Exploration of Optimized Teaching Mode in Applied Technology Colleges Under the Background of Big Data

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Abstract Under the background of big data era, private universities should make big data not only a teaching tool and means for teachers, but also a teaching platform for students' professional learning and practical training, so as to improve the students' ability of independent innovation. Based on the characteristics of big data and the curriculum requirements of private colleges, this paper analyzes the teaching mode of private colleges under the background of big data, and probes into the teaching reform path of private colleges, which is helpful to improve the teaching quality of private colleges.

Keywords Big data · Private colleges and universities · Teaching mode

1 Introduction

With the development of science and technology and the popularization of mobile terminals in recent years, the rapid development of the media has taken place, and the teaching mode has undergone profound changes, and the traditional teaching mode centered on classrooms, textbooks and teachers has been unable to meet the increasingly diversified learning needs of students. With "pre-class knowledge transfer, in-class knowledge internalization" as the special feature of the "MOOC", "rain classroom" and other new teaching models, with the help of advanced education technology and network platform, effectively promote the personalized development of students, has become the innovative model of higher education and the inevitable trend of teaching reform in the Internet era. This new teaching model has been introduced in China since 2011 and has received great attention from the academic circles and the industry. As an important supplement to China's higher education system, private colleges and universities should follow the trend of social development and the requirements of the development of the times, and vigorously develop the big data teaching model.

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2 Problems in the Traditional Practice Teaching of Private Colleges and Universities

Since the media education model is aimed at cultivating talents with pioneering personality, the education of innovative thinking is cultivated in stages and levels. Since media education is essentially a kind of practical education, according to the requirements of quality education in colleges and universities, there are some differences in the goal of training talents at different levels. The training goal of some private colleges and universities is to train applied talents with practical ability and students' comprehensive vocational ability, which is the fundamental of applied education and teaching, and it is imperative to optimize the educational model [1]. Knowledge comes from practice, ability comes from practice, quality needs to be cultivated in practice, practice teaching is an important form of teaching means in colleges and universities, an important channel to cultivate college students' innovative ability, and plays an important role in forming college students' innovative thinking and hands-on ability. Mainly reflected in the following aspects.

2.1 Practice Teaching is not Strong Enough

In terms of curriculum teaching, generally in accordance with the allocation of classes, so that theoretical teaching is concentrated in fixed classroom classes, class size is larger, when the need to arrange practical teaching links, the number can not be too large, otherwise chaos is not easy to manage, classroom order and reception situation can not be controlled, which requires the students to regroup, but such class time is not good to do, it is likely to conflict with other courses, the second is to guide teachers, practice places also need reasonable adjustment and planning. There may not be enough practical teachers and venues. It takes a lot of energy to coordinate, so in practice teaching, the teaching method of practice is limited to case discussion, observation and other eye-catching ways, so that students have low interest in practical teaching, lack of initiative and enthusiasm for learning, practice teaching flow in form, teaching is still inclined to classroom teaching and theoretical knowledge transfer, and put practical teaching in a secondary position [2].

2.2 Teachers Practice Guidance Ability is Limited, the Lack of Dual-Teacher Teachers

At present, some college teachers are the main source of new master's or doctoral graduates, teachers in the enterprise training time is short, practical operation ability is weak, basically the school to schools, books to book training. Some even after some training, but because of the grass-roots docking top-post system is not perfect,

so that teachers practice floating on the surface, can not really integrate into the grass-roots level, participate in the actual work [3]. Therefore, the specific operation of enterprises, specific design, etc. is not very clear, so that in guiding students will appear insufficient strength, can not correctly guide students to complete practical training and other related tasks, practical teaching will be greatly reduced.

2.3   The Evaluation System of Practical Teaching Quality Needs to Be Perfected and Standardized

In the long-term teaching exploration, colleges and universities continue to carry out innovative research on practical teaching mode, fully provide teachers with various channels, so that teachers in classroom teaching constantly reform, explore and innovate teaching mode, in order to better promote the development of applied talent education. Practice teaching forms are diverse, aimed at training students' hands-on ability, so the evaluation system can not be single, to be flexible and diverse, suitable for different practice teaching models [4]. However, under the inconsistent evaluation system, the guidance teachers will have different standards, each way, making the level of practical teaching difficult to evaluate, which also makes the effect of practical teaching has been greatly affected.

3   The Development Status Quo of Big Data Education Mode in Private Colleges and Universities

Big data teaching mode refers to teachers' use of the network to teach, which has many forms, such as recording real classrooms, live teaching and so on. In 2010 NetEase opened public courses, in March 2011 Fudan University joint NetEase to build a domestic university online course platform, and then major universities have joined. In these four years, the variety of online courses greatly enriched, the number of online courses platform increased, college students began to gradually contact the network teaching, more students can listen to the teachers. At the same time the major training institutions, examination and research tutoring classes have taken this new situation, widely occupied the market and achieved a good response. At present, online classes have been in a period of rapid development. For foreign countries. The United States in the construction and practice of online courses has been in the forefront of the world, as early as 2001 MIT will be part of the network courses on the Internet open, and then Harvard, Yale 250 universities and scientific research institutions to join the construction of online courses, the relevant survey shows that the quality of online courses in American universities can be as good as traditional college, or even better than traditional teaching. At the same time, the vast majority of

American colleges and universities agree that online courses are an important long-term strategy of higher education [5]. In 1,200 questionnaires on the application of online courses to university teaching, we found that 139 people thought it was "very appropriate", 561 thought it was "more appropriate", 334 thought it was "general", 109 thought it was "inappropriate" and 13 thought it was "very inappropriate".

4   The Optimization Strategy of Big Data Education Mode in Private Colleges and Universities

4.1   Teachers Are Actively Coping with the Changes and Developments of the Media Era

The rapid development of modern educational technology has made great changes in the way university teachers conduct ideological and political teaching. Teachers should always pay attention to the pace of development since the media era itself, timely find that big data for college students' ideological and political education to bring good and bad effects. And at the same time pay attention to the polarization of things, in order to play the role of big data perfectly [6]. Teachers in the teaching before also do a good job of big data information analysis work, will be a variety of information categories, maximize the use of big data strengths, discard the harm, but also to make students understand more easily, such as many users in the shake, boss direct employment, spell more, fast hand these sites and platforms published bad information need teachers in advance for students to identify out, let them avoid falling into the trap of fraudsters.

4.2   Strengthen Students' Self-Awareness Ability

To get excellent teaching results, it is necessary for college students to have a clear understanding of their own ideas before establishing a good educational idea, and find out their strengths and weaknesses, before they can pick out useful information from many big data messages to make up for educational deficiencies [7]. In this way, the school can coordinate the development of all aspects of education for college students, so that they will not get lost in the bustling and full of temptation in the world but learn to down-to-earth, hard work, and then enrich their own life experience.

4.3 Take the Initiative to Publicize the Actual Education Information, the Leading Power of the Dissemination of Information Firmly Grasp

The teacher in the classroom education work at the same time, the school should also organize a big data department to establish its own media platform timed, reasonable layout of information columns, and then on the ideological education of micro-video, audio, and animation information through the media to promote to students to learn to absorb, singing with the party-related voices with positive energy, and allow students to join the group of information sharing [8]. In the shortest possible time, teachers in the school received information about the development of the Party and the country simplified and soft, timely release on the official new media platform, so that every student can see the school's news reports on the Internet, and students can also personal views, comments feedback to school teachers.

4.4 Strict Control, Improve the Quality of Propaganda Materials

Now many universities in the big data [9] information control has not set up a professional control department, which has a great impact on the detection and control of information, so now university leaders at all levels should timely create a qualified big data information regulatory department, set up a comprehensive information column as a guide. Not only should the text information supervision department, the sound information supervision department and the picture information supervision department be set up the video information supervision department, among which the video information supervision department should focus on strengthening the supervision [10]. With the rapid development of information technology, most college students now like to understand the outside of the new things through video, precisely because of this to a lot of people with bad intentions to bring opportunities, so that many bad video spread on the Internet, so schools should strengthen the human input in this area and then carry out a reasonable division of labor and overall management, so that high-quality information into the political and ideological education work, so that students learn healthy positive and useful ideological and political content, Then all-round drive China's education cause harmonious and steady development and promotion.

5 Conclusion in Summary

China is now in the period of education reform and the rapid development of network information technology, all kinds of information explosion boom has become the

normal network information. And the emergence of the network from the media platform, for the dissemination of this information provides a good carrier. With the deepening of educational reform, more and more people realize the role of the Internet big data in teaching and educating people. Therefore, private colleges and universities must keep up with the trend of development of the times, understand the characteristics of the network big data, after analyzing the role of the network big data in teaching and educating people, actively explore the study of big data platform in the process of optimizing teaching mode, establish a professional big data management group, big data content integration and utilization, actively promote campus culture and socialist core values, in order to optimize the teaching model, to ensure the personalized all-round development of students to provide impetus.

References

1. Naimi AI, Westreich DJ (2014) Big data : a revolution that will transform how we live, work, and think|Clc. Am J Epidemiol 179(9):1143–1144
2. Philip Chen CL, Zhang CY (2014) Data-intensive applications, challenges, techniques and technologies: a survey on big data. Inf Sci 275(11):314–347
3. Dupuy d'Angeac G (2012) Big data: the management revolution. Harvard Bus Rev 90(10):60–6, 68, 128
4. Chen CLP, Zhang CY (2014) Data-intensive applications, challenges, techniques and technologies: a survey on big data. Inf Sci Int J
5. Hashem IAT, Yaqoob I, Anuar NB et al (2015) The rise of "big data" on cloud computing: review and open research issues. Inf Syst 47:98–115
6. Goes PB (2014) Design science research in top information systems. J MIS Q 38(1)
7. Romero C, Ventura S, Pechenizkiy, Baker RSJD (eds) (2011) Handbook of educational data mining. CRC Press, Boca Raton, FL, USA
8. Weber AS (2014) Suggested legal framework for student data privacy in the age of big data and smart devices. Front Artif Intell Appl 262:669–678
9. Ding D, Li J, Wang H et al (2017) Student behavior clustering method based on campus big data. In: International conference on computational intelligence & security. IEEE Computer Society
10. Muthukrishnan SM, Govindasamy MK, Mustapha MN (2018) Systematic mapping review on student's performance analysis using big data predictive model. J Fundamental Appl Sci 9(4S):730