

Research on Practical Teaching Reform of Software Engineering Specialty based on Innovation Competition

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Abstract

Innovative talents are the driving force of social development and national progress. Colleges and universities bear the burden of cultivating innovative talents. Innovation competition has become one of the effective ways for colleges and universities to cultivate innovative talents. The extensive development of innovation competition is the inevitable trend of the growing demand for high-quality talents in modern society. Combined with the construction of practical teaching of software engineering specialty driven by college students' innovation competition, this paper points out how to improve the competition level of software engineering technology specialty and how to join the innovation practice link of competition in the teaching link. Combined with many years of teaching methods, the author analyzes and summarizes how to promote the practical teaching reform of software engineering specialty by means of innovation competition.

Keywords

Innovation Competition; Software Engineering; Reform in Education.

1. Introduction

Innovation is a unique human ability, which plays an inestimable role in promoting national progress and social development. If a country or a nation wants to make continuous progress and stay ahead of the times, it must continue to innovate and cultivate a large number of senior talents with innovative thinking. In recent years, innovative education has been increasingly pushed to an important level of College Students' education. College students of different disciplines and majors try to innovate in their respective fields to promote the development of disciplines.

Innovation competition is one of the effective ways to cultivate high-quality talents with innovative ability[1]. Innovation competition is the expansion of classroom teaching and discipline construction. It can enable students to deeply understand professional knowledge, systematically sort out and Practice on the basis of understanding, and also promote teachers to carry out effective discipline construction and teaching reform. The whole process of students participating in innovation competition is equivalent to completing a complete scientific research project. This process greatly stimulates students' innovative thinking, improves students' practical ability, and cultivates students' cooperative spirit.

General secretary Jin Ping stressed that we should "adhere to the view of practice first and constantly promote theoretical innovation based on practice". Theory comes from practice, and theoretical innovation must also be based on practical innovation. Therefore, it is necessary to bring innovative practice and ability training into the process of talent training and professional teaching, vigorously cultivate students' innovative spirit, enhance entrepreneurial awareness and enhance practical ability[2].

2. Improve the Innovation Competition Level of Software Engineering Specialty

Innovation competition can be widely carried out in Colleges and universities, which is promoted by multiple factors. For the school, it can achieve excellent results in the innovation competition, which can improve the reputation and popularity of the school. For students, they can get exercise in the process of participating in the innovation competition and improve their quality in all aspects; For teachers, they can guide students to participate in innovation competitions: ① reflect and exercise their ability; ② Achieving excellent results in the competition can become a help in the process of professional title evaluation. Therefore, innovation competition has been paid more and more attention by major colleges and universities[3]. From the three levels of school, teachers and students, they are more keen to participate in discipline competition. In order to improve the results of innovation competition, the training mode of students must take the training of applied innovative talents as the goal, and build a set of curriculum system and management system for the purpose of Cultivating College Students' innovative ability.

3. Improve the Professional Level of Teachers and Students

To improve teachers' professional level, teachers should be familiar with various rules and regulations of the competition. We should strengthen communication with the outside world and adjust or change the entries in time according to the actual situation of the competition. After the innovation competition, teachers should summarize the problems and deficiencies in time, so as to prepare for the next competition. Teachers are encouraged to often participate in the conference guidelines held by some competitions to understand the principles and policies of the competitions. At the same time, teachers are encouraged to participate in some academic conference related activities to increase teachers' vision and improve their professional level.

In order to improve students' own level, all aspects need to coordinate and cooperate with each other. In terms of student achievement assessment, students can replace the final grade with the actual competition results to improve students' awareness of the competition. In the whole process of the competition, it can not only improve students' innovation ability, team mutual assistance ability, but also improve the ability of autonomous learning and problem-solving. In the process of the competition, let the students see, think and ask more, compare and analyze with the works of previous years, and learn from each other.

4. Integration of Innovation Competition and Software Engineering Curriculum System

The works and topics of the innovation competition are generally consistent with the cutting-edge research aspects or topics of the discipline. The tools used in the innovation competition are generally software or other methods commonly used in the society. As a teacher, I have accumulated a lot of experience in the process of guiding innovation competitions for many times. These experience should be directly connected with the curriculum system as one of the reference factors for the construction of the curriculum system. Deepening the reform of curriculum system and teaching content and enriching teaching methods and means are the basic requirements of curriculum construction in Colleges and universities[4].

Integrate innovative competition into professional courses, integrate teaching objectives, teaching means and teaching contents with the cultivation of innovative thinking, innovative consciousness and practical ability, and finally achieve the purpose of improving the level of theoretical teaching and innovative education; At the same time, a curriculum system with typical cases of innovation competition as the main content is set up to expand the

popularization of innovation education through case teaching and create a good foundation for innovation education; Strengthen general education, lay the foundation for innovation, encourage students to take innovative development courses and cultivate innovative thinking; Integrate the latest scientific and technological achievements into the classroom, enhance the attraction of scientific and technological competitions, stimulate college students' interest in actively participating in discipline competitions, and then cultivate college students' innovation ability.

5. Integration of Innovative Competition and Practical Teaching

Innovation competition attaches importance to both innovation and practicality. The main way to cultivate students' practicality in Colleges and universities is through practical teaching. Therefore, we must integrate innovation competition and practical teaching and establish a practical teaching mechanism based on innovation competition. Move the venue of the innovation competition to the practice teaching venue in the school, retain the content, methods and methods of the innovation competition, or innovate and design the practice teaching method suitable for the students of the school with the competition mode of the original innovation competition. The practical teaching mechanism based on innovation competition is not only a reference, but also an innovation. Only by following the trend of the times can we cultivate applied talents suitable for the development of the times. With the support of professional theoretical knowledge and high-quality practical teaching mode, students have the foundation and ability to solve practical problems, which will greatly improve students' interest and learning initiative. Students' participation is higher and higher, their awareness of knowledge exploration is stronger and stronger, and the effect of practice is better. At the same time, with many exercises in the practice link, we can give better play to and achieve better results in dealing with the real innovation competition, and our own value has been affirmed. Therefore, to optimize practical teaching and integrate the contents and methods of subject competition into it is to help and promote each other for practical teaching and subject competition.

6. Improve Teaching Assessment Methods

In the traditional assessment method, teachers mainly refer to students' usual and final grades. However, examination or usual performance can not fully reflect students' learning ability and achievements, especially in software engineering. Therefore, this teaching mode reform requires teachers to establish a reasonable teaching system, closely connect the teaching objectives with the assessment methods, and help students focus on specific projects. At the same time, teachers should guide students to draw inferences from one instance and reasonably integrate disciplines and majors. We divide the course assessment methods into various methods, bring the competition into the classroom, and replace the previous final and usual grades with the results of the competition, so that students can really improve their practical ability. In terms of teaching assessment methods: ① classroom participation: according to the scope of each competition, we bring classroom discussion, answering questions, group discussion, team member interaction and other contents into the classroom. The simulated on-site defense link is carried out in the form of groups in the classroom, which cultivates the students' on-site expression ability and teamwork ability, and enhances the students' expression and analysis ability. The situation of these classes will eventually be included in the scope of usual assessment as the students' usual grades. ② Competition situation: students can replace the final grade according to their own competition results. For example, students who win the first, second and third prizes at the national level or the first,

second and third prizes at the provincial level will give reasonable final grades according to different types of competitions, different grades and the requirements of teachers.

7. Summary

As the main battlefield for cultivating innovative talents, colleges and universities should bear in mind their mission and cultivate more high-quality comprehensive talents with innovative and practical ability for national development and national progress. Since its establishment, our university has always taken cultivating innovative talents as the talent training goal, and will continue to adhere to this direction. Discipline competition is an indispensable and effective way to cultivate college students' innovative ability and practical ability. Our university should adhere to the principle of "learning for application and studying for application", combine the development needs of the times and the development needs of college students, build a discipline competition system for the purpose of improving college students' innovation ability, build a curriculum system based on discipline competition, complete practical teaching reform based on discipline competition, effectively promote the cultivation of students' innovation ability, and give full play to the role of discipline competition in the cultivation of innovative talents.

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