Study on the Construction of Local College Textbooks under the Mode of "Internet +"

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Abstract: Playing a role of knowledge carrier in the teaching work, the textbook, an indispensable part of cultivating talents, is the basis for teachers to carry out teaching activities for the learning objects and an important form of teaching content. As an important prerequisite for improving the quality of talents training and college teaching, strengthening the quality construction and management level of local college textbooks plays a key role in improving the overall education level of colleges. With the continuous deepening and reform of China's higher education, the traditional college textbook construction and management model can no longer meet the needs of the new era. Under the "Internet +" model of the new era, the way of promoting the construction of local college textbooks to improve local colleges to train high-quality, innovative, composite and applied talents is a question for colleges to explore and think about.

1. Present Situation in the Construction of College Textbooks

1.1 Analysis of the operation and management mode of textbooks:

At present, according to statistics, most public colleges in China adopt a comprehensive management mode of business and administrative management. Some local colleges adopt a double-regulation model in which the management and management functions of teaching materials are separated from each other. Among them, the textbook management department is responsible for the special textbook management, including the construction, study and evaluation of college textbooks. The cooperative textbook supplier is responsible for management functions of textbooks, including the distribution and the management of textbooks. This promotes the supply and subscription ability of college textbooks to a certain extent. However, it requires close communication and cooperation between the management departments and management departments of textbooks to strengthen information exchange and resource sharing, avoid derailment and disjointed teaching materials management, hindering the implementation of research, construction and evaluation of textbooks in colleges and reducing the quality of teaching and the cultivation of talents.
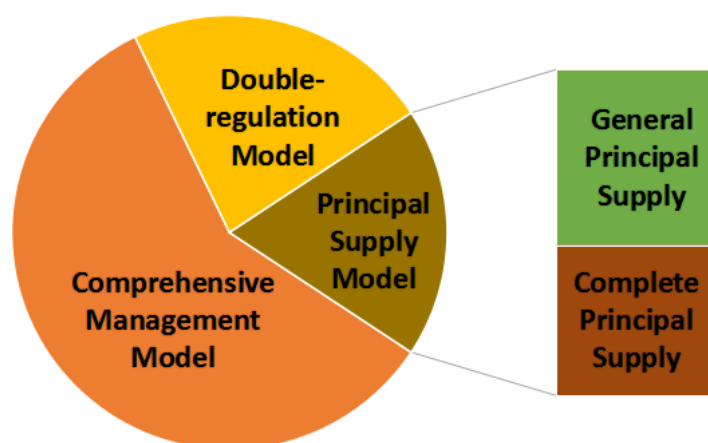

Fig.1

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1.2 Analysis of Presentation Ways of Textbooks

With the improvement of modern technology, textbook representation ways are developing in a diversified direction, such as paper textbooks, electronic textbooks, online classes, micro-courses, animations, audio-visual tutorials, and so forth. The traditional textbooks are slow to update and the content is lagging behind. For one thing, there are problems such as the incomplete variety of sample books in local college libraries, the lack of foreign textbooks and information channels, the imperfect digital resources, and backward management of textbooks. For another, because the publication of college textbooks is time-consuming and cumbersome, the content has been lagging behind when the textbooks are used. The latest theories are not learned and shared in time, and the effect will be greatly reduced. With the development and progress of society, the research and development and extensive application in the fields of informatics, digitization, intelligence, computer science, and mobile internet technology have accelerated the speed and ways of dissemination of electronic publishing, accelerating knowledge renewal, and diversifying information channels. A single paper textbook can no longer meet the needs of social development and has affected students' learning and practice of new knowledge.

1.3 Young Textbook Research Team and Imperfect System Construction

At present, with imperfect construction system of textbook and few teachers in the research and writing of textbooks, senior teachers focus on the evaluation of scientific research projects and professional titles. Textbooks writing are mostly undertaken by young teachers who lack experience of teaching and writing textbooks. To a certain extent, these textbooks are not systematic, sequential, logical, and applicable. In addition, the construction system of textbooks lacks scientific and standardized management. The incentive mechanism, funding guarantee system of textbook research, and textbook evaluation system are not perfect, and the motivation of textbook construction is insufficient.

2. The Necessity of the Construction of Three-dimensional Textbooks for Local Colleges under the "Internet +" Model

In 2012, the Ministry of Education issued the "Several Opinions on Comprehensively Improving the Quality of Higher Education" [1], clearly pointing out that it is necessary to vigorously improve the level of talents training and comprehensively improve the quality of higher education. Playing the role of knowledge carrier in the teaching work, textbooks, an indispensable part of cultivating talents, are the basis for teachers to carry out teaching activities for the learning objects and an important form of teaching content. As an important prerequisite for improving the quality of talents training and college teaching, strengthening the quality construction and management level of local college textbooks plays a key role in improving the overall education level of colleges. In July 2016, the Ministry of Education issued the "Guiding Opinions on the Reform of Deepening Education and Teaching in the colleges of the Central Department", clearly pointing out the in-depth integration of Internet information technology education and opening up online quality courses on a large scale form a "student-oriented" education and teaching system. In 2017, the Ministry of Education set up a textbook functional department, the textbook bureau, which specially formulated the management system, curriculum standards, and textbook planning for textbook construction. In April 2018, the Ministry of Education proposed to implement the Education Informatization 2.0 Action Plan. By 2022, it will basically achieve the development goal of "three covers, two improvements and one big platform" (The teaching application covers all teachers, the learning application covers all school-age students, the digital campus construction covers all schools, the information application level and the information literacy of teachers and students are generally improved, and the big "Internet + Education" platform is built) [2] to provide guiding opinions for the future development of education informationization. The Ten-Year Development Plan (2011-2020) of education informationization also pointed out: "Implementing the construction and sharing of high-quality digital education resources is the basic project and key link to promote education informatization"

[3]. In 2018, the General Office of the Ministry of Education issued the "Special Fund Management Measures of Education Curriculum Textbook Reform and Quality Standards [4].

This shows that the Ministry of Education attaches great importance to the construction and implementation of digital education resources, and participates in the application of informatization, standardization and normalization of education management. Some local governments pay great attention to the spirit of relevant documents. For example, in December 2018, Tencent cooperated with the Yantai Municipal Education Bureau. Tencent provided a complete set of solutions covering whole ecosystem of course content, experimental training, competitions, teacher training, pre-employment training, certification exams, innovation and entrepreneurship, internship employment and campus circle. Based on emerging technologies such as cloud computing, big data, artificial intelligence, and Internet of Things, it takes advantage of various intelligent devices and networks to carry out innovative research on new engineering and smart education so as to help implement the Yantai Education Informatization 2.0 program and create localized smart applications and solutions.

3. Suggestions on Promoting the Construction of Three-dimensional Textbooks for Local Colleges

It is recommended to attach importance to the construction of practical teaching and combine theoretical knowledge with practical application. Scientific experiments proved that compared with practice teaching, the frequency of brainwave activity of students in the classroom is relatively low. When classroom teaching is conducted, the effect of receiving information by the brain is not ideal. This requires teachers to focus on cultivating students' ability to learn and think independently about problems. Before the class, students will preview the learning content by three-dimensional textbooks such as online classrooms, electronic textbooks, micro-courses, and online tutorials. In the class, teachers will show and deepen students' learning, understanding and remember of knowledge by various media tutorials such as "multi-platform teaching" and "interactive classroom". After class, students and teachers form an interactive communication, taking the hot spots and difficulties of students concerned as the starting point, correcting homework and solving doubts, improving students' interest in learning, giving play to students' subjective initiative and changing the teaching mode of "cramming" so as to integrate students into the process of learning, which is conducive to the individualized development and innovative thinking of students.

Different orientations make different footholds and emphasis on talent training of colleges. It is necessary to select excellent textbooks at different levels. For instance, a class of undergraduate college students has a high level of knowledge. The selection of textbooks can focus on high-level theoretical study, while the second-class undergraduate colleges can adopt relatively easy-to-understand textbooks so that students can learn and understand better.

It is suggested to develop the construction of hardware facilities, make full use of the resources of teaching materials, improve the quality of textbooks in colleges, and improve the management and construction of quality textbooks. First of all, the hardware is the foundation. Relying on intelligent equipment and network technology, developing and using new technology system software such as smart education and online education, strengthening the information management of textbooks construction, and establishing the use of teaching materials and information sharing mode among colleges, are conducive to discover and use excellent textbooks and conduct the review of excellent textbooks. The selection and writing of excellent teaching materials need to be distinctive. The incentive mechanism, teaching material evaluation and feedback mechanism need to be perfected, and the reward treatment needs to be improved.

As the application and popularization of network, big data and mobile terminals, the construction of local college textbooks presents a diversified trend. It is necessary to jointly maintain the order of local college textbooks and promote the standardization, scientific, informatization, legalization, and three-dimensional construction of local college textbooks.

It is recommended to create an academic atmosphere, focus on cultivating teachers, and create excellent textbook writing teams with technical perfect skills to improve the soft power of teachers.

Strengthening the training of teachers, expanding the teaching team of textbooks research and preparation, and improving the comprehensive quality of textbooks management staff and the ability of teachers to write textbooks, are also recommended.

It is proposed to strengthen industry communication, promote the sharing of academic resources, and develop variety of textbooks to ensure the quality of content. The development of textbook varieties shall be based on the goals and requirements of teaching reform. The curriculum and teaching plans of emerging majors need to develop special textbooks that are suitable for them.

In brief, under the "Internet +" mode, it is suggested to comprehensively improve the quality of textbooks, combine paper materials with a variety of teaching resources, media tutorials, provide a full range of teaching services, explore local college textbook management models suitable for their own development, and promote construction of three-dimensional textbooks local colleges, and promote the cultivation of high-quality, innovative, compound and applied talents in local colleges.

References

[1] Document No. 4 of Higher Education [2012], *Several Opinions on Comprehensively Improving the Quality of Higher Education* issued by Ministry of Education

[2] Document No. 6 of Education Skills [2018], "Notice of the Ministry of Education on Printing and Distributing the *Education Informatization 2.0 Action Plan* [Z]

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