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A Study on the Cultivation Model of Teachers' Informatization Teaching Ability in the Context of New Curriculum of High School English

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Abstract: *Informatization teaching is the inevitable development of modern education, and with the gradual realization of the informatization of teaching environment and learning mode, the level of teachers' informatization teaching ability becomes an important factor directly affecting the quality and effect of classroom teaching. This paper analyzes the current situation of the development of high school English teachers' informatization teaching ability, proposes a model of teachers' informatization teaching ability in the context of the new curriculum for high school English, constructs a model for cultivating high school English teachers' informatization teaching ability, and discusses several aspects of training goal orientation, curriculum system setting, teaching model innovation, and evaluation system construction. It is hoped that this paper can provide reference for the innovative teacher informatization teaching ability cultivation model.*

Keywords: *High school English; New standards; Information-based teaching; Cultivation models*

Introduction

With the accelerated pace of education informatization, China's education informatization has officially entered the 2.0 stage, and the "Education Informatization 2.0 Action Plan" issued by the Ministry of Education in 2018 emphasizes the need to continuously promote the deep integration of information technology and education, vigorously improve teachers' information literacy, give full play to the auxiliary role of information technology in education teaching, and effectively apply education information technology to actual teaching, requiring that teachers should have Information technology teaching awareness, constantly improve the ability to use information technology, improve teaching methods and approaches, and promote the continuous development of education (Ministry of Education, 2018). Today, with the continuous development of information technology, both teachers and students have fully felt the advantages brought by the means of information technology in education, and with the deepening of the integration of information technology and teaching, the level of information technology in English teaching has been gradually improved. Teaching ability cultivation should also keep pace with the times and constantly seek to develop new cultivation modes.

Overview of Research

Connotations of Information-based Teaching and Learning Competencies

Researchers elaborate the connotation of informational teaching competence based on different theoretical perspectives and classification methods. He Keban (2011) pointed out that informational teaching competencies include both informational teaching attitudes, informational teaching concepts and informational teaching skills, and cover related theoretical research and practical exploration. According to Wang Weijun (2009), teachers' informatization teaching ability includes six sub-capabilities: informatization teaching migration, integration, interaction, evaluation, collaboration ability and the ability to promote students' informatization learning, and Li Tianlong (2009) divides informatization teaching ability into six capabilities, namely, information technology and curriculum integration ability, informatization teaching design, implementation, evaluation, monitoring ability, and informatization teaching resources design and development competencies. According to Cui Yanli (2014), teachers' informatization teaching competency is a synthesis of multiple teaching competencies, which interact and are interrelated, including teaching theory framework competency, teaching analysis competency, curriculum analysis competency, and curriculum development competency. In summary, teachers' informational teaching competencies have the following main characteristics: First, "integrative", the whole of multiple competencies united. Second, "practicability", formed in continuous practical application. Third, "intersectionality", emphasizing the integration of technology into teaching, i.e. deep "integration". Fourth, "sustainability", sustainable development.

Development Status and Improvement Strategies of the Development of English Informatization Teaching Ability

Bai Li (2018) and Wang Yi (2019) believe that English teaching informatization in China is in the initial stage,the development level is low and there are many shortcomings. Currently, English teachers' informatization teaching ability in China has been developed to a certain extent, however, compared with the needs of education modernization, there is still a certain gap, and the informatization teaching ability needs to be further improved. According to Yin Chengxin (2019), the informatization teaching ability of high school English teachers is not greatly influenced by gender and education, while it is more influenced by teaching age, title, teacher training experience and pre-service teacher training study experience. According to Liu (2019), the existing problems of informatization teaching are mainly manifested as teachers' weak awareness of informatization teaching, not focusing on informatization teaching, and relatively backward teaching concepts; insufficient understanding of advanced information technology,difficult to connect with modern information technology; weak informatization teaching ability and weak integration of information technology and curriculum; teachers' lack of sustainable development of informatization teaching ability and lack of self-development motivation; the school lacks a corresponding mechanism for training information technology teaching ability, and most teachers lack opportunities for professional training.

Si Ruirui (2017) proposed a hybrid training model of "centralized training – online training – interactive communication – evaluation and reflection" as a theoretical framework for the development of English teachers' informatization teaching ability model in colleges and universities. According to Mo Jianxue (2016), establishing a long-term training mechanism, optimizing training contents, innovating training methods and expanding training approaches are crucial to the success or failure of teachers' IT teaching ability training. Yang Guoyun (2018) believes that in order to improve the level of informatization teaching, teachers themselves must change their concepts and consciously improve their informatization teaching ability; strengthen their own learning and improve their informatization teaching skills; schools should target the diversified training of English teachers'

Vol.2 No.8 2021
https://doi.org/10.37420/j.cer.2021.060

informatization ability, build a good English informatization teaching environment, and improve the incentive mechanism for improving informatization teaching ability; promote the use of information technology in English classroom, and widely carry out research on informatization education and teaching topics.

Throughout the relevant studies, the existing results have laid a good foundation for this study, and their shortcomings leave room for expansion of this study. Firstly, there are more relevant research results located in the informatization teaching ability of English teachers in general colleges and vocational colleges, while relevant research on high school English teachers is relatively rare; secondly, previous studies have covered the connotation, current situation, influencing factors and development strategies of English teachers' informatization teaching ability, but most of the strategies, ways and modes of cultivating teachers' informatization teaching ability stay at the theoretical level; finally, the less attention has been paid to the research on the evaluation model of high school English teachers' informatization teaching ability, and the establishment of a proven ability evaluation model is an important problem that needs to be solved.

A Model of Teachers' Information-based Teaching Ability in the Context of the New High School English Standard

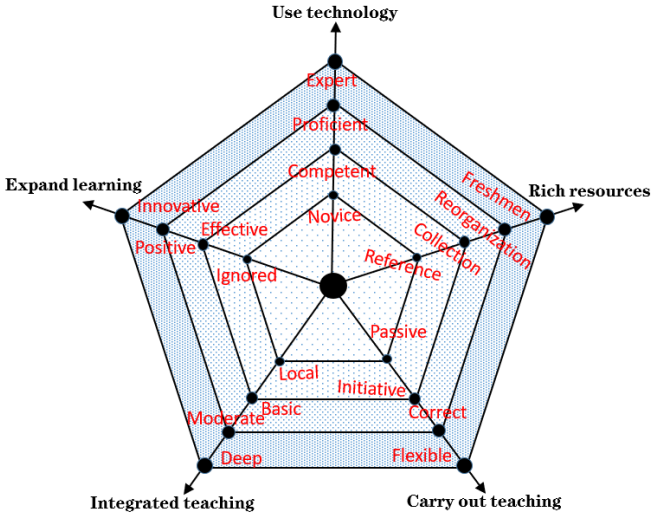

Figure 1. A model of high school English teachers' competence in information-based teaching

The new standard for high school English points out that importance should be attached to the changes in teaching mode and learning style in the context of modern information technology, making full use of information technology, promoting the deep integration of information technology and curriculum teaching, organizing and carrying out online and offline blended teaching scientifically, enriching curriculum resources and expanding learning channels. We found the following key words: "utilize", "enrich", "carry out", "integrate", and it can be understood that high school English teachers' informatization teaching ability is the comprehensive quality of teachers' use of various information technology and resources to carry out teaching, and it is the synthesis of teachers' ability to integrate information technology and curriculum (Jang & Chang, 2016), and it is a way to lead teachers from "traditional classroom" to "smart classroom". This paper combines the requirements of the new standard with the requirements of the new curriculum. In this paper, based on previous research, we propose a model of high school English teachers' information technology teaching ability (as shown in Figure 1).

The model involves five indicators of using technology, enriching resources, carrying out teaching, integrating teaching, and expanding learning, which correspond to four levels of progression respectively.

According to Professor Gu Xiaoqing's five-dimensional IT teaching competencies and the Instructor Competencies proposed by the International Board for Standards in Training, Performance and Teaching (IBSTPI) (Gu & Zhu, 2004; IBSTPI, 2004), we summarize the three dimensions of information literacy, consciousness competence and research innovation: information literacy is examined in terms of the application of IT tools and mainstream teaching platforms, resource creation and development; consciousness competence is examined in terms of teachers' perception of and willingness to apply IT teaching practices and the extent of IT-integrated teaching; research innovation is examined in terms of teaching research to improve curriculum teaching and learning perspectives to reflect on teaching. Information literacy is mainly examined in terms of the application of IT tools and mainstream teaching platforms, resource production and development; awareness competence is mainly examined in terms of teachers' perceptions and willingness to apply IT teaching practices and the degree of IT-integrated teaching; research innovation is reflected and communicated from the perspective of teaching research to improve curriculum teaching and learning, and to innovate teaching methods, learning contents and formats (as shown in Table 1).

Table 1. Table describing the dimensions of high school English teachers' competence level in information technology teaching

Dimensionality	Targets	Level	Horizontal Description
Information literacy	Use technology	1. Novice	No contact or very little contact with high school English information teaching activities, because of the lack of use of information technology rusty.
		2. Competent	Have the most basic theory knowledge and technology to complete the high school English informationization teaching.
		3. Proficient	Familiar with information-based teaching technology, methods, can independently complete the high school English information-based teaching process.
		4. Expert	Have a thorough understanding of high school English information teaching and be able to skillfully complete the information teaching process.
	Rich resources	1. Reference	Can use the simple network search tool to find and learn the content-related learning resources and reasonable citation.
		2. Collection	Learning resources can be collected through different information technology tools and stored in an orderly way, so that they can be called at any time.
		3. Reorganization	Can use information technology tools to recombine learning resources, improve the utilization of learning resources.
		4. Freshmen	Through the processing and processing of information resources, innovative resource sharing, derived from the new learning resources.

Vol.2 No.8 2021
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Consciousness ability	Carry out teaching	1. Passive	Lack of attention to information-based teaching, little knowledge of information technology, passive information-based teaching activities.
		2. Initiative	Understand the development trend of information-based teaching, have a certain understanding of information technology, actively carry out information-based teaching activities.
		3. Correct	Always pay attention to the development trend of information-based teaching, have a deeper understanding of information technology, appropriate to carry out information-based teaching.
		4. Flexible	Be keen on the research and practice of information-based teaching, have a deep understanding of information technology, and carry out information-based teaching flexibly.
	Integrated teaching	1. Local	The partial combination of information technology and English teaching in senior high school: Using information technology to assist teaching.
		2. Basic	The simple combination of information technology and English teaching in senior high school: Using information technology to improve teaching efficiency.
		3. Moderate	The organic combination of information technology and high school English teaching: Using information technology to improve teaching methods, methods and evaluation system.
		4. Deep	Deep integration of information technology and English teaching in senior high school: Deepening teaching reform and constructing intelligent classroom.
Research innovation	Expand learning	1. Ignored	Use information technology to expand learning awareness is shallow, ignoring the link of expanding learning.
		2. Effective	Use information technology appropriately and effectively to expand learning for students.
		3. Positive	Actively seek the effective methods and ways to use information technology to develop extended learning.
		4. Innovative	Use information technology to innovate teaching content, form and method comprehensively, and promote students' all-round development.

Constructing a Model for Developing Information-based Teaching Ability of High School English Teachers

The mode of cultivating high school English teachers' informatization teaching ability is based on the model

of informatization teaching ability under the guidance of modern education theory, and is explored from the target orientation, curriculum setting, teaching mode innovation and evaluation system construction of teachers' informatization teaching ability in accordance with the requirements of the new curriculum.

Clarify Training Objectives to Achieve Sustainable Development

The orientation of training objectives is the prerequisite for the development of training, which affects the construction of curriculum system, the innovation of training mode, the reform of teaching methods, the evaluation of training effects and other aspects. The lack of a unified standard for measuring high school English teachers' informatization teaching ability makes it difficult to highlight the effectiveness of traditional training methods, because of the large differences in teachers' informatization teaching ability levels under different teaching ages, degrees, schools, regions and other characteristics. What kind of training objectives can be adapted to the requirements of the new high school English curriculum? Combining the policy documents on the implementation of informatization teaching and the model of informatization teaching ability, we proposed to establish teachers' modern education and teaching concepts, require teachers to master the basic theories and methods of educational technology, improve the practice and application of educational technology, promote teachers' educational technology literacy and professional ability, promote the application of information technology in high school English classrooms, and widely carry out research on informatization education and teaching topics. The overall goal of the program is to train a group of "elites" who will lead the development of informatization teaching by carefully selecting and training them with high standards, to stimulate more teachers to learn the theory of informatization teaching and to participate in practical activities, to improve the overall level of informatization teaching in each school by leading them from point to point, and to achieve sustainable development of informatization teaching.

Optimize the Curriculum Implementprecise Teaching

Constructing a cultivation curriculum system that closely follows high school English teaching and deepens the application of information technology is an important part of the cultivation of information technology teaching ability. The cultivation of informatization teaching ability follows the principle of thick foundation and heavy practice, and the curriculum design needs to set up special courses for cultivation, but also needs to be combined with high school English teaching for cultivation, focusing on the integration and innovation of information technology and high school English teaching. The curriculum system contains 3 major categories: theoretical courses, practical courses and extension courses. Theoretical courses mainly include information technology teaching theory, information technology teaching knowledge and skills, etc., aiming to cultivate teachers' information technology teaching concept and information literacy; practical courses mainly include information technology teaching design, hybrid teaching practice, information technology teaching assessment, information technology teaching research, etc., aiming to cultivate teachers' information technology teaching application ability and research ability; extension courses include information technology teaching forum, teaching The extension courses include informatization teaching forum, teaching demonstration, teaching competition and other programs, aiming at promoting teachers' ability of continuous development and innovation in informatization teaching. Due to the obvious level differences between regions and teachers, it is important to ensure the overall training effect while focusing on individual training,

Vol.2 No.8 2021
https://doi.org/10.37420/j.cer.2021.060

and it is important to select learning contents flexibly and implement precise teaching according to regional and teachers' own development needs and actual ability levels.

Create a Diversified Training Model to Help Build the Teaching Force

To create a diversified training model by continuously adjusting policy measures to provide quality platforms and resources for the design and implementation of diverse forms of training activities, and to achieve open sharing and maximum utilization of teaching resources. Specifically, there are the following points: (1) Using projects as a carrier, teachers are systematically trained in information-based teaching skills through various training programs, so that they can master the ideas, knowledge and skills of information-based teaching design. (2) Encourage teachers to apply online learning spaces to carry out activities such as lesson preparation and online training, face-to-face teaching and research, online seminars, and promote the organic integration of on-site and online training, so as to build up a diversified mode of improving informatization teaching ability with organic integration between online and offline, and create a novel, multi-dimensional, highly participatory and personalized training environment for teachers. (3) Expand informatization teaching training through classroom demonstration, group lesson preparation, and classroom competition integration. On the one hand, they can learn the methods and skills of making informatization courseware from excellent teachers, enhance group cohesion and innovation, and members can learn from each other's strengths and make progress together; on the other hand, they can enhance teachers' main position in informatization teaching activities, stimulate their interest in informatization teaching, enhance their participation and gain a sense of achievement. (4) Selecting and sending master teachers of informatization teaching to regional schools to support teaching and exchange, and promoting schools and regional teachers' informatization teaching ability through special study, school-based training and teaching and research activities (as shown in Figure 2). The above measures have promoted the healthy and efficient development of teachers' informatization teaching ability and the construction of an informatization teacher team.

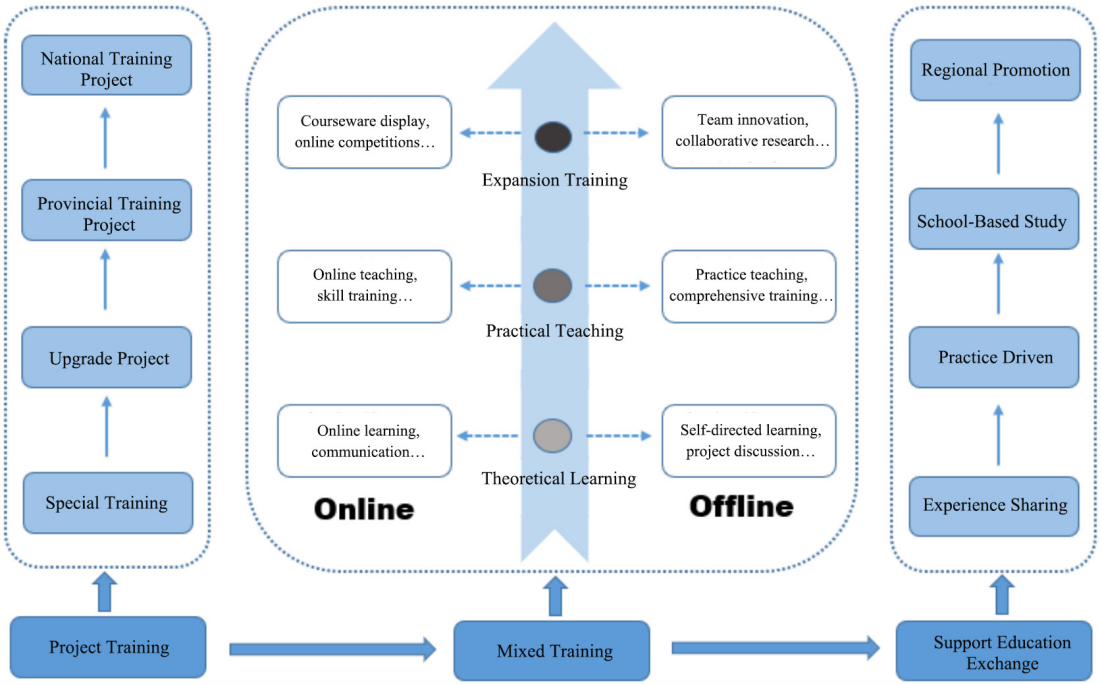

Figure 2. A model for developing information-based teaching skills of high school English teachers

Establish a Scientific and Dynamic Evaluation System to Improve Assessment Validity and Training Quality

A scientific and dynamic evaluation system can provide methods and standards for the assessment of high school English teachers' informatization teaching ability, and objectively and truly reflect the teachers' current level. The development of informatization teaching ability is a long-term, continuous and dynamic process, and it is necessary to comply with the requirements of informatization teaching and teaching reform, modify the evaluation indexes in time, and construct a scientific and dynamic evaluation system, with reference to the following criteria in this paper: first, focus on the integration of information technology and English teaching; second, pay attention to the sustainable development of teachers' informatization teaching ability; third, surround the rap information literacy, awareness ability and research innovation. The combination of self-evaluation, teachers' mutual evaluation and experts' evaluation, school evaluation and education bureau evaluation, effect evaluation and emotional and attitudinal evaluation, and stage evaluation and anticipatory evaluation was adopted to establish four primary indicators of high school English informatization teaching expertise, informatization teaching design ability, informatization teaching implementation and evaluation ability, and informatization teaching research and innovation ability, and the flexible use of online learning time The evaluation of individual indicators, such as participation, cooperation spirit, team contribution, etc., is used to evaluate and motivate teachers, enhance their participation and sense of acquisition. The application of the dynamic evaluation model provides timely feedback on teachers' learning data in the process of capacity development at each stage, facilitating the identification of problems and personalized adjustment, greatly compensating for the shortcomings of the traditional evaluation system, reducing the subjectivity of evaluation, and improving the validity of assessment and training quality.

Concluding Remarks

In order to cope with the requirements of the new curriculum and teaching reform on high school English teachers' informatization teaching ability, and to get rid of the dilemma faced by the development of high school English teachers' informatization teaching ability, this paper constructs a model of teachers' informatization teaching ability in the context of the new curriculum standard of high school English, and proposes a model of teachers' informatization teaching ability cultivation from several The model of teachers' informatization teaching ability cultivation is proposed in several aspects, in order to promote the healthy and efficient development of high school English teachers' informatization teaching ability, promote the informatization teaching reform of high school English curriculum, and promote the deep integration of information technology and curriculum teaching. Admittedly, there are still many shortcomings in this study, such as the lack of empirical research and feasibility analysis, etc. In the future, empirical research will be conducted on the basis of this paper to further improve the effectiveness of the study.

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Vol.2 No.8 2021
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