

Reflections on the Reform of Public Basic Courses in Universities of Applied Sciences

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Abstract: By means of investigating public basic courses' status, studying their functions, and analyzing the current situation and existing problems in universities of applied sciences, this paper puts forward the reform ideas, reform objects and implementation methods of public basic courses and it also summarizes practical strategies to improve teaching approaches of public basic courses under the positive environment of universities' transformation development. This article has important reference value and significance to colleges and universities in the construction of public basic courses, the improvement of schools' level, and the cultivation of the high-talent and other aspects related.

1. Introduction

Public basic course is a fundamental cultural course to learn and master other knowledge in modern society and it also plays an important role in every professional talent training program in universities of applied sciences. At the same time, it's the basic link of forming a complete curriculum system and takes an irreplaceable part of realizing talent training program. Public basic courses education can help students master basic scientific knowledge, professional skills and thinking methods, thus forming a sound scientific thinking system, and promoting the coordinated development of knowledge, abilities and skills. The emphasis of applied sciences college education lies in cultivating students' professional and vocational skills, while possessing a certain cultural foundation is also a necessity for the cultivation, development and improvement of skills. It is imperative to reform the public basic courses so as to optimize the talent training mode, improve the teaching level, and cultivate high-quality talents with innovative spirit and practical ability in universities of applied sciences.

2. Status Analysis

2.1 Course Situation

At present, the universities of applied sciences is not a new term already and its connotation has been widely recognized. The so-called public basic courses reform either is a "compressed" version of the old undergraduate basic curriculum, or serves as an "introductory" supplementary course, while its importance has not received enough attention. Universities of applied sciences are different from vocational colleges and technical schools, and even different from social training institutions. One of its most remarkable features is the reform of public basic courses. Whether the public basic courses reform is successful or not is the key point of the comprehensive reform of university education and teaching.

2.2 Teacher Situation

After the adjustment of national policies, more and more universities will be transformed into applied sciences universities, but the former teachers of public basic courses in these colleges and universities have already developed fixed thinking and got used to the original teaching mode, while there is no ready-made reform model to draw lessons from. Moreover, quite a few universities are deficient in the teacher quantity, education quality and teaching experience.

2.3 Student Situation

With the transformation development of colleges and universities, the education of technical schools, secondary vocational schools, higher vocational schools, undergraduate colleges and engineering or professional master's universities will be gradually integrated. The following phenomena will be evident among students of applied sciences universities. There are more students from central and western regions and more students from ethnic minorities. At the same time, more and more middle school students from liberal arts choose to major in engineering in universities. These students have low entrance scores, but high expectations for success, strong personality and weak self-confidence, and there are regional differences in culture, thoughts and habits^[1].

3. Reform Thoughts

Based on the principle guidance of practically professional personnel training program, universities can set the direction of reform by serving professional learning and enhancing job competitiveness. It first not only needs to abide by the rules of education and teaching, and follow the laws of talent growth, but also needs to emancipate the inherent thought, change the old concept, understand the current situation clearly, and then carry out classified teaching according to the actual situation, strengthen basic training, increase the intensity of practice, highlight the importance of college education's practicability and effectiveness as well. By means of changing old education concepts and reforming the college mathematics, college physics, college English and other public basic courses' curriculum system, teaching content, teaching method and examination mode, applied sciences universities can better optimize the allocation of teaching resources, and thus meeting the diverse and personalized learning needs of students, so as to establish a more perfect curriculum system to be more suitable for their training objectives^[1].

The cognitive process of people to things is from perceptual external side to rational internal side, while rational internal cognition refers to the understanding and mastery of the theories and the application of this law. Therefore, the public basic courses should be designed to meet the theoretical needs of majors related and conform to people's understanding, but should not take too many hours and credits in the talent training program. First, we should optimize the public basic course system and improve the teaching effect by selecting better teaching contents, reducing teaching time in class, giving students more practice and encouraging students to study independently. The second is to implement classification teaching to meet the needs of students of different levels. The third is to consider the quality of students as the core of education and strengthen the cultivation of students' interest and ability, by the way of selecting classroom teaching content, and focusing on teaching basic knowledge, basic theory, basic skills and others related. Fourth, we should make full use of modern teaching resources to build a three-dimensional learning platform, such as the full use of the Internet, audio and video and other teaching platforms and resources, so as to provide students with a multichannel, three-dimensional learning way and cultivate students' independent learning and independent thinking ability^[2].

4. Reform Content

4.1 Curriculum Reform

4.1.1 The first is to integrate the teaching content and revise the syllabus.

Universities need to list the knowledge modules which public basic courses need to master, and then subdivide those knowledge points. According to the principle of "necessity, adequacy and appropriateness", each second-level college carries on the screening, and then, on the actual basis of students, reorganizes those proposed public basic courses' course name, teaching content, class hour, credit, teaching term and so on. For example, after reforming and reorganizing the higher mathematics, economic mathematics, linear algebra, probability and mathematical statistics, complex function and integral transform, discrete mathematics, college physics, college English and so on, the university can reconsider to open Higher Mathematics, Engineering Mathematics,

Practical English, Specialized College English Training, Specialized College Mathematics Training and other courses related.

4.1.2 The second is to select appropriate textbooks and write handouts.

According to the newly fixed curriculum outline, universities should select the textbooks suitable for students of different levels. The selection of teaching materials must respect the collective opinions and suggestions of teachers, because teaching materials for teachers may be only an important reference, but for students is an all-important preview reference, learning book and review materials. If textbooks are changed frequently, curriculum reform will be compromised or even fail. According to the syllabus and teaching materials, teachers must compile teaching handouts suitable for students of different levels. Haste makes waste. Therefore, the difficulty of handouts must be in line with the students' actual basic level.

4.1.3 The third is to dynamically adjust and improve the teaching content.

The university must adjust and supplement the course content in real time according to the newly fixed syllabus, selected textbooks and written handouts. The principle of adjustment is to give priority to basic knowledge and highlight the application of knowledge. Similarly, teachers should remember to teach them according to the actual basic level of students and be practical and realistic in the process of teaching because grasp all and lose all. For those students who have the ability to learn something more, the university can set up other training classes for them, such as postgraduate entrance examination tutoring class, course interest class, etc., and encourage them to set up study interest group. It aims to improve their independent research and study ability and increase their comprehensive knowledge so as to cultivate students developing in different directions.

4.2 Teacher Reform

It is better for universities to regard teachers with obvious teaching effects as “gold” teachers and set them up as model teachers in teaching, so that other teachers can observe their classes openly and let everyone learn from all links in their classes such as lesson preparation, class teaching, tutoring and questions answering, and then these excellent teachers can play an exemplary role in the teaching process. By doing so, teachers are encouraged to learn from each other. The university employs excellent “gold” teachers as mentors to guide other teachers and encourage them to share their lessons so as to gradually improve the new teachers' abilities. Meanwhile, it would be better for universities to send teachers to study regularly and learn excellent teaching experience from teachers from other colleges and universities. Universities can also select “gold” and “new” teachers to participate in various teaching competitions at all levels to improve teachers' teaching level.

4.3 Teaching Method Reform

4.3.1 The first is to attach importance to the first lesson.

The first lesson is very important and its success often leads to more effective teaching later. In the first class, the teacher must explain to the students the importance and function of this course in their major studying. First, the teacher should let all students understand this course's supporting role in their professional learning and also emphasizes its crucial role in their future employment. In addition, teachers should also make students feel the interest of this course so as to inspire them to learn this course from the bottom of their hearts.

4.3.2 The second is to strengthen the classroom control.

In the first class, the teacher should make clear to the students the requirements and regulations of this course, such as homework requirements, questions, etc., and inform them of the this course's learning methods. Students must bring notebooks to the classroom and the teacher will check the notes.

4.3.3 The third is to enhance teachers' personal quality.

Teachers not only must be familiar with the teaching outlines, teaching materials, handouts and

knowledge points inside, but also need to use famous quotes, famous sentences and famous paragraphs to enrich the classroom language, and simultaneously they must be familiar their own students as well. Teachers in universities should strive to make themselves more influential and attractive, devote themselves to teaching with full emotions and guide students with smile and encouraging language to actively participate in learning. Meanwhile, the richness of the class should be supported by a large number of cases and exercises.

4.3.4 The fourth is to emphasize classroom effect.

The teaching effect is mainly reflected in the concentration of students' attention. Therefore, teachers need to pay attention to the effect and feelings of students at all times, and by using classroom questions, discussion and other methods to conduct teaching interaction with students so as to strengthen the participation of students. Students are the main body or even the master of learning, while teachers plays the role of organizing, leading or even assisting, so teachers must be good at arousing the enthusiasm of their students in class, give students more chances to perform at the same time. In addition, teachers also need to master skills of using classroom questions, classroom assignments, homework and other ways to verify the teaching effect in time so as to carry on the targeted adjustment to the teaching content.

4.3.5 The fifth is to appreciate teaching and research reflection.

Teachers should often sort out their own classroom teaching content, reflect on teaching methods and processes, summarize valuable experience and lessons and solve new-found problems in time so as to improve the teachers' teaching and controlling abilities. The relevant departments of public basic courses should hold teaching and research activities regularly every week. Under the established plan, teaching and research activities should focus on the discussion of teaching reform, and complete the collation of materials, such as the revision of curriculum standards, the compilation of exercises, the writing of handouts, unit test questions, etc^[4].

4.3.6 The sixth is to carry out classification and multichannel teaching and learning.

In order to understand students' basic level more accurately, all students should be required to take an entrance exam before entering the university, and then be assigned to classes at different basic levels according to the test results. In order to really consolidate the basic knowledge of students, teaching reform, according to the principle of "necessity, adequacy and appropriateness", should break the original way of teaching and identify what and how much students need to learn. At the same time, the teaching method should be gradually transformed from the traditional pattern of "text + blackboard + chalk" to the modern teaching method of "text + blackboard + chalk + multimedia technology + network learning platform", so as to provide the students with more learning resources through various channels. Meanwhile, the "cramming education mode" should be replaced by the teaching mode of guiding, enlightening, asking questions, discussing, debating and arguing.

After abandoning the original paper examination only method, the university should first find a suitable evaluation way for the public basic courses, and then implement the comprehensive evaluation system with equal emphasis on the process and the result, like students' attendance rate, head-up rate, question-asking rate, interaction rate, homework completion rate, homework quality, class discussion, professional competition, unit test, final exam, certificate passing rate and credit exchange. This kind of evaluation method mainly aims at examining and evaluating students' mastery and application of basic knowledge, basic theory and basic skills. At the same time, universities should strengthen the monitoring of teaching order and teaching quality, such as the establishment of online evaluation system, teachers' self-evaluation, teachers' mutual evaluation, teaching supervision, leaders' listening to lectures, students' feedback and so on.

5. Conclusion

In a word, the public basic courses reform plan of applied sciences universities must be based on

the actual investigation. According to the difference of professional emphasis, student situation, starting point height and class level, it must formulate the proper course standard (outline) which accords with the actual situation, compile different handouts (teaching materials) and adopt different teaching methods and evaluation system. The study of public basic courses aims to cultivate students' better study, life and interpersonal communication habits, which focuses on the need to serve professional learning and the possibility of goals achieving. In the process of public basic courses studying, students can well master the necessary mainstream knowledge and use multidimensional and nonlinear perspectives to observe the real world and solve practical problems. At the same time, the public basic curriculum reform is a systematic project, which should be closely around the two main goals of professional service and employ-ability enhancement. Universities related must implement the reform measures into the actual curriculum, teachers, classrooms and students, and then mobilize all members to strive to train high-quality applied technical talents.

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