Research on Improving PE Teachers' Information Literacy in the Era of "Internet +"

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Abstract: In the era of "Internet +", the core goal of teacher education informatization is to improve teachers' information literacy. At this stage, there is still a big gap between the improvement ideas and strategies of PE Teachers' information literacy and the requirements of teacher education informatization to promote the great leap forward development of physical education. How to carry out effective PE Teachers' information literacy education has become a topic of common concern in the society. Because there are still misunderstandings or defects in the cultivation of PE Teachers' information literacy, this paper considers and puts forward promotion approaches to improve PE Teachers' information literacy.

1. Introduction

1.1 Topic Selection Background

Under the background of "Internet +", teachers' information literacy is particularly important. The era of PE Teachers has passed. The new PE Teachers require us to know how to obtain information, sort out information and use information to improve physical education teaching while mastering and teaching skills [1]. How to develop the information literacy of PE teachers and how to grasp the information literacy of PE teachers in the "Internet plus" era, so as to enhance the professionalization level and information literacy of PE teachers. Physical education is an important part of school physical education, and the improvement of PE Teachers' information literacy is an important contribution to Chinese school physical education [2].

1.2 Research Purpose and Significance

With the rapid development of the Internet, all walks of life are facing the integration and impact of information technology. Both opportunities and challenges are also faced by teachers. Occupation is also under higher demand in the “Internet +”. At the same time, the improvement of
PE Teachers' information literacy is not only the improvement of their teaching ability, but also the improvement of PE Teachers' acquisition of relevant sports information knowledge, sorting out the acquired information knowledge, and transforming the acquired and sorted information into the latest cutting-edge knowledge concepts and theories of relevant disciplines, which can not only improve their ability, but also improve students' enthusiasm for sports, so as to enrich students' sports related knowledge, And improve and update their own teaching level and teaching philosophy[3-4].

The research on the development of PE Teachers' information literacy is first based on the analysis of the current situation, integrating theory with practice to solve the development problem of PE Teachers' information literacy, and also provide help for PE Teachers' transformation as new teachers in the information age. At the same time, the development of PE teachers' information literacy also provides relevant theoretical reference and basis for the future development of teachers' information literacy in other disciplines [5-6].

2. The Misunderstanding of PE Teachers' Information Literacy Training

2.1 Weak Information Awareness

Information awareness refers to people's active reflection of objective information and information activities, which is an important prerequisite for the development of information literacy. The level of information awareness determines the physical education teachers' attention to information technology, their willingness to use information technology to solve difficulties in teaching and their enthusiasm to use information technology to improve themselves, and also relates to the overall level of teachers' information literacy. Physical education teachers should take the initiative to realize the importance of information and information technology in teaching and learning so as to improve their information literacy. Under the background of "Internet +", the updating speed of information technology is very fast [7]. PE teachers timely study and reasonable application of new information technology play a vital role in improving the classroom teaching effect. Physical education teachers are not enthusiastic about learning new information technology, and the situation is not optimistic. As time goes by, teachers will gradually deviate from The Times, and it is difficult to improve classroom teaching efficiency, which will also affect the improvement of their information literacy. On the one hand, Growing with the development of the Internet, information resources, access to information, the use of information also have the very big change, it puts forward new requirements for physical education teachers, teachers only by constantly learning new knowledge and skills, to raise their level of information literacy, to better meet the needs of the development of the modern education Not defined as "illiterate" in this era. On the other hand, the concept of lifelong learning is a branch of information literacy. If physical education teachers can implement the concept of lifelong learning into their daily study and work, the level of their information literacy will be gradually improved [8].

2.2 Lack of Information Knowledge

Information knowledge refers to the theories, knowledge and methods related to information, including information theoretical knowledge and information technology knowledge, which is the entity manifestation of information consciousness and the foundation of the development of information literacy [9]. Physical education teachers' information knowledge means that they have a certain understanding of the theory of physical education information and master the technology of
using basic office software and related sports information equipment. Physical education teachers should have the corresponding information knowledge, and can use this information knowledge to solve the problems in teaching, which is the "Internet +" era of teachers put forward the basic requirements. PE teachers think that the meaning of information literacy is one-sided, which is "the ability to search information by computer", "the mastery of Office software such as Word, Excel or PPT" or "the ability to use multimedia to teach in PE class". It can be seen that although many physical education teachers think they have a good understanding of information literacy, their cognition of information literacy is still on the surface, and they do not have a deeper understanding of the content of information literacy [10].

2.3 Weak Information Capacity

Information ability refers to the ability of understanding, acquiring, using information and using information technology, which is the guarantee of teachers' information literacy. The physical education teacher's information ability includes the fast acquisition of the required physical education information, the use of modern teaching means and the proper use of information technology in classroom teaching. In the era of "Internet +", PE teachers need to innovate on the basis of traditional teaching mode and have the ability to integrate information technology with teaching [11-12]. The ability of PE teachers to acquire PE information and use it flexibly in teaching is weak. Through interviews with some teachers, we know that at present, PE teachers mainly obtain information through TV programs, Baidu search and short video software, etc., the form of acquisition is relatively simple, and the quality of sports information obtained still needs to be studied. As for the information acquired, some teachers expressed that it was difficult to directly apply it to classroom teaching, and they needed to have certain practical experience or guidance and help from other teachers. Under the background of "Internet +", PE teachers need to continue to learn all kinds of information teaching methods, improve their information ability, achieve the flexible use of teaching methods, realize the organic combination of online and offline PE classes, and maximize the efficiency of PE teaching[13].

3. The Development Path of PE Teachers' Information Literacy

3.1 Strengthening Information Awareness Education

In the traditional concept of school physical education, information literacy is not rigidly stipulated as the necessary ability of PE Teachers, which is largely due to the lack of awareness of education administrative departments, school leaders and PE Teachers. With the development of teacher education informatization, the role of teachers has changed. Many PE Teachers can not combine information technology with the characteristics of physical education for the time being, and actively explore physical education reform and physical research. Therefore, relevant education management departments and schools should, according to the development process of China's educational information construction and the evolution of social information environment, and in combination with the discipline characteristics of physical education, strengthen the publicity and education of information policies, regulations and morality among PE Teachers, and strengthen the awareness of PE Teachers about the importance of information literacy. Schools should regularly organize PE Teachers to learn relevant policies and regulations on information technology, hold various special lectures and academic reports on information technology, and carry out academic exchanges, so as to make PE Teachers fully understand the status and role of information
technology in modern physical education, enhance PE Teachers' sensitivity to information, and enhance their consciousness of capturing, analyzing, judging and absorbing information. Guide the majority of PE Teachers to apply information technology as a physical education teaching tool and means to the whole process of school physical education teaching, so as to achieve the purpose of cultivating and improving PE Teachers' information literacy[14].

3.2 Establishing and Improving Information Literacy Training System

In fact, at present, some pure technology and repetitive information technology training has led to the ambiguity of front-line PE Teachers' ideas and actions, resulting in some PE Teachers' resistance to information technology training. To this end, we need to do the following work: first, we should formulate information technology training programs for PE Teachers and establish special training institutions. Educational administrative departments at all levels and schools shall, in combination with the job requirements of PE Teachers and the mastery of information technology by PE Teachers, formulate targeted information technology training contents, stage objectives and assessment plans for PE Teachers; Set up open teacher information technology training institutions, hire trainers with high literacy in the field of educational information technology, organize PE Teachers to carry out various training of the latest teaching information technology in real time or regularly, and also provide training information required by PE Teachers to training institutions. The training institutions conduct targeted on-the-spot training, so as to promote the substantive improvement of PE Teachers' information literacy as soon as possible [15].

Secondly, we should design the training standard of PE Teachers' information literacy and reform the training mode of information literacy. The design of information literacy training standards for PE Teachers should focus on emphasizing the technical level, application level and theoretical knowledge level, and design the basic information technology training scale for the technical operation level and the educational information technology training scale suitable for the application level of technology integration. The training contents include the basic operation and application of computer-aided physical education teaching and scientific research application software, the integrated application of information technology and physical education curriculum, the application of campus network physical education resource database, the search of internet physical education resources, mastering the skills of making courseware with flash, the development of personal website and physical education theme knowledge website, etc. We should reform the training mode of information literacy, promote the combination of "school-based training" and "discipline penetration", and make the information literacy training activities of PE Teachers more dynamic and effective. In addition, PE Teachers should learn and master the relevant knowledge and skills of information technology through spontaneous research activities such as network and reading. Spontaneous research activities can enhance the urgency of PE Teachers to improve information literacy, which is especially helpful for PE Teachers to integrate information technology and physical education.

Third, we should establish the training, assessment and evaluation mechanism of PE Teachers' information literacy. One of the important functions of formulating the training assessment and evaluation mechanism is to provide a framework for the assessment and evaluation of PE Teachers' information literacy ability. Only by continuously assessing and evaluating the ability of applying information technology can the training assessment and evaluation mechanism not become a mere formality, and finally achieve the purpose of improving PE Teachers' information literacy. When organizing training assessment, we should not only pay attention to the assessment of information
technology, but also pay attention to the assessment of information awareness, attitude and the integration and innovation ability of comprehensively using information technology to solve problems. At the same time, the PE Teachers' information technology training assessment and evaluation are linked with the PE Teachers' assessment, employment, evaluation and promotion, and the PE Teachers' information technology ability is regarded as the necessary condition for teachers' qualification certification, so as to promote PE Teachers to constantly pursue personal and professional information technology development and improve their own information ability and information literacy. For the newly transferred PE Teachers every year, they are required to complete the specified information technology learning contents, conduct corresponding training and assessment, and form a system.

3.3 Establishing an Evaluation Platform and Incentive Mechanism

The purpose of improving PE Teachers' information literacy is to realize the comprehensive application of modern information technology in physical education teaching and scientific research. Therefore, it must be considered to extend the effect evaluation of PE Teachers' information literacy training beyond the training. The advantage of establishing the tracking and evaluation mechanism of training effect is that through tracking, assessment and evaluation, PE Teachers can urge them to apply the information technology knowledge they have learned to teaching practice in a certain period of time, and internalize it into their own teaching methods and experience through practice. The tracking and evaluation platform to improve PE Teachers' information literacy can be considered from two aspects: policy platform and network platform. The so-called policy platform is to link the evaluation mechanism of excellent courses, open courses and other courses with the ability of information technology, formulate quantitative evaluation indicators of the ability of information technology literacy, and track and evaluate the trained PE Teachers in batches.

The so-called network platform mainly uses the online teaching system to evaluate and supervise the teaching of PE Teachers using information technology. The competent teaching departments and school leaders should take a positive attitude to support information technology, establish corresponding incentive mechanisms, encourage PE Teachers to apply information technology in teaching practice and scientific research, and give certain material rewards to PE Teachers who can use information technology to promote physical education teaching and reform after the training, so as to form a virtuous circle in which physical education teaching innovation and the improvement of PE Teachers' information literacy complement each other. In addition, the competent teaching department should regularly hold some activities such as physical education courseware competition and high-quality physical education course selection in combination with the actual physical education teaching, so as to mobilize the enthusiasm of PE Teachers to use information technology and promote PE Teachers to learn relevant knowledge of information technology. PE Teachers are encouraged to further improve their information literacy through continuing education and independent training. Only in this way can the information literacy training of PE Teachers develop healthily.

3.4 Strengthening the Construction of School Information Technology Environment

To improve PE Teachers' information literacy and build an information platform for improving information literacy, the construction of information infrastructure and physical education information resources is imperative. Physical education teaching is different from the teaching of other disciplines, which is mainly carried out outdoors or in stadiums, which makes the teaching of
PE Teachers have corresponding limitations in the use of information education means. Schools also have certain restrictions on the allocation of information technology equipment for PE Teachers, which should be paid attention to by various teaching management departments and PE Teachers themselves. We should strengthen the construction of information network hardware in the aspects of CAI courseware production room, multi-functional network classroom and the development of sports information network of school physical education departments, and purchase necessary physical education teaching materials and software at the same time, so as to provide a material platform for PE Teachers' teaching. In attaching importance to the construction of school information infrastructure, we must not ignore the development and utilization of physical education information resources.

In view of the lack of available information resources for physical education, the focus at this stage is to strengthen the construction of new physical education information resources such as electronic literature, database and network resources. It is also very necessary to consider the pertinence of the development and effectiveness of the utilization of physical education information resources. If PE Teachers lack the awareness of applying physical education information resources to teaching, or can not effectively use the transmission and sharing of physical education information resources to meet the needs of teaching and learning, it is impossible to improve PE Teachers' information literacy and provide support services for improving the quality of physical education teaching. Therefore, we should combine the development of physical education information resources with the training of PE Teachers' information technology, and combine the development of physical education information resources with the assessment of PE Teachers' information technology application ability, so as to improve the enthusiasm of PE Teachers in the application of information technology and make PE Teachers consciously improve their information literacy in the process of participating in the development of physical education information resources. At the same time, the improvement of PE Teachers' information literacy has laid the foundation for the school to develop physical education information resources with school characteristics.

4. Conclusion

As the organizational undertaker of physical education practice and the specific implementer of physical education reform, PE Teachers have changed from a single imparter of physical education knowledge and skills to the builder of physical education learning module, the organizer of physical education learning activities and the provider of sports information resources. The level of their information literacy directly affects the teaching efficiency and effect of physical education. The traditional PE Teachers' information literacy training has made some achievements, but it also exposed some urgent problems to be solved. Taking this as an opportunity, this paper considers to build an information literacy training system and education training system in which PE Teachers actively learn, improve themselves and strengthen and promote each other's external conditions, so as to provide useful reference.

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