job in "development evaluation" after training, and conduct training effect against the teachers participating in training. Feedback and satisfaction survey, summarize training results and write training summary.

3.4.4 Pay attention to technical analysis and feedback of training data

Develop the relevant training platform, build the functions related to data collection and storage, data analysis, personalized training plan formulation and training evaluation, so as to realize the information literacy training of primary school teachers based on big data. Through the analysis and judgment of big data, the learning data of institutions, cities, districts, counties and schools are monitored in real time. Take the participation rate, effective learning rate, online and offline data, and the number of assignments as important indicators of quantitative monitoring. Big data technology enables the data to be fed back to the District, city, county and school management and service teams in time based on the acquisition and analysis of teachers' professional development data, so as to conduct classified training from different dimensions according to the current situation of teachers' professional development, and guide the participating teachers to learn effectively.

3.4.5 Strengthen the application of training practice

Any form of primary school teacher training and learning activities, in order to achieve real results, we need to strengthen the practical application after training, so as to strengthen the practical ability of teachers, promote the exchange and sharing between teachers, and improve the overall ability of teachers' team. Guide teachers to integrate training and teaching, and integrate online training and learning with offline teaching and research seamlessly. Teachers are required to apply learning content to classroom teaching practice through online training courses, so that online training and school-based practice can be promoted in coordination. Strengthen practical application after training, let teachers experience problem reflection, learning practice, mutual learning and mutual evaluation, from the simple application of information technology to the deep-seated reform of teaching and learning supported by technology, from independent exploration to collaborative development, to the historical reform of teaching and learning supported by technology.

4. Conclusion

All in all, with the rapid development of Internet, cloud services, network technology and communication technology, our education industry should also conform to the development of the times. We should actively explore Internet + education, explore a new teaching mode based on information technology, and develop a new mode of educational service based on Internet. All kinds of schools under the background of Internet + education should take the upgrading project as an opportunity to enhance teachers' information-based teaching ability as the starting point, and strive to "really attach importance to, really implement and really push", promote the reform of classroom teaching and promote the modernization of classroom teaching. At the same time, the majority of primary school teachers need to keep up with the pace of the times, constantly improve their own knowledge system, improve their information-based teaching ability, and strive to achieve "true learning, true application and true improvement", so as to make rational use of emerging information technology in the field of education, build new teaching and learning methods, and effectively play the role of modern information technology in students' independent learning, cooperative exploration and other aspects. The advantages of information technology make it serve the improvement of education and teaching quality, so as to improve the efficiency of classroom teaching and effectively promote classroom teaching.

References

[1] Li Yubin,Liu Huiyu, Zhang Beibei, et al. Research Status and Analysis of Informatization Teaching Ability of Primary and Secondary School Teachers [J].The Chinese Journal of Ict in Education, 2015 (05):72-74.

[2] Du Yuxia. Research on the Promotion of Primary and Secondary School Teachers' Informationalized Teaching Competence Based on"Internet+" [J]. China Educational Technology, 2017 (08):86-92.

[3] Sun Huiqin. Research on the Development of Primary School Teachers' Information-Based Teaching Ability [J]. China Educational Technology & Equipment, 2015 (06):25-26.

[4] Zhang Jingwei. Strategies for Improving the Informatization Teaching Ability of Primary and Secondary School Teachers [J]. Heilongjiang Education (Theory and Practice), 2018 (8):9-10.

[5] Hong Dongren. Strategies for Promoting Information-Based Teaching in Schools in the New Era [J]. Journal of Fujian Institute of Education, 2019,20 (7):93-95.