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Higher Education Teachers Digital Literacy Competencies Exploration of Cultivation Models - Based on New Liberal Arts Contextual Perspectives

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Abstract
In the context of the new liberal arts, teachers' digital literacy ability has become a key factor affecting the effectiveness of education. At present, some colleges and universities are still facing a lot of problems in cultivating teachers' digital literacy ability, which are mainly manifested in the low utilization rate of digital teaching resources, imperfect teaching digital evaluation system, lack of personalized and systematic cultivation of teachers' digital literacy ability, and teachers' cross-fusion ability of disciplines need to be strengthened and so on. In view of these difficulties encountered in the cultivation of teachers' digital literacy, three new cultivation modes are proposed, namely, the implementation of the "cloud platform" cultivation mode, the establishment of the "research-practice-competition" integrated cultivation mode, and the promotion of the "research-practice-competition" integrated cultivation mode. Three new cultivation modes are proposed, namely the implementation of the "cloud platform" cultivation mode, the establishment of the "research-practice-competition" integration cultivation mode, and the promotion of the "market mechanism" cultivation mode, and we hope to provide reliable suggestions for the cultivation of the digital literacy competence of college teachers in China.

Keywords: digital literacy; new liberal arts context; teacher competence; cultivation model

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1.Introduction

Facing the urgent demand for high-quality development of education and the challenge of the new generation of information technology changes represented by artificial intelligence, digital literacy has also gradually become a mandatory requirement for teachers to improve the quality of teaching. Therefore, in the face of the current development situation, the only way to better adapt to the development of modern society is to keep abreast of the times and improve teachers' digital literacy and digital teaching ability. Since the concept of digital literacy was first put forward in the 1990s, it has been studied at home and abroad, and new definitions have been given to it. In recent years, China has attached great importance to it, and has successively issued relevant policies and plans to enhance the digital literacy capacity of college teachers in China. The Ministry of Education (MOE) released the "Key Points of the Ministry of Education 2022", which proposes to "implement the strategic action of education digitization" and "accelerate the digital

transformation and intelligent upgrading of education". The report of the 20th Party Congress further specifies the need to "implement the strategy of revitalizing the country through science and education" and "promote the digitalization of education".[1] In December 2022, the Ministry of Education (MOE) issued a notice on the release of the education industry standard "Digital Literacy for Teachers," aiming to improve the standard system of education informatization.2023 In February 2023, the "Digital Literacy for Teachers" was based on the education industry standard, and a framework of digital literacy for teachers was formulated, which includes 5 first-level dimensions, 13 second-level dimensions, and 33 third-level dimensions, providing comprehensive guidance for the enhancement of digital literacy of teachers and support. At the January 2024 press conference of the Ministry of Education, Comrade Liu Jin mentioned that the Chinese government attaches great importance to the digitization of education, and that both the 20th Party Congress and General Secretary Xi Jinping emphasized the importance of promoting the digitization of education. At the same time, Comrade Zhu Dongbin pointed out that in recent years, through the Ministry of Education's strategic action to actively promote the digitization of national education, the digital literacy of China's college and university teachers has been significantly improved. It can be seen that in the process of promoting the development of national education digitization, strengthening the digital literacy capacity development of college teachers is the key, which is related to the quality of the whole digital literacy education.

For how to cultivate the competence of digital literacy of college teachers, the current research is mainly from the following four aspects to develop the narrative. First, digital awareness competence is one of the first-level dimensions in the standard of Digital Literacy for Teachers, which also contains three second-level dimensions, namely digital awareness, digital will, and digital willingness. Pan Weihua et al. believe that digital awareness competence is embodied in teachers' clear perception of the value of digital technology based on their in-depth understanding of it and their will to learn actively[2]. The improvement of digital literacy of teachers in universities and colleges is an important impetus to promote the digital transformation and development, reform and innovation of university education, which not only requires teachers to have a strong digital awareness, master certain digital technologies and skills, and be able to skillfully apply them to teaching design, implementation and evaluation, but also to participate in digital teaching research and innovation, and to cultivate students' digital thinking and awareness of digital security and protection, etc[3]. Therefore, in the context of the new liberal arts, as the development of various disciplines gradually integrates with digital technology in depth, teachers need to have a forward-looking vision, and be able to have a keen insight into the reshaping power of digital technology for the liberal arts education model, as well as its great potential in broadening the boundaries of the disciplines, promoting the cross-disciplinary and in-depth integration of multiple disciplines, and enhancing the timeliness and interactivity of the teaching content, so as to effectively integrate the digital resources and promote the transformation of liberal arts education in the process of teaching and learning. digital resources in the teaching and learning process, and promote the transformation and upgrading of liberal arts education[4].The study of digital resources in liberal arts education has been a major challenge in the past few years. At the same time, Li Zhengchao et al. proposed through their research that the cultivation of digital awareness ability has a positive impact on teachers' personal career development and helps teachers to maintain their competitiveness in the rapid change of educational technology[4].

Second, digital technology knowledge and skills As the core literacy competence for teacher development, including digital technology knowledge and digital technology skills, mainly refers to the digital technology knowledge that teachers should know and the digital technology skills that they need to master in their daily teaching activities, and it is the basic requirement for teachers to realize the deep integration of digital technology and education and teaching[5]. In the environment of new liberal arts construction, with the integration of digital technologies such as big data and artificial intelligence, it

changes the traditional classroom organization. Li Linguang et al. pointed out on the study of digital library construction and countermeasures in Changchun colleges and universities that a variety of digital resources, such as online courses and digital libraries, have been integrated into a teaching resource base with richness and diversity, which has greatly expanded teaching resources[6]. The library has been greatly enlarged. Therefore, while facing the educational audience, i.e. students, and utilizing the advantages of teaching resources brought by digital technology, it is the key to cultivate teachers' digital technology knowledge and skills in the context of the new liberal arts to truly tap into the educational depth and breadth of digital technology and reach the educational goal of cultivating all-rounded development of talent[7]. The key to the development of teachers' digital technology knowledge and skills in the context of the new liberal arts is to truly explore the depth and breadth of digital technology education to achieve the educational goal of cultivating all-round development talents. Strengthening digital technology knowledge and skills will help teachers take advantage of the digitalization process in the construction of the new liberal arts and promote educational innovation.

Third, teachers' digital social responsibility, as an aspect of ethical training and behavior in digital activities, is a fundamental guarantee for teachers to carry out digital education that is fair and inclusive, green and open and cooperative[8]. Yuan Huiling proposes teachers' digital social responsibility as an important dimension of teachers' digital literacy, which is integral and indispensable to the other four dimensions and together constitute the basic content of teachers' digital literacy[9]. The connotation of digital social responsibility is reflected in the fact that teachers actively maintain the harmony and stability of the digital society in education and teaching. When introducing digital resources, they adhere to the principle of social value orientation. The cultivation of digital social responsibility has an irreplaceable significance for improving the social value of education and building a positive and healthy digital education ecology[10]. Teachers with digital social responsibility can help students recognize the social impact behind digital information, cultivate students' sense of social responsibility, and also guide students to make the right choices that meet the requirements of social morality and norms in the process of digital society, become advocates and practitioners of digital ethics, and lead students to establish a correct concept of digital ethics by setting a good example[9]. This includes respecting intellectual property rights, observing network etiquette, resisting network violence, etc., and jointly creating a healthy, civilized and harmonious digital environment .

Fourthly, digital practice and application ability refers to the accumulation of digital skills and knowledge on the basis of possessing relevant awareness and literacy, assuming corresponding digital society and responsibility, and Digital practice and application ability can be transformed into an effective tool to improve the quality of education. Teachers play a dynamic role, actively pay attention to the cutting-edge dynamics of technological development, cultivate human-computer synergy, critical thinking and other abilities, and fully integrate and apply the existing intelligent technological means in teaching, in order to optimize the teaching and management process, and to promote teaching and education as well as innovation and research[11]. Importantly, teachers' ability to apply digital practices is related to the improvement of education quality at the practical level and the change of teaching methods in practice. Liu et al. suggest that the improvement of digital practice application ability can help teachers occupy a higher position in digital transformation, make educational practice develop in the direction of meeting the needs of the times, and open up a wider learning world for students[12]. The following are some examples of such suggestions. For example, Keng Hao suggests that in humanities and social sciences courses, teachers use virtual reality (VR) technology to recreate historical scenes, so that students can experience the cultural connotations in an immersive environment, which is a concrete embodiment of the application of digital practice ability in teaching practice[13].

In summary, it can be seen that most of the current research on the digital literacy competence of

college teachers focuses on the connotation of teacher literacy and its characteristics, the necessity of cultivating teachers' digital literacy competence, and the preliminary exploration of pathways, etc. Few scholars have explored the mode of cultivating the digital literacy competence of college teachers in the context of the new liberal arts. Based on the new liberal arts background, this study proposes three modes of cultivating teachers' digital literacy ability based on the previous scholars' research and the current dilemmas facing the cultivation of teachers' digital literacy ability in colleges and universities.

2. The Current Status of Digital Literacy Competencies of Higher Education Teachers and Their Dilemmas

2.1 The current state of digital literacy competency development among higher education teachers

In the context of the construction of the new liberal arts, the improvement of digital literacy skills of college teachers has become an important part of educational reform, and it is crucial to strengthen teachers' digital literacy awareness and technology training[14]. For colleges and universities, the key to promoting the deep integration of education and teaching with digital technology lies in college teachers, who are required to have a high level of digital literacy ability[15]. Therefore, colleges and universities are actively encouraging teachers to learn digital literacy-related knowledge and technology independently, and organizing regular teachers' digital literacy competence training, which is not only the key to improve the quality of teaching, but also an important impetus to promote the construction of new liberal arts.

2.2 Digital Literacy Awareness Grows Among Higher Education Teachers

In the face of the diversified and complex flood of information on the Internet, teachers' digital literacy requires the ability to identify, analyze and access key information and resources to pave the way for further processing and integration of information. With the wide application of cloud computing, artificial intelligence, big data and other information technologies in the field of higher education, more and more colleges and universities are adopting digital teaching resources such as online classrooms and virtual laboratories, gradually evolving traditional education marked by classrooms with time and space boundaries into ubiquitous hybrid education integrating real and virtual spaces[7]. This form is mainly embodied in the superstar classrooms and virtual laboratories. This form is mainly embodied in such digital teaching modes as super star platform, rain classroom, micro-course, catechism, virtual simulation classroom training and other digital teaching modes. The application of these intelligent media not only enriches the digital teaching methods and improves the teaching efficiency, but more importantly, with the help of digital technology and high-quality teaching resources, college and university teachers not only gradually realize the necessity of improving their own digital literacy skills, but also realize the importance of how to actively explore the integration of digital literacy into daily teaching to adapt to the needs of talent cultivation in the new era.

2.3 Teachers in the digital age are key drivers of the digital transformation process in education

There is still a certain gap between China's digital literacy ability training for teachers in the new era and that of foreign countries. First of all, in developing digital platforms and digital tools for learning, some universities in China (Peking University, University of Science and Technology of China, Xi'an Jiaotong University, Zhejiang University) carried out earlier, and built a new generation of artificial intelligence open research and education platform with Microsoft Research Asia in 2018. Most other colleges and universities are still in the exploratory stage in the development of teachers' digital literacy skills. Nonetheless, China's universities have achieved remarkable results in the digitalization of education. For example, East China Normal University has taken the lead in promoting the digital transformation of education, led the establishment of the National Education Digital Reform School Alliance, put forward computer science education for all, built a full-link online education platform, explored a new model of education data

governance, and also put forward a vision for the future based on this, focusing on building an education data middle platform to support higher education, an education evaluation system and education governance practices and other moves and results that It provides strong support for the digital capacity training of teachers in major universities and demonstrates digital education reform.

2.4 Realistic Dilemmas Facing the Development of Digital Literacy Competencies for Higher Education Teachers

Although some colleges and universities have currently achieved certain results in the cultivation of teachers' digital literacy skills, there are still certain problems, and the digital literacy skills of college teachers need to be improved. The problems faced by most colleges and universities are mainly reflected as follows.

2.4.1 Underutilization of digital teaching resources

Teachers are bound to encounter many problems in the teaching process, and they will also encounter many resistances in the integration of digital technology and digital resources, including external resistance and internal resistance, and external resistance is equivalent to the external environmental factors affecting teachers' behavior. Although education digital teaching innovation, virtual simulation systems and information technology teaching materials construction has won more than 20 national teaching achievement awards[16], but the utilization rate of digital educational resources by some college teachers is not high. In the current teaching process, some college teachers are often at a loss when faced with a wide range of digital educational resources, but rather have a high utilization rate of traditional textbook books, e-book manuscripts, online cases, etc., but not a high percentage of new digital educational resources such as artificial intelligence tools, digital technology applications, VR/AR and other new digital educational resources, which makes it difficult to select the appropriate resources for use. With such external resistance, it is inevitable that it is difficult to improve teachers' digital literacy skills, and it will be difficult to achieve the expected results in the development of the teacher training system, which hinders the improvement of the quality of education.

2.4.2 Inadequate digital evaluation system for teaching and learning

Regarding the evaluation of teachers' digital literacy competence, as China still lacks an evaluation system that is compatible with the goals and value orientation of educational digitization, the majority of college teachers have a single method of evaluating their digital literacy, such as the evaluation system set up by some colleges and universities, which is too concerned about teachers' basic operational ability and ignores the in-depth evaluation of teachers' mastery of knowledge of digital literacy as well as their practical application. At the same time, the evaluation indexes are broad and similar, and also have a certain degree of subjectivity, which will also lead to the difficulty for college teachers to clarify their own digital literacy competence various evaluation indexes , and they cannot refer to the comprehensiveness and scientificity of the evaluation results. And most of the imperfect evaluation system lacks an effective feedback mechanism, with the iteration of digital technology updates, college teachers will not be able to understand the specific and accurate evaluation results and targeted recommendations after completing the training, thus limiting the continued improvement and growth in the development of digital literacy skills. Therefore, teachers in colleges and universities should accelerate the further improvement of the evaluation system to guarantee the quality of teachers' digital literacy competence training.

2.4.3 Lack of personalization and systematic development of teachers' digital literacy competencies

The improvement of teachers' digital literacy ability cannot be achieved without preliminary training. With

the wide application of digital technology and the concept of modern education, teacher training is an important way to promote the growth of college teachers' ability. At present, there is a "one-size-fits-all" model for the training of college teachers' digital literacy ability, ignoring the differences in skill levels and subject needs of individual teachers, and lacking a targeted and personalized training model. Secondly, the training content is generally generalized and generalized, lacking in practicality and systematicity, and different colleges and universities fail to combine the digital practice application scenarios and teaching characteristics for effective training. At the same time, from the previous training methods, most of the teacher training is face-to-face, in a single form, with a short training time, and the training content is mainly based on theoretical knowledge. These forms of training are superficial and cannot fully stimulate the internal learning motivation of teachers , teachers to a certain extent, it is difficult to improve the ability of digital literacy, and the effect of training will also be poor.

2.4.4 Teachers' capacity to cross-fertilize disciplines needs to be strengthened

The construction of new liberal arts is to require the integration of different disciplines and the formation of an interdisciplinary education model to better meet the needs of the digital era. In this context, the overall teaching orientation of the current digital literacy capacity development of college teachers tends to focus on the transmission of knowledge in a single discipline, and the teaching content is only limited to the field of this discipline, which restricts the teachers' cognition of the integration of knowledge from different disciplines. For example, when utilizing knowledge related to digital literacy, teachers of literature courses only learn how to use digital resources for teaching and research in their own disciplines, and seldom involve the integration of other fields in digital literacy. This makes it difficult for teachers to build a comprehensive, interdisciplinary digital literacy knowledge system, and also affects their ability to cultivate students' digital literacy across disciplines in their teaching.

3. Digital Literacy Competency Development Model for Higher Education Teachers

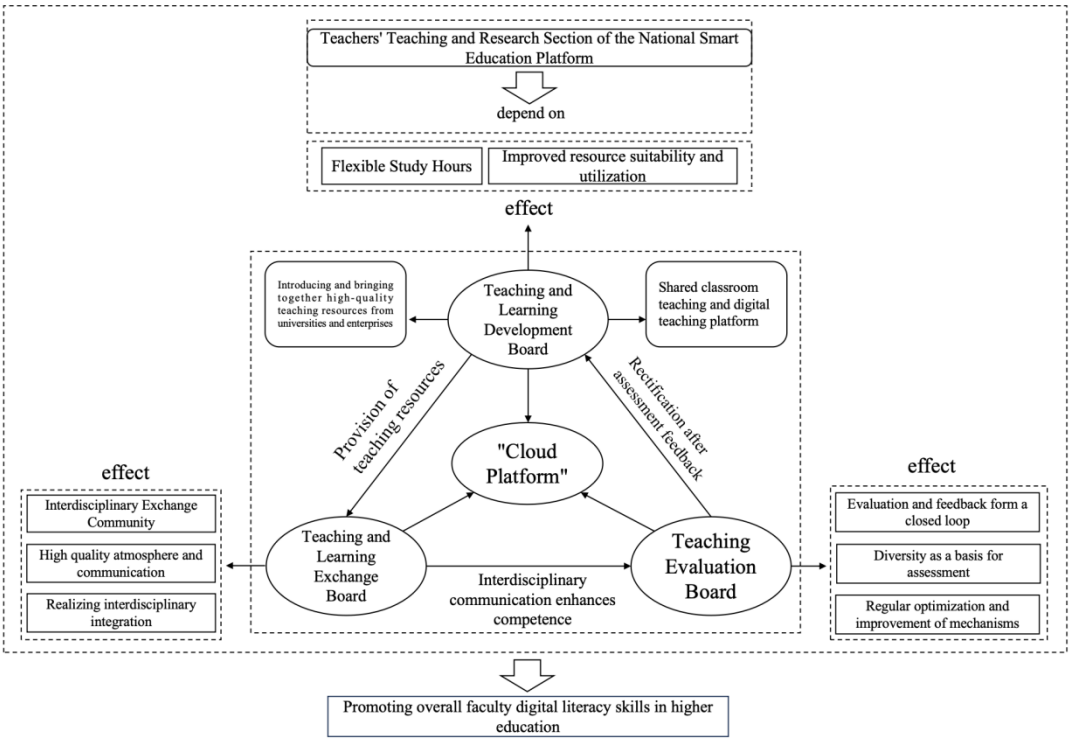
The cultivation of teachers' digital literacy ability is related to whether higher education can adapt to the requirements of digital literacy talents in the context of the new liberal arts, so in this context, it is urgent for colleges and universities to establish a perfect teacher training system. This paper focuses on This paper proposes three modes for the cultivation of teachers' digital literacy competence in colleges and universities, namely, the implementation of the "cloud platform" cultivation mode, the establishment of the "research-practice-competition" integration cultivation mode, and the promotion of the "market mechanism" cultivation mode. This paper proposes three models for the cultivation of digital literacy ability of college teachers, namely, the implementation of "cloud platform", the establishment of "research-practice-competition" integrated cultivation model, and the promotion of "market mechanism" cultivation model, which provide complementary reference for the cultivation model of digital literacy ability of college teachers.

3.1 Implemented "cloud platform" training model

The teaching development platform can create more learning opportunities for the majority of college teachers, provide richer teaching resources, help teachers innovate and optimize their teaching activities in a multi-functional and diversified form, and improve their digital literacy skills. Combined with the action plan of the national education digitalization strategy, it actively plays the role of the national intelligent education platform, explores the path and methods of teacher education digitalization, and improves the digital literacy and skills of college teachers. Through the "cloud platform", it realizes the management and sharing of educational resources, interdisciplinary communication and integration, and the evaluation and feedback of teaching results.

Based on , the teacher teaching and research section of the National Intelligent Education Platform, an open teacher professional development platform is created for teachers' online learning and communication. The platform consists of a number of different sections, including "Teaching Development", "Teaching Communication" and "Teaching Evaluation". The "Teaching Development" section can be used for teachers to effectively share and acquire educational resources in this section. By introducing quality teaching resources from universities and enterprises, it realizes sharing of teaching resources across industries and regions. . Moreover, shares classroom teaching courses and the display of digital teaching platforms , which also facilitates the progress of teachers' digital literacy skills. This not only makes teachers' learning time more flexible and diversified, but also enhances the applicability and utilization of teaching resources. The "Teaching Exchange" is mainly used for teachers of different subject specialties to conduct interdisciplinary exchanges. In this section, an interdisciplinary exchange community is set up, where teachers can share their experiences in applying digital literacy to their own disciplines, and they can also put forward the dilemmas encountered in interdisciplinary integration. For example, liberal arts teachers can share how to use digital resources for teaching cultural heritage protection, and science and technology teachers share how to integrate programming thinking into basic discipline teaching. Both sides conduct interdisciplinary exchanges on this platform, sharing insights on the one hand and learning experiences on the other. Such platform interaction not only adapts to the interdisciplinary education model required in the context of the new liberal arts, but also lets teachers, in the good atmosphere and high-quality It also allows teachers to realize the improvement of their teaching digital literacy skills in a good atmosphere and high-quality communication and interaction. The evaluation and feedback system is a guarantee to ensure the improvement of teachers' digital literacy. The "Teaching Evaluation" section forms a closed loop of evaluation and feedback to ensure that the evaluation results can truly influence teachers' teaching ability and progress. At the same time, evaluation methods should be diversified, covering both theoretical knowledge systems and teachers' digital literacy skills. Evaluation feedback, on the other hand, can be used as an important assessment basis for teaching practice to help teachers continuously optimize their teaching ability. Through regular optimization, a closed-loop improvement mechanism can be formed to promote teachers' continuous growth and development.

The "cloud platform" cultivation model built by the three boards, through the combination of internal and external, resource sharing, mutual communication and finally evaluation and feedback, not only improves the applicability and utilization, but also promotes the improvement of teachers' digital literacy ability through cross-disciplinary communication and evaluation and feedback , as shown in Figure 1.



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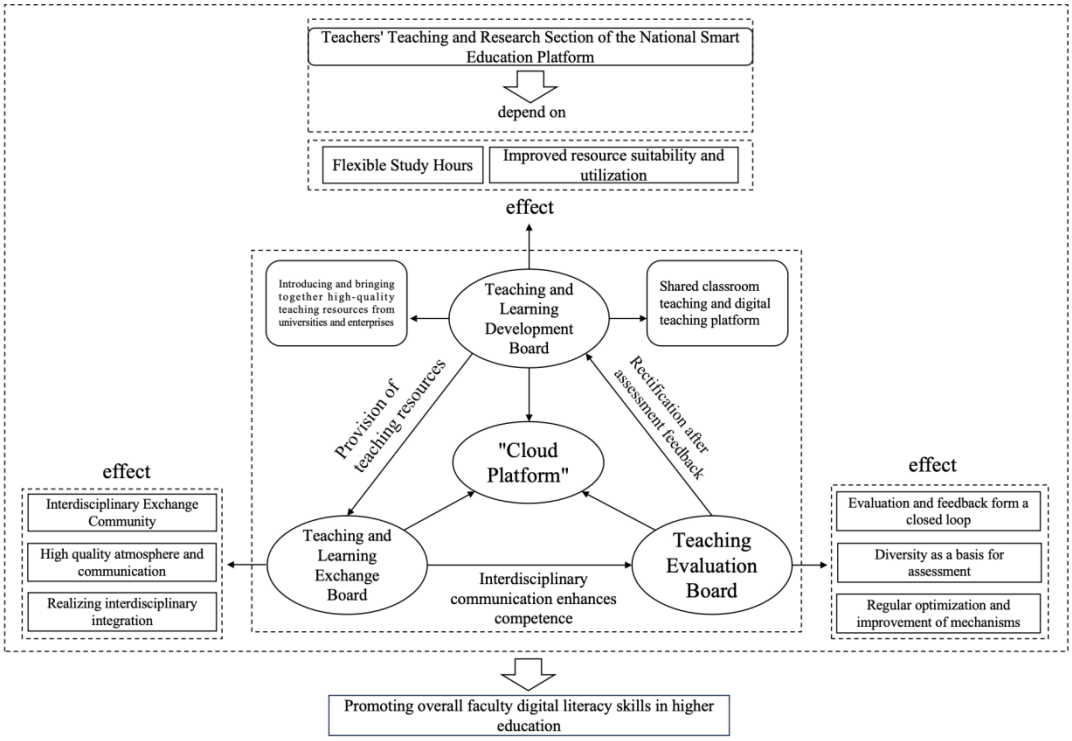


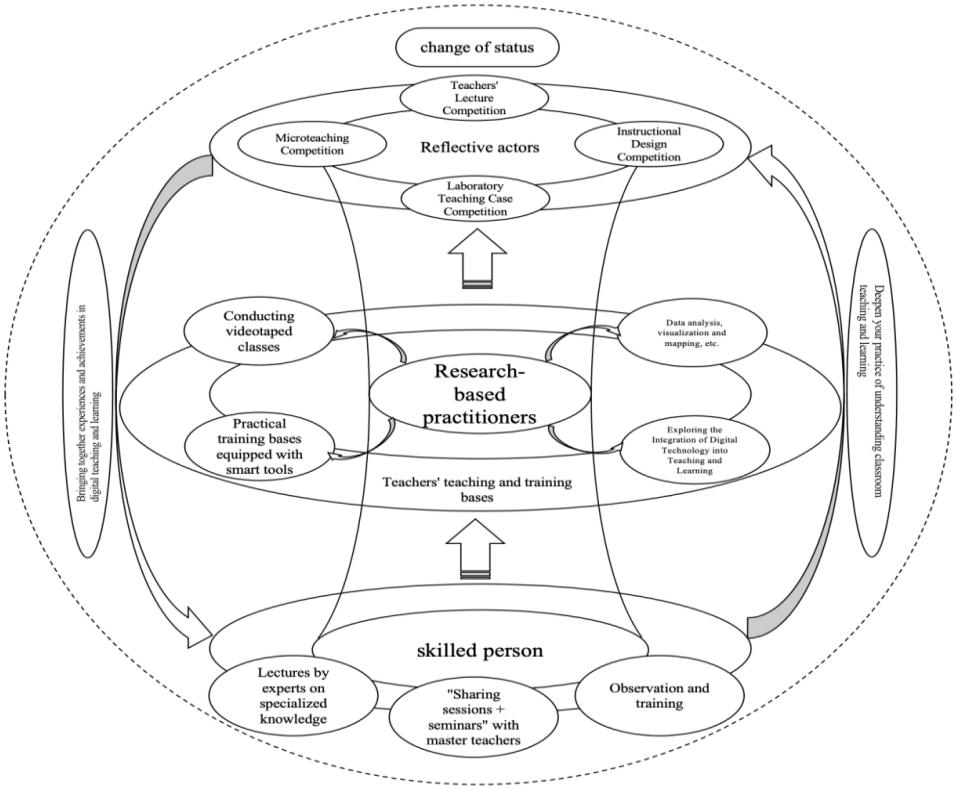
Figure 1. The "cloud platform" training model

3.2 Establishment of "research-practice-competition" integrated training model

In the context of the new liberal arts, promoting a high-quality model of teacher digital literacy competency development is the key to improving teachers' teaching ability. Colleges and universities should refer to the industry standard of Digital Literacy for Teachers, and establish a matching program for the development of teachers' digital literacy competence based on the digital infrastructure in colleges and universities, the goal

of educating people, and the practice environment provided to teachers.

Through Establishing the integrated training model of "research-practice-competition", which shifts the once closed learning area to a scenario of learning based on practical experience, seminars and reflections, and cooperation and participation. Among them, "research" refers to the learning of theoretical knowledge, through expert lectures, sharing sessions of famous teachers, seminars, observation and training, etc., systematically learn theories , tools and application methods of digital literacy, and gradually deepen their understanding and practice of classroom teaching. At the same time, dig out the good problems in theoretical learning and academic research to promote their own professional development. "Practice" refers to strengthening the application of practice and practicing in the real scene. Teachers should not only learn through theoretical knowledge, but also apply the theoretical knowledge learned in specific scenes, internalize it in the heart, externalize it in action. The establishment of teachers' teaching training bases in colleges and universities and the development of recorded classrooms can enable teachers to self-examine each link in the teaching process. At the same time, the training base can be equipped with all kinds of advanced artificial intelligence tools, using ChatGPT, Wenxin Yiyin and other emerging generative artificial intelligence technology, virtual environment construction and application of technology, using Twee, Visla and other tools to assist in generating multimodal teaching resources, mastering the integration of literature management, data analysis, visualization and mapping, and other tools such as the use of the fusion of methods and so on (Bao-Cun Liu, Ming-Han Gou 2023; Cai Jigang, Lin Yun 2024), which facilitates teachers to explore how to better integrate digital technology into teaching content in practice. Of course, post-practice reflection is also essential. Through self-examination of teaching after practice, teachers continue to reconstruct the knowledge system and internalize it into their own teaching wisdom in exploring the path of integrating digital technology and teaching, so as to avoid the phenomenon of "talking on paper" and realize the effective enhancement of digital literacy skills. "Competition" refers to the display and exchange of the results of teachers' experience accumulated through the learning and practice of theoretical knowledge in the front. The display of results can be carried out through a number of competitions, such as microteaching competitions, teacher lecture competitions, teaching design competitions and experimental teaching case competitions, etc., through the competition to select teachers with outstanding performance in teaching, convergence of digital teaching experience and results, and through the establishment of certain awards and honors, to inspire the enthusiasm of teachers in colleges and universities to improve their digital literacy skills and innovative consciousness, and to provide the general public with exemplary and exemplary teachers. Example. The integrated cultivation model of "research-practice-competition", to a certain extent, enables teachers to realize the transition from " technological proficiency " to "research-based practitioner " in digital literacy ability. research-oriented practitioner " and " reflective actor " in digital literacy competence to a certain extent (Li Dong 2020), as shown in



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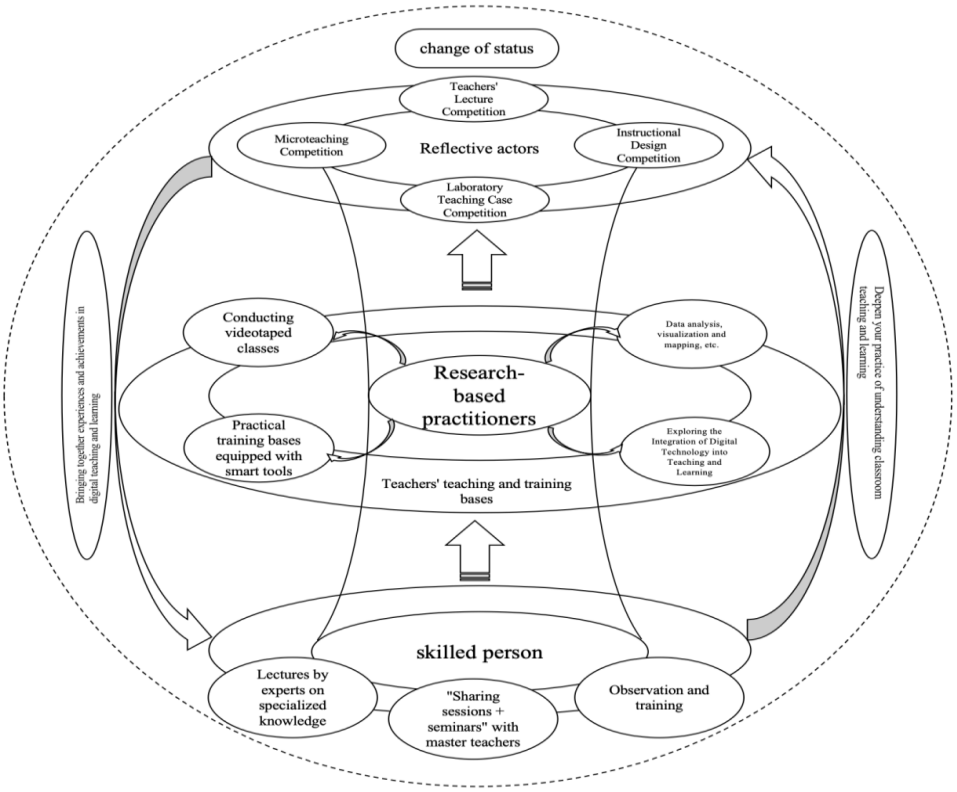

Figure1. Integrated Training Model of Research-Practice-Competition

3.3 Promote "market mechanism" training model

From the perspective of the "market mechanism", the relationship between the government, teachers, enterprises and research institutions is viewed as a joint effort to promote the improvement of teachers'

digital literacy skills. Among them, the government acts as a macro-level regulator in the "market mechanism", and provides favorable guarantee for the cultivation of digital literacy skills through the formulation of relevant teaching policies and implementation plans; teachers, as the consumers of the "market mechanism", that is, the users' own behavior and market demand, influence the development direction and strategy of the market; enterprises and research institutes influence the development direction and strategy of the market; and enterprises and research institutes influence the development direction and strategy of the market. Teachers, as consumers of the "market mechanism", that is, the users' own behavior and market demand, influence the development direction and strategy of the market; enterprises and scientific research institutions are the executive agencies of the government, responsible for implementing the government's policies and standards, meeting the needs of users, and promoting the cultivation of digital literacy skills in the field.

Specifically, the government can promulgate and implement specific, enforceable operational programs and continuously improve relevant policies, such as formulating incentive policies and special funds, to provide guarantees for the development of "users" and further stimulate their motivation and innovation. At the same time, the government can also issue a notice of administrative meeting to organize a study of the central government's requirements for teacher training, and implement a monitoring mechanism to ensure the effective use of resources and the effective implementation of policies. The "users", i.e. teachers, should also actively cooperate with the government's relevant policies and implement them, actively participate in digital literacy knowledge and competence training and related practical activities, and improve their own digital literacy competence level. At the same time, based on their own learning and practice, teachers should provide timely feedback and rectification suggestions to the government, enterprises and scientific research institutions, so as to promote the improvement of relevant policies and the continuous improvement and optimization of the digital literacy competence cultivation system. Enterprises, on the other hand, have advantages in innovation and technology. They actively develop digital literacy technologies and product services that match teachers' needs based on relevant policies and implementation programs issued by the government. For example, job training, teaching skills videos, teaching tools, etc. provide teachers with better teaching systems and support. At the same time, enterprises also need to cooperate with research institutions, which play an important role in the development of teachers' digital literacy competence. Teaching seminars and digital literacy training courses for teachers, such as , provide teachers with continuous learning and broad development space, and assist teachers to continuously improve their digital literacy competence level. The "Market Mechanism" training model, by imitating the market operation form, unites multiple parties for effective cooperation, and is committed to creating a good digital literacy training environment, providing teachers with a more perfect, open and innovative atmosphere, and promoting them to achieve significant results in deeper areas, so as to realize the sustainable development of digital literacy education in the context of the new liberal arts. The sustainable development of digital literacy education in the context of the new liberal arts can be realized.

New Liberal Arts context by creating a high Under the background of the new liberal arts, the development of teaching education is promoted by creating a model for cultivating the digital literacy ability of teachers in high schools. The first is the "cloud platform" cultivation mode, which realizes resource sharing and communication feedback to improve literacy through the combination of multiple boards; the second is the "research-practice-competition" integrated cultivation mode, which promotes the transformation of teachers' digital literacy ability from theoretical learning to practical application to the display and exchange of achievements; and the last is the "market mechanism" cultivation mode. Secondly, it is the "research-practice-competition" integrated training mode, which promotes the transformation of teachers' digital literacy ability from theoretical learning to practical application to the display and exchange of results; and lastly, it is the "market mechanism" training mode, which creates a good cultivation

environment with the help of multi-party cooperation among the government, teachers, enterprises and scientific research institutes. From different perspectives, the three modes work together to improve teachers' digital literacy competence and promote the development of digital literacy education in the context of the new liberal arts.

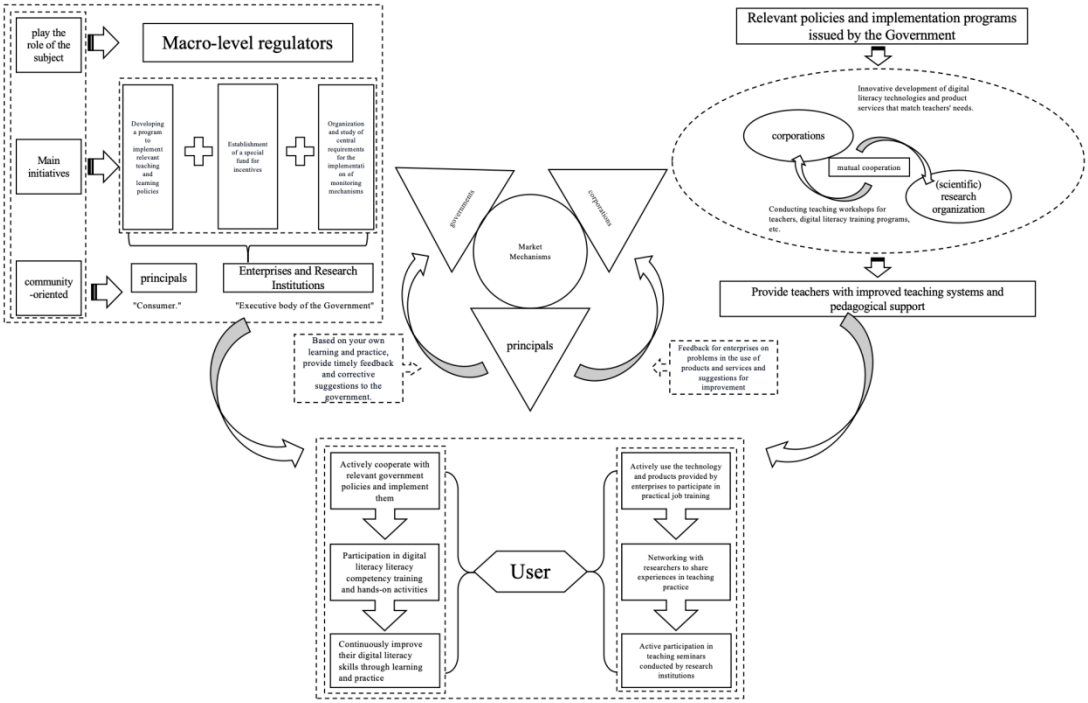

Figure 3. The "market mechanism" model of training

References

1. HU Xiaoyong,LI Wanyi,ZHOU Yanni. Research on Teachers' Digital Literacy Development: International Policies, Focus Issues and Development Strategies[J]. Journal of National Institute of Educational Administration,2023,(04):47-56.
2. Pan Weihua ,Liu Caihua. Cultivation of Digital Literacy for Teachers of Business and Economics under the Perspective of New Liberal Arts--Connotation, Realistic Dilemma and Enhancement Path[J]. New Curriculum Teaching(Electronic Edition),2024,(11):184-186.
3. Sun Yanchun. Research on the path of improving digital literacy of higher vocational teachers in the era of digital intelligence[J]. Mechanical Vocational Education,2024,(10):1007-1776.
4. LI Zhengchao ,GAO Ming,WANG Hui. The connotation, current situation and influencing factors of digital literacy of teachers in higher vocational colleges and universities[J]. PR World,2024,(21):103-105.
5. XIAO Yonghe,ZOU Yumei,FENG Wenqin,et al. Research on the evaluation analysis and promotion path of digital literacy ability of foreign language teachers in colleges and universities[J]. Modern Education Technology,2024,34(10):83-91.
6. Li Linguang,Xu Ying,Zhou Zihan. Research on Construction Problems and Countermeasures of Digital Library in Changchun Universities [J]. International Public Relations,2024,(18):11-5281.
7. Zhang Ranni. Connotation characteristics and development path of teachers' digital literacy under the vision of education digitization[J]. Continuing Education Research,2023,(08):46-51.
8. Wu Mian, Chen Min. Teachers' digital literacy: the focus of teacher development in the context of digital transformation of education[J]. China Information Technology Education,2023(5):4-7.
9. YUAN Huiling. Digital social responsibility of university English teachers in traditional Chinese

medicine colleges: implications, challenges and cultivation[J]. Pharmacy Education,2024,40(05):32-1352.
10. Ci Zhaohong. Research on the cultivation and enhancement of digital literacy of teachers of Civics and Political Science courses in colleges and universities in the new era[J]. Journal of Heilongjiang Institute of Technology (General Edition),2024,24(07):1672-6758.
11. Wang Xuemei,Zhou Maojie. Mathematical Intelligence Literacy of Foreign Language Teachers in Colleges and Universities: Connotation, Framework and Development Path[J]. Foreign Language Society,2024,(05):33-40.
12. LIU Wentao,REN Zhijiang,WANG Youth. A multidimensional review of digital literacy enhancement of teachers in higher vocational colleges and universities: value, reflection and way forward [J]. China Vocational and Technical Education,2024,(27):53-58+66.
13. Li. Grasp the curriculum construction and promote the quality of schooling [N]. Language and writing newspaper,2024-04-24(008).
14. GÓMEZ-TRIGUEROSIM,RUIZ-BAÑULSM,ORTEGA-SÁNCHEZD.DigitalLiteracyofTeachersinTraining:MovingfromICTS(InformationandCommuni-ation cationTechnologies)toLKTs(LearningandKnowledgeTechnologies)[J].EducationScience,2019,9(4):274.
15. Wang Wenqian. Research on the Influencing Factors and Enhancement Strategies of Higher Education Teachers' Digital Competence [D]. Qingdao University,2022.
16. ZHAO Zhiqun,HUANG Huiting. Research on the construction of digital learning resources in vocational education: status quo, problems and suggestions[J]. China Education Informatization,2022,28(08):10-17.