

Teaching discussion on computer program design curriculum of universities in the new media environment

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Abstract: Riding the wave of new media, a huge influx of intelligent terminals ranging from smartphone, iPad to laptop have provided university students with diverse accesses to information. Meanwhile, multimedia communication supported by mobile internet has promoted online courses. However, learning computer program design curriculum on the internet alone can't reach the best result, unless corresponding cases are given offline to discuss, design and complete through the program, so as to better grasp the grammar of the programming language and the concept of programming.

1. Introduction

As the computer technology and network technology are gaining momentum, especially the emergence of new media, traditional education model has been greatly challenged by some fresh teaching models like MOOC, online classes and so on. Universities have put a higher value on online education recently.

2. New media and its impact on education and teaching

1) Concept of the new media

New media, also known as digital media or network media, is a general term of all communication media based on computer information processing technology and Internet. In addition to the function of traditional media like newspaper, television and radio station, new media are endowed with new features of interaction, instant extension and integration.

2) The influence of new media on universities students

i) Universities students have changed their ways of thinking. New media ensures their accesses to huge amount of information, thus shaping a more personalized and diversified thinking.

ii) Thanks to the openness of new media information communication, a broad platform is established for universities students. The flexibility and speed of new media are conducive to enriching the means of college education.

iii) Interactive learning supported by new media environment strengthens the students' ownership of college education.

3) The influence of new media on education

New media strikes a balance between information receiving and digesting in learning. In terms of traditional teaching model, teachers are mainly responsible for motivating learning initiative of dozens or even hundreds of students and conveying the knowledge vividly and accurately in an easily understandable way. During this process, most of their teaching content is relatively fixed. In contrast, new media environment enables teachers record their lessons as a video and send them to students on the internet, so that students can download the video to their laptops, mobile phones and other media anywhere and anytime. Therefore, online education is carried on as students can study online according to their own schedules.

3. The advantages and disadvantages of online teaching

1) The advantages of online teaching

i) Students are able to arrange their learning hours and control the pace flexibly to meet their own needs. Moreover, sharing of the educational resources of high quality on the internet complement the access to knowledge relying on teachers.

ii) Students are allowed to access and review the online resources at any time as well as pausing the video to take notes. When it comes to traditional teaching, limited notes are the only thing students can rely on if they want to review the knowledge. In comparison, convenience for reviewing provided by online studying enables fully understanding of the key and difficult points. On top of that, online communication with teachers and classmates promotes thorough grasp of the entire course.

iii) Online education kicks start an independent study mode, unlike previous passively learning. This is a knowledge-centered mode which requires teachers not only to guide, enlighten and educate students but also to deliver discussions with students based on an equal relationship, so as to enhance their learning enthusiasm.

2) The disadvantages of online teaching

i) Students are asked to finish a pile of courses, which requires a well-scheduled arrangement and excellent self-control.

ii) Online teachers' supervision of students falls far short of brick-and-mortar learning so that some students are likely to learn for the sake of learning.

iii) Distraction is inevitable when studying alone on the internet. Lack of efficiency costs more time to watch the videos.

4. Curriculum design of computer programming design

To deal with the drawbacks of online education, the author works out the following course design. These measures are proved effective and feasible, and achieve promising results in practice.

1) Intensify the experiment. Students are allowed to validate the program in the computer room by using the time saved in the class. Teachers provide on-site guidance to further consolidate the knowledge. In this way, the computer room becomes a place for interaction between teachers and students as well as among students themselves, such as Q & A time, so as to achieve better teaching results.

2) Teachers create cases for the knowledge of each chapter followed by guiding students to discuss, complete the case design and validate the program on the computer. During this process, they consciously observe the students' grasp of knowledge, and motivate students to produce more profound understanding by applying grammar to it, thus realizing knowledge acquisition before class and the knowledge internalization in class.

3) Big homework is given according to different stages, which requires students to design in groups and complete them on the computer. Big homework is a comprehensive application of knowledge at this stage. It not only examines basic grammatical knowledge, but also facilitates the flexible application of programming algorithms and ideas. More important, it upgrades students' ability to collaborate.

4) Applying stage-appropriate testing. The laziness of individual students in online learning makes them unfamiliar with grammar knowledge, which seriously affects the progress of the experiment. In this regard, the staged test is prepared to urge students to complete online learning on time and seriously.

5. Conclusion

The advent and wide application of new media have challenged the traditional teaching model and put forward higher requirements for teachers. It is proved by practice that online program design courses combined with the preliminary discussion and program validation can better help

students digest knowledge, master grammar, and apply the programming ideas to practical problems.

References

- [1] Haiju Ji, Deconstruction and remolding of ideological and political education in colleges and universities in the new media Era, Southeast University Press, 2014.12
- [2] Jingxiang Fu, Qiaoli Liu. Research on the Application of Flip Class in American History and Culture Class, Opportunity, challenge and mission: the media education in the era of media convergence, Communication University of China Press, 2017.12: 28
- [3] Li Xu. Personalized guidance in sports commentary teaching from the perspective of flipped classroom. Opportunity, challenge and mission: the media education in the era of media convergence, Communication University of China Press, 2017.12: 17