

Study on the Scheme of Educational Informatization Construction for Newly-Founded Undergraduate Colleges in China

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Abstract—In the process of realizing the leap-forward development of teaching quality, the newly-built colleges and universities in China are facing the problems of mechanism, teachers, and ideas etc. The practice shows that educational informatization construction scheme which taking classroom teaching as a breakthrough, reforming on the areas of mechanism system, resources & platforms, and teaching mode, is an effective way to improve the teaching quality and students' quality in newly-built colleges and universities in China.

Keywords: *newly-founded undergraduate colleges in China, informatization in education, classroom teaching*

I. INTRODUCTION

In the information age, the rapid development of various information technologies, especially mobile Internet technology, has a profound impact on the form of higher education, teaching mode, and the information reform of education has formed an irresistible wave [1]. The deepening reform of education informatization is an effective way to significantly improve the teaching quality and student quality, thus, many colleges and universities have carried out a lot of exploration and practice in the reform of educational informatization, including many newly-built undergraduate colleges and universities [2] [3]. Since 2000, with the transition and development of chinaundefineds higher education from elite education to mass education, a number of colleges and universities have been built to meet the demands of the masses for the development of higher education [4] [5]. However, in the process of educational informatization construction in these newly-built colleges and universities, due to various reasons, there are also problems in the aspects of mechanism, teachers, ideas and so on. The importance of finding a program suitable for the construction of the educational information of the newly-built university is becoming more and more important.

II. LITERATURE REVIEW

The application of information technology achievements in the field of education has changed the traditional way of

teaching and learning in colleges and universities, and thus has a profound impact on education [6] [7]. At present, the newly-built colleges and universities in China attach great importance to the construction of educational informatization, especially to the cultivation of teachers' information teaching ability, and encourage teachers to apply advanced information technology to classroom teaching[8] [9]. However, in the process of educational informatization construction in these newly-built colleges and universities, and due to various reasons, there are also various problems, and the concentrated problems could be explored as below:

Firstly, in the process of promoting the teaching reform in newly-built colleges and universities, there are problems of multi-department cooperation, formalization and inefficiency [10]. Secondly, in terms of teacher strength, newly-built colleges and universities are faced with weak teachers and insufficient information teaching ability [11]. Many teachers are used to the way of thinking and the teaching mode of junior college education in the past [12]. However, teachers' information teaching ability is the key to the construction of informatization teaching [13]. Thirdly, In terms of teaching methods, it is difficult to guarantee individualized teaching needs in large-scale teaching, otherwise, the traditional classroom teaching method is single and the atmosphere is dreary [14].

As all mentioned above, how to make the reform of classroom teaching in schools conform to the development trend of the information age, and how to construct the deep integration of information technology and teaching ecology has become a burning issue in the context of the new era [15].

III. SCHEME OF EDUCATIONAL INFORMATION CONSTRUCTION IN NEWLY-FOUNDED UNDERGRADUATE COLLEGES

A. Methodology

Neusoft Institute Guangdong is an undergraduate college in the south of China. In May 2014, Neusoft Institute Guangdong has been upgraded from a junior college to an undergraduate college. As a newly-founded

undergraduate college, in order to realize the leaping development of teaching quality, Neusoft Institute Guangdong has launched the educational information reform aimed at "providing satisfactory classroom for college students". In the practice for five years, taking the classroom teaching reform as the breakthrough point, focusing on the key elements of classroom teaching, promoting the reform and practice of educational informatization in an all-round way from the four dimensions of "mechanism system, resources and platform, teaching mode and teacher training", gradually creating the "golden course" and eliminating the "water course", the college have found a path of continuously and effectively promoting the construction of educational informatization, which is theoretical and practical. The following "Fig. 1" will illustrate the methodology in detail.

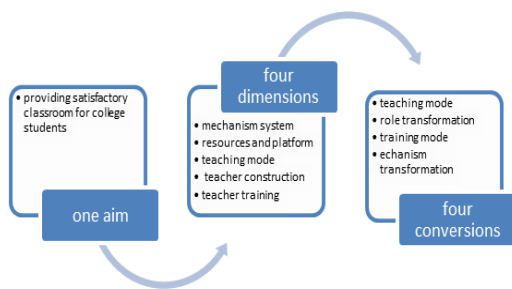


Fig. 1. Methodology of the scheme design.

B. Content of the scheme

1) *Optimizing the multi-department linkage system:* In order to continuously and effectively promote the practice of educational informatization reform, from the top-level design, the college has jointly set up the Educational Informatization Reform Promotion Office with five departments: Teaching Affairs Office, Teacher Development Center, Student Work Department, Digital Teaching Center and Teaching Quality Assurance Department, which include project promotion group, teacher training group, student learning group, resource construction and technical support group, teaching evaluation group. The structure of multi-department linkage system is shown in the following "Fig. 2".

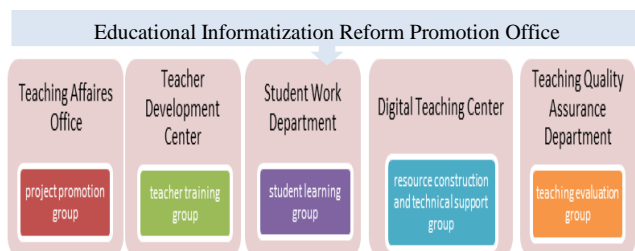


Fig. 2. Structure of multi-department linkage system.

2) *Highlights of the leading role of famous teachers in the teacher training:* In order to improve the strength of teachers, the school highlights the leading role of famous

teachers, holds regular teaching research forums, and regularly invites famous teachers inside and outside the school to carry out targeted teaching demonstrations to all teachers. The college has set up a platform for teachers to communicate and improve their communication through extensive display of typical lessons, "talking about lessons" observation and discussion, MOOC training, teaching skills competition and so on, thus effectively improving teachers' innovative consciousness and information teaching ability. All these help teachers to become excellent teachers who master the deep integration of information technology and teaching.

3) *Advanced blended teaching models:* The school promotes the development of the mixed teaching mode and the turn-over teaching mode in the form of a project, forms the classroom teaching forms such as the results-based, thematic, project-training, question-and-answer, and scene-simulation, and meets the individual needs of the students and the teachers. At the same time, the school has issued a series of supporting policies, such as the Application and Management of MOOC Curriculum Construction in Guangdong Neusoft College and the "reverse classroom" Teaching Evaluation method in Guangdong Neusoft College, which combines the reform performance evaluation with the teacher performance evaluation, thus reward the excellent reform projects.

4) *Equipped information-based teaching space and platforms:* In order to provide a high-quality resource environment for educational information reform, the school has arranged about 23,500 network information points, wired and wireless network campus full coverage on the campus, and all the classrooms are equipped with multimedia equipment and the teachers and students are equipped with a notebook. In addition, the college has also built a flip classroom demonstration area with 10 flipped classrooms and 5 live broadcast classrooms, and has constructed an intelligent teaching environment that connects online and offline. In the aspect of platform resource construction, the strategy of "introduction, cooperation, transformation and construction" has been adopted, and high-quality on-line open course has introduced successively from the platform of Icourse163 and Erya Mooc. The college also cooperated with Chaoxing Group and other companies to meet the needs of flipped classroom teaching by upgrading and reforming the excellent courses in the school, building typical class examples, shooting micro-classes and so on.

C. Results of the reform

The equations are an exception to the prescribed.

1) *Realizing the integration of information technology and classroom teaching:* With the promotion of the school information reform office, more than half of the public elective courses and nearly 1/3 of the professional courses

adopted blended teaching model. In that process of teaching, project driven , formed the classroom teaching forms such as the results-based, thematic, project-training, question-and-answer, and scene-simulation, so that the effectiveness of the classroom teaching, The students' learning initiative and enthusiasm are greatly improved.

2) *Cultivating many education informationization achievement:* First, the accumulation of all kinds of education and teaching information resources, including a variety of online open courses, micro-courses, typical lessons, teaching cases, teaching platform and so on. The second is the accumulation of the consciousness of teaching reform. In the process of reform practice, the majority of teachers not only cultivate the good accomplishment of using information technology to solve teaching problems, but also improve the consciousness of reform.

3) *Effectively improving the quality of classroom teaching:* In the past three years, through the investigation of teaching quality, students' satisfaction with classroom teaching quality has been improved year by year. The teachers who carry out the classroom teaching reform and the teaching quality evaluation have an excellent ratio far higher than those who do not carry out the classroom teaching reform. College teachers have won more than 100 awards in various educational information competitions.

4) *Enhancing the teachers' ability of informatization teaching-design:* Through a series of teaching information research, training, observation and reform practice activities, the majority of teachers' awareness of teaching reform has been enhanced, and their research and teaching ability has been significantly improved. Relying on the reform of information classroom teaching, not only the teaching design ability of teachers has been significantly improved, but also a number of young teachers who have performed well in teaching competitions at all levels have been spawned.

IV. CONCLUSION

The educational informatization construction scheme in this study is an innovation reform model in China. Taking classroom teaching as a breakthrough, it reform on the areas of mechanism system, resources & platforms, and teaching mode, which is an effective way to improve the teaching quality and students' quality in newly-built colleges and universities.

The reform plan involves many departments and links. The multi-department linkage mechanism under the direct leadership of college leading cadres is the key to promote the reform of educational informatization. In the process of reform, it is necessary to change the concept, establish the educational values suitable for the information age, persist in educating people, and emphasize the deep integration of information technology and teaching. In addition, the college should provide continuous support for the educational information reform through all-round incentive

measures, and fully mobilize and protect the enthusiasm and creativity of teachers to participate in the information teaching reform.

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