Computer Teaching Reform in Applied Undergraduate Colleges under the Background of "Internet +"

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Keywords: Computer teaching; "Internet +"; Mode; Optimization

Abstract. Under the "Internet +" environment, application-oriented undergraduate colleges need to reform the basic computer teaching mode, establish a new and open teaching mode in order to improve the teaching quality. In this paper, through the discussion of the new model of computer basic teaching in "Internet +" application-oriented undergraduate colleges, such as micro-course, MOOC platform, multimedia and other new classroom teaching forms, hoping to provide relevant reference for promoting the reform of the new model of computer basic teaching in "Internet +" application-oriented undergraduate colleges.

1. Introduction

In recent years, the proposal of "Internet +" education has promoted the innovative development of the whole field of education and teaching. In 2015, the State Council promulgated the Guiding Opinions of the State Council on Actively Promoting "Internet +" Actions and the Higher Education Innovation Development Action Plan (2015-2018) issued by the Ministry of Education clearly pointed out that it is necessary to vigorously promote the application of information technology in the field of education and teaching, continuously explore new modes of information education and education, encourage cooperation between universities and Internet companies, open up new resources for online and offline education and teaching, and implement the "Internet +" action plan [1-2].

2. The Necessity of Computer Teaching Reform under the Background of "Internet +"

2.1. Teaching design lacks efficiency

Under the background of "Internet +", students can quickly learn about access to knowledge and information in the wave of informatization. Traditional teaching methods have been unable to keep up with the pace of students' development, and the fundamental reason lies mainly in teachers [3]. Teachers' teaching methods cannot effectively make use of information technology to innovate teaching methods, which are mainly manifested in the following three aspects: Firstly, under the new situation, the teaching philosophy of teachers is backward; secondly, the level of information technology of teachers is insufficient; thirdly, teachers' initiative of independent learning is not strong. Under the background of "Internet +", teaching is not a traditional process of knowledge transfer, but the cultivation of students' comprehensive ability. Students also change from traditional classroom learning to modern mixed teaching mode. Around the research of "Internet +" education, teachers must carry out the research on teaching reform into teaching practice and mobilize the initiative of students in the class.

2.2. The teaching mode lacks pertinence

Under the background of "Internet +" required by industrial transformation, the integrated development of primary, secondary and tertiary industries and industrial transformation have brought about great changes in the supply-side structure, which requires a large number of high-level information technology talents. However, at present, the teaching mode of computer major in application-oriented undergraduate colleges is still in the traditional mode, which cannot meet the requirements of industrial transformation under the new situation, mainly reflected in the
following three aspects: Firstly, there is no comprehensive consideration for students' future development space; secondly, the training program did not make timely adjustments to the industrial transformation; thirdly, the teaching content is not reintegrated according to the core competence.

2.3. Resource allocation lacks rationality

The application-oriented talents focuses on practical teaching, and the resource allocation requirements of the teaching platform are relatively high. In recent years, with the expansion of the enrollment of computer majors in application-oriented undergraduate colleges in China, the resource allocation of practical teaching platforms has shown obvious deficiencies. It often happens that multiple courses are taught in the same classroom, which affects the teaching quality. Moreover, the existing teaching resource database is too fixed to arouse students' interest in teaching research, and some teaching platforms are not covered by the network, so it is difficult to use online resources [4].

3. Analysis of the Direction of Computer Teaching Reform under the Background of "Internet+

Under the background of "Internet +" teaching, computer teachers in application-oriented undergraduate colleges should establish a new concept of "Internet +" teaching, change the traditional teaching direction, and improve the overall teaching quality. The specific conditions are shown in Table 1.

Table 1. Main characteristics of computer teaching in the context of "Internet +"

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Aspects</th>
<th>Concrete embodiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted</td>
<td>Basic knowledge</td>
<td>In the computer teaching design of application-oriented undergraduate colleges, students need to explain the knowledge they need to master in detail, so as to ensure that the knowledge they teach is beneficial to students, independent and innovative.</td>
</tr>
<tr>
<td></td>
<td>Student development</td>
<td>Different students have different paths of future development. Therefore, teachers should carry out targeted teaching design for different categories of students and adopt corresponding grouping system.</td>
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<tr>
<td></td>
<td>Individual differences</td>
<td>There is a gap between people. Different people have different knowledge reserves and different abilities. When designing computer courses, we must fully consider the different abilities of different students and maximize teaching according to their aptitude.</td>
</tr>
<tr>
<td>Operability</td>
<td></td>
<td>It cannot be because &quot;Internet +&quot; emphasizes the collaborative development of multiple industries, so that there is an unrealistic air castle in the design of teaching. The operability of the instructional design is conducive to the development of students during school.</td>
</tr>
<tr>
<td>Collaboration</td>
<td></td>
<td>Divide the students into groups, assign each group a different step of the overall task, and ask them to cooperate. The teacher is only responsible for assigning the overall task and dividing the content of each group, coordinating the progress and unifying the design and planning, etc., all of which are left to the students to solve by themselves.</td>
</tr>
<tr>
<td>Fun effect</td>
<td></td>
<td>The design of computer teaching can be from shallow to deep, and more practical examples are set in the teaching design of the computer. The examples of operability are strong, so that students can get more interesting in the exercise, and they can have more interest in learning computer professional knowledge.</td>
</tr>
</tbody>
</table>

4. The Choice of Computer Teaching Mode under the Background of "Internet +"

4.1. Micro-course teaching in the era of "Internet +"

With the emergence of "Internet +" micro-course teaching, it provides an important opportunity for computer teachers' teaching and students' independent learning in application-oriented undergraduate colleges. Micro-course teaching means that the teacher first stores the materials and contents required in class in the way of the video in the device before class. The space proportion of these files is very small, which is extremely suitable for students to use mobile terminals for learning anytime and anywhere.
The main features of the micro-course teaching are that the teaching time is short, the teaching content is fragmented, the content is less, the resources are less, and the structure of the resources is more reasonable, and it is convenient for students to learn and understand the knowledge of teachers and professors [5]. Because the basic knowledge of the computer is too complicated and complicated, the teacher can subdivide the important knowledge points, and classify the difficult points, key points, and error-prone points in the teaching process into micro-course courseware, and then upload them to online so that students can learn. The advantage of using micro-course courseware is that only a short time can let the teacher complete the explanation of a knowledge point, so that the basic computer knowledge is simple and easy to understand, which is beneficial for students to master. In addition, students can also play video repeatedly at different times and places to facilitate their own understanding of the knowledge, which is conducive to improving students' autonomous learning ability.

The computer-based micro-course teaching of the application-oriented undergraduate colleges in the "Internet +" era is a breakthrough in the traditional teaching mode. This new model always adheres to the student-centered and student-oriented needs. Students are the protagonists in the classroom, and teachers are just behind the scenes in the teaching process, which promotes the progress of teaching reform. Each micro-course teaching can bring students new experience, and each micro-course teaching can bring students to think about new problems and inspiration.

4.2. MOOC classroom teaching in the era of "Internet +"

In the MOOC platform of the application-oriented undergraduate colleges, teachers can upload courseware videos for students from different schools to learn. MOOC classroom teaching model relies on advanced technologies such as big data and cloud computing, and is effectively supported by advanced teaching concepts [6]. In this way, teaching objectives can be effectively achieved and teaching quality can be effectively improved.

In the MOOC platform, there are many high-quality teaching resources, including not only the open course video of major colleges in China, but also the teaching video of top colleges outside the high school, which provides a very good platform for students to understand learning resources and learn. The course covers various fields and covers a wide range of fields, which provides an effective and convenient channel for students who want to learn more knowledge.

On the MOOC platform, students can find what they want to learn by gently moving their little fingers and watching a video for dozens of minutes. After each video broadcast, there will be corresponding exam questions for students to deepen their understanding of the knowledge and consolidate the knowledge they have learned in time, as well as corresponding credit acquisition. The above study can stimulate the enthusiasm of the students majoring in computer science in application-oriented undergraduate colleges and also provide inexhaustible motivation for their study. In addition, similar online learning platforms like MOOC include NetEase cloud class, TED and so on, all of which are benefited from the development of "Internet +" technology.

4.3. Multimedia teaching in the era of "Internet +"

Multimedia teaching technology can design appropriate teaching programs according to the characteristics of teaching objects and use multimedia tools to assist teaching. Multimedia teaching is not simply using multimedia tools for teaching. Instead, it combines the new teaching tools of multimedia with the traditional teaching mode, and runs through the entire curriculum of computer-based teaching in application-oriented undergraduate colleges to achieve the goal of optimal teaching results. Multimedia teaching can stimulate students' senses through rich electronic courseware, help students to have a long-term memory of the knowledge content of learning, and help students to prepare before class and review after class. Multimedia teaching is different from traditional cramming teaching. Multimedia teaching can also give students tasks in real-time in class and carry out classroom tests [7-8]. Through multimedia, teachers can have a general understanding of students' learning situation, so as to adjust the teaching tasks and teaching content. Through the completion of classroom tests in multimedia, multimedia can also record students' learning in a timely manner. Specific analysis of students' problems is conducive to the realization of teaching objectives. The application of multimedia teaching means is an important breakthrough
to change the traditional computer teaching mode in application-oriented undergraduate colleges.

5. Optimization of Computer Teaching System under the Background of "Internet +"

5.1. Focus on teaching students in accordance with their aptitude and respecting student differences

In the "Internet +" environment, the computer teaching methods of application-oriented undergraduate colleges have undergone great changes. Taking advantage of the strong resource base provided by the Internet, teachers can improve the arrangement of part or all of the teaching content in the classroom in the form of questions, so that students can find answers and form their own opinions and ideas. In class, the teacher asks the students to express their opinions with guidance. Finally, complete the teaching content of this course through the teacher's supplement and answering questions. This allows students to truly participate in the classroom. It changed the situation that students to be spectators and teachers to be actors. Students search for data, compare opinions and ask questions from teachers to deepen their understanding of knowledge to achieve better teaching results.

5.2. Change the curriculum system and optimize the content structure

In the era of "Internet +", computer teaching in application-oriented undergraduate colleges not only requires students to master the basic knowledge and operation skills of computer, but also, based on this, trains students to apply computer in the professional field, flexibly use computer to analyze and solve practical problems, and obtain knowledge and information from the Internet. From this goal, teachers can adopt a flexible curriculum system to further develop students' understanding and ability of computer application [9]. The teaching of basic computer courses in application-oriented undergraduate colleges should combine theory and practice. Each final grade can be divided into grades, mid-term grades and final grades. The result of the examination paper is instructive for students to learn theoretical knowledge. It is mainly the actual ability of students at the computer level to test students' normal attendance and course scores. Through testing, students can improve their theoretical knowledge and comprehensive operational skills.

Computer teachers in application-oriented undergraduate colleges should realize that computer teaching is an open teaching system, and they should make full use of heuristic, discussion and participatory teaching methods in the teaching process. In addition, university teachers should pay attention to the integration of new computer development into general teaching. Watching videos in class makes it easier for students to master what they have learned.

5.3. Adjust teaching methods and do good teaching guidance

At the beginning of freshman enrollment, application-oriented undergraduate colleges should provide computer learning guidance for new students so that students can develop different learning plans and goals according to their actual situation. Therefore, computer learning is more purposeful and targeted. For students with a relatively poor foundation, they can choose the direction they are interested in advance, study hard and pass the scores of different national abilities as soon as possible. At the same time, this can also inspire and guide other students to learn the enthusiasm of the computer and improve the efficiency of learning. Give full play to the role of the Internet. Computer teachers in application-oriented undergraduate colleges should make full use of the school's Internet resources, establish an online teaching platform, and expand and improve students' computer knowledge learning methods and methods. Through this platform, teachers can update e-learning plans, publish homework and test questions in a timely manner, answer questions in a timely manner, and post answers to the Internet. Students receive timely guidance in their spare time to increase their learning time and the way they receive knowledge. In today's society, in order to adapt to thousands of knowledge and information on the Internet, students can choose and acquire useful knowledge. If conditions permit, application-oriented undergraduate colleges can also provide students with database resources, such as digital journals, to meet students' desire for knowledge in a timely manner.

5.4. Transforming evaluation methods to stimulate student enthusiasm

The teaching method of application-oriented undergraduate colleges emphasizes that when
examining the quality of talent training, it is necessary to combine the assessment knowledge with
the assessment ability, and combine the assessment innovation ability with the assessment
comprehensive quality, so that students in the book and outside the book, in-class and
extra-curricular In-school and off-campus, education and self-education have been fully developed
[10]. To this end, in addition to the normal final exam, the computer course assessment method
should also consider the following aspects: The first is the process assessment, which adopts the
method of self-evaluation and mutual evaluation. It mainly evaluates the completion of the project
operation (teaching task) in the teaching process. The purpose is to encourage students to learn and
help students to effectively adjust their learning process. The second is the vocational qualification
assessment. It refers to the objective, fair, scientific and standardized evaluation and appraisal of the
skill level or professional qualification of the laborer through the government-approved assessment
and appraisal institution according to the vocational skill standards or qualifications conditions
formulated by the state. The third is to promote the test, to organize flexible and diverse competition
activities, such as typing, courseware production, animation design, etc., so that students can learn
and improve in the competition in order to achieve the goal of promoting learning and practicing in
competition.

6. Summary

As we all know, computer technology is the fastest updated in all fields. This makes the teaching
requirements of teachers in the computer field of application-oriented undergraduate colleges higher.
In addition to guiding students to learn, teachers should constantly accumulate new knowledge and
continue to receive education. At the same time, teachers should keep up with the development of the
"Internet +" era, find out the interests of students in teaching, form a new "Internet +" teaching model, and comprehensively improve the quality of computer teaching in application-oriented undergraduate colleges.

References


