Received: 4 Jul. 2023 | Revised: 11 Jul. 2023 | Accepted:24 Jul. 2023 | Published online: 29 Aug. 2023

RESEARCH ARTICLE

Contemporary Education and Teaching Research
2023, Vol. 4(8)389-393
DOI: 10.61360/BoniCETR232014470812

Discussion on Teaching Links of Graduation Design for Computer Science and Technology Specialty in Open Education

Wei Yang[1],*& Weilian Tian[1]
[1]*Liupanshui Normal University, China*

Abstract: Open education is an educational model with flexible learning and resource sharing as its core. As the core subject of modern information society, computer science and technology, combined with open education, provides learning opportunities for scholars and is conducive to promoting the cultivation of technical talents. This paper focuses on the teaching link of graduation project of computer science and technology specialty under open education. The graduation project of development education is very important in students' career development and has some unique characteristics. In order to optimize the teaching process of graduation project, measures can be taken, such as designing learning plan and instruction manual, providing abundant learning resources and tools, establishing a platform for interaction and cooperation between teachers and students, and effective evaluation and supervision mechanism, in order to optimize the teaching effect and improve students' learning experience and achievement quality.

Keywords: open education； Computer science and technolog；Graduation design；

Introduction:

As a form of modern distance education, open education breaks through the time and space limitations of traditional education and provides learners with flexible learning methods and independent learning opportunities. Through the online and offline integrated learning form, students can study anytime and anywhere and get learning resources from all over the country. In such an educational environment, open education provides students in various professional fields with broad academic space and development opportunities. Graduation design teaching in open education is an important stage for students, and graduation design plays an important role in cultivating students' comprehensive ability and promoting career development. Through the in-depth discussion of open education and graduation design teaching of Computer Science and Technology, we can further tap the potential of open education in distance education and provide useful reference and enlightenment for educational reform and teaching practice.

1.The significance of graduation project of Computer Science and Technology in open education

Graduation design is a key link in students' professional learning process, aiming at cultivating students' practical ability, innovative consciousness and problem-solving ability. The graduation project of computer science and technology is of great significance in open education. Through graduation project, students can apply their theoretical knowledge to practical projects, thus deepening their understanding and mastery of professional knowledge. Graduation design has a positive impact on the improvement of students' comprehensive ability. In the process of graduation design, students

Corresponding Author: Wei Yang
Liupanshui Normal University, China
Email:18985495016@163.com

need to analyze problems, define requirements, design schemes, implement and evaluate, and cultivate their comprehensive thinking and problem-solving ability. Graduation design also involves skills in teamwork, communication and coordination, time management, etc., which further enhances students' comprehensive quality and employment competitiveness. Graduation design is very important for students' career development. With the rapid development of information technology, graduates majoring in computer science and technology are facing fierce employment competition. Through graduation design, students can show their professional ability and practical experience, and provide strong support for future employment or further study (Huang & Lu & Huang, 2022). The results of graduation design can be used as a collection of students' technical works to help them highlight their own advantages and gain more employment opportunities in the process of job hunting.

2.The characteristics of graduation design teaching of Computer Science and Technology in open education

Under the background of open education, the teaching process of graduation design for computer science and technology majors presents some unique characteristics. Because open education adopts the online and offline integration learning form, it provides students with more flexible learning opportunities. Students can arrange their studies according to their own time and place, get learning resources and guidance through online platforms, and also participate in face-to-face discussions and practical activities. Open education emphasizes students' autonomous learning and individualized development. In the teaching process of graduation design, students can choose suitable topics according to their own interests and abilities, and study independently according to their own learning progress. At the same time, students can also choose their own learning methods and learning resources according to their own needs and characteristics, so as to improve their professional ability in the field of computer science and technology. In addition, open education pays attention to the establishment of learning community and the promotion of cooperative learning. Through online platforms and social tools, students can interact and cooperate with other students and teachers, share experiences, exchange views and solve problems together. Students can get diverse views and feedback in the learning community, broaden their thinking and horizons, and practice teamwork and communication skills through cooperative learning (Zhang &Liu & Zhang 2020).

3. The challenges of graduation design teaching for Computer Science and Technology in open education

In the open education, the graduation design teaching of Computer Science and Technology specialty also faces some challenges.

First of all, students' autonomous learning and time management ability is an important challenge. Under the learning mode of open education, students need to plan their own learning time and study and practice independently, which may be difficult for some students and require them to have high self-management and learning ability.

Secondly, the role and responsibility of the instructor is also a challenge. In open education, instructors often can't interact and guide students face to face, and need guidance and support through online platforms and communication tools. This requires instructors to have good online communication and guidance skills, be able to answer students' questions in time and provide effective guidance and feedback.

Thirdly, the evaluation and supervision of graduation project is also a challenging task. Because of the wide distribution of students in open education, evaluation and supervision become more difficult. How to ensure the quality and fairness of graduation design and how to effectively supervise students' academic integrity and originality of works need to establish corresponding evaluation and supervision

mechanisms to ensure the effective and reasonable evaluation of graduation design (Sean, 2016).

We need to fully understand and effectively deal with the challenges faced by graduation design teaching of Computer Science and Technology in open education, so as to improve the quality and effect of graduation design teaching and provide better support for students' comprehensive ability training and career development.

4. Measures to improve the teaching link of graduation project of Computer Science and Technology in open education

4.1 The design of appropriate learning plans and instruction manuals

In order to improve the teaching of graduation design for computer science and technology majors in open education, it is very important to design appropriate study plans and instruction manuals. Make it clear that graduation design must have goals and requirements. By defining the goals, students can understand the importance of graduation design and the expected learning results. At the same time, clear requirements can ensure that students understand the various stages of graduation design and the required learning content. The graduation design process can be divided into different stages, and specific learning plans and timetables can be made for each stage. The learning plan should include the required learning tasks, the acquisition methods of learning resources, and the goals and deadlines of each stage. In addition, instruction manuals and instructions can be provided for students. The instruction manual should introduce the requirements, specifications and evaluation criteria of graduation design in detail, as well as the guidance and suggestions for each stage. Instructions can provide examples and demonstration projects to help students better understand and apply what they have learned (Zhang & Zhang, 2004). In order to take into account students' differences and different learning rhythms, study plans and instruction manuals should be flexible, allowing students to adjust according to their own situation and learning progress. At the same time, instructors should also provide individualized guidance and provide appropriate suggestions and support according to students' needs and abilities. By designing appropriate study plans and instruction manuals, students can be provided with clear learning routes and effective guidance, and their success in graduation design of computer science and technology specialty can be promoted. Such plans and manuals can not only help students plan and manage time, but also provide clear goals and learning resources, thus improving the overall learning effect and the quality of results.

4.2 Provide rich learning resources and tools to support.

Providing abundant learning resources and tools is an important measure to improve the teaching of graduation design in computer science and technology industry. The richness of learning resources refers to providing students with diverse and extensive learning materials and resources, such as textbooks, academic papers, online teaching videos, etc. This kind of resources can meet the students' needs for different levels and depths of knowledge in the process of graduation design. At the same time, online tools and software suitable for open education environment, such as virtual laboratory, programming environment and project management tools, should be provided to support students' practice and project development.

The purpose of providing abundant learning resources and tools is to expand the breadth and depth of students' knowledge and stimulate their creativity and problem-solving ability. Students can deeply understand the frontier and practical experience of the field through extensive reading of relevant literature and case studies. The use of online tools and software can help students carry out practical operation and project development, and improve their practical ability and technical application level. By providing abundant learning resources and tools, students can choose suitable learning materials and tools according to their own interests and needs, and carry out their study and practice in a personalized way. This will help to

improve students' learning effect and satisfaction, and cultivate their autonomous learning ability and information acquisition ability. At the same time, rich learning resources and tools support also provide teachers with more teaching resources and means to promote the interaction and cooperation between teachers and students. By encouraging students to participate in open source projects and community cooperation, and providing practical project experience and cooperation opportunities, it is helpful for students to apply what they have learned in practice and communicate and cooperate with industry professionals (Liu & Tian & Yang, 2023). Therefore, providing rich learning resources and tools can provide students with a more comprehensive, flexible and personalized learning experience and promote their learning achievements and professional ability in graduation design. At the same time, it also provides teachers with more abundant teaching resources and tools to improve teaching quality and effect.

4.3 To establish a good platform for interaction and cooperation between teachers and students

Establishing a good platform for interaction and cooperation between teachers and students is an important measure to improve the teaching of graduation design for computer science and technology majors. Through online platforms or social tools, we can build a bridge of communication and cooperation between teachers and students (Zhang , 2015). Instructors can regularly discuss and answer questions online with students and provide real-time guidance and support. This kind of teacher-student interaction can promote students' in-depth understanding of graduation project and help them solve problems and overcome difficulties. In addition, it is also very important to encourage mutual assistance and cooperation among students. Through group projects or learning communities, students can exchange experiences, share resources and work together to solve problems. This cooperative learning process can not only broaden students' thinking and vision, but also cultivate their teamwork and communication skills. By establishing a good platform for interaction and cooperation between teachers and students, we can promote effective interaction between teachers and students, strengthen guidance and support, and at the same time cultivate the spirit of cooperation among students, laying a solid foundation for them to achieve better results and learning experience in graduation design.

4.4 Implementing an effective evaluation and supervision mechanism.

In order to improve the teaching of graduation design for computer science and technology majors in open education, it is very important to implement an effective evaluation and supervision mechanism. First of all, it is necessary to establish clear graduation design evaluation standards and processes to ensure the fairness and objectivity of the evaluation. Evaluation criteria should cover all aspects of graduation design, such as project planning, technical realization, innovation and problem-solving ability. The evaluation process should be clear, including the composition of judges, scoring methods and feedback of results. Through clear evaluation criteria and processes, the evaluation of graduation project can be guaranteed to be scientific and fair (Zhang & Xu & Wang, 2023). Secondly, it is necessary to strengthen the supervision of students' academic integrity and originality of works. In the open education environment, students may face the risk of plagiarism and academic misconduct. Therefore, it is necessary to take corresponding measures, such as using anti-plagiarism software and conducting academic testing, to ensure the originality and academic integrity of graduation design works submitted by students. In addition, instructors should also pay attention to academic ethics and norms in the process of guidance, guide students to behave correctly, and cultivate students' awareness of academic integrity. By implementing effective evaluation and supervision mechanism, the quality and academic level of graduation design can be guaranteed. This not only helps students get fair evaluation and recognition, but also promotes students' active

participation and innovative thinking in the graduation design of computer science and technology specialty (Shi & Li & Huang ,2016). At the same time, the evaluation and supervision mechanism is also helpful to maintain the credibility and quality of education and promote the improvement and optimization of teaching. Therefore, establishing an effective evaluation and supervision mechanism is an important means to improve the teaching effect of graduation design in open education.

Summary:

Through flexible learning methods and rich learning resources in open education, students majoring in computer science and technology can better carry out autonomous learning, practice and cooperation, and cultivate their practical application ability and problem-solving ability. Facing some challenges in the teaching of graduation project, such as the cultivation of students' autonomous learning ability, the role of the instructor and the improvement of the evaluation and supervision mechanism, it can be optimized by designing appropriate learning plans and instruction manuals, providing rich learning resources and tools, establishing a good platform for interaction and cooperation between teachers and students, and implementing effective evaluation and supervision mechanisms. In addition, the follow-up should pay attention to the sustainable development and application of open education. Including further research and practice of open education methods and strategies, and constantly optimize the teaching mode and technical tools to meet students' learning needs and improve the quality of education. At the same time, strengthen cooperation with industry and other schools, promote interdisciplinary exchanges and cooperation in open education, and jointly promote the development of open education.

Conflict of Interest

The authors declare that they have no conflicts of interest to this work.

References

Huang, J., Lu , L., & Huang , X. (2022). Teaching reform and practice of graduation design based on engineering education certification-taking computer science and technology as an example. *Journal of Higher Education*, *08*(S1), 127–130.

Zhang, X., Liu , J., & Zhang , S. (2020). Graduation requirements and teaching mode design of computer major based on certification standards. *Computer Education*, *No.302*(02), 127–132.

Sean, S. (2016). Reflections on the teaching of undergraduate graduation design for computer science and technology majors. *Journal of Shenyang Agricultural University (Social Science Edition)*, *18*(03), 322–325.

Zhang, Y., & Zhang, Yue. (2004). Open education " computer science and technology" professional graduation design teaching. *Journal of Nanjing Radio and TV University*, *2004*(04), 56–58.

Liu, J., Tian, H., & Yang , L. (2023). Teaching reform and practice of undergraduate graduation design based on OBE education concept-taking computer major as an example. *Science and Technology Wind*, *No.530*(18), 121–123.

Zhang, Q. (2015). Reform and exploration of computer science and technology teaching mode. *Information Construction*, *No.205*(09), 179.

Zhang, J., Xu, G., & Wang, J. (2023). Exploration and practice of quality assurance methods for undergraduate graduation design of computer science and technology specialty for application-oriented undergraduate students . *Science and Technology Wind, No.528*(16), 39–41.

Shi, Z., Li , Q., & Huang, X. (2016). Discussion on the topic selection of graduation project based on output education-taking computer science and technology as an example. *Education and Teaching Forum*, *No.284*(46), 40–41.

How to Cite: Yang, W.& Tian, W. (2023). Discussion on the Teaching Segment of Graduation Design in Open Education "Computer Science and Technology" Specialty. *Contemporary Education and Teaching Research,* 04(08), 389-393.
https://doi.org/10.61360 /BoniCETR232014470812