

The Effect of Professional Skills Competition on Educational Reform of Professional Courses

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Abstract. Skills competition has achieved more attention with the increase of skills competitions. The front-line teachers of higher vocational education found that skills competition has many effects on professional course teaching during the guidance of competitors. In this paper, it gives a detailed introduction to the effect of skills competition on freshmen's first class, selection of vocational teaching contents, teachers' capability for professional course, teaching methods, course arrangement and teaching quality inspection; and thus the reform direction for professional course teaching is concluded.

In recent years, national skills competitions among higher vocational colleges have been held frequently, and higher vocational institutes themselves also often hold such kind of competitions; however, is this phenomenon good or bad? Does the skills competition have any effect on reform of professional courses during vocational education? After investigation, students who participated in skills competitions have a sound and deep understanding of what they've learned. At the same time, professional teachers can obtain much knowledge beyond the books during guiding students in skills competition, which can promote teachers' practical ability. That is to say, professional knowledge is the theoretical guidance for students' participation in skills competition, while participation in skills competition can promote students' practical skills in turn.

By participating in skills competition, students' mastery of basic knowledge and practical skills can be tested, teachers' quality of teaching can be tested, and meanwhile curriculum construction and teaching quality in the college can be tested as well. The author of this paper guided vocational students' participation in "*Blue Bridge Cup*" National Professional Software Talents Design and Innovation Competition for C programming language[1], during which the author has found that skills competition can make some difference for professional course teaching. These effects are shown in Figure 1.

The Effect of Skills Competition on Freshmen's First Class

According to document [2006] 16 from Ministry of Education, the goal of higher vocational education is that higher vocational education should cultivate talents specialized in high-end technology application such as production, construction, management and front-line service. Its value orientation of talents' cultivation is employment; while students in higher vocational colleges have no clear goal for employment direction, especially for freshmen. They have no idea about their future development direction. They only accept what teachers offer them passively without knowing

the practical application of knowledge, which has seriously affected their activeness. Therefore, in the first class for freshmen, we should present these problems by combining practical application cases in skills competitions with theoretical knowledge. After the reform of the first class, students' attitude towards study will be more active with a clear mind for future development.

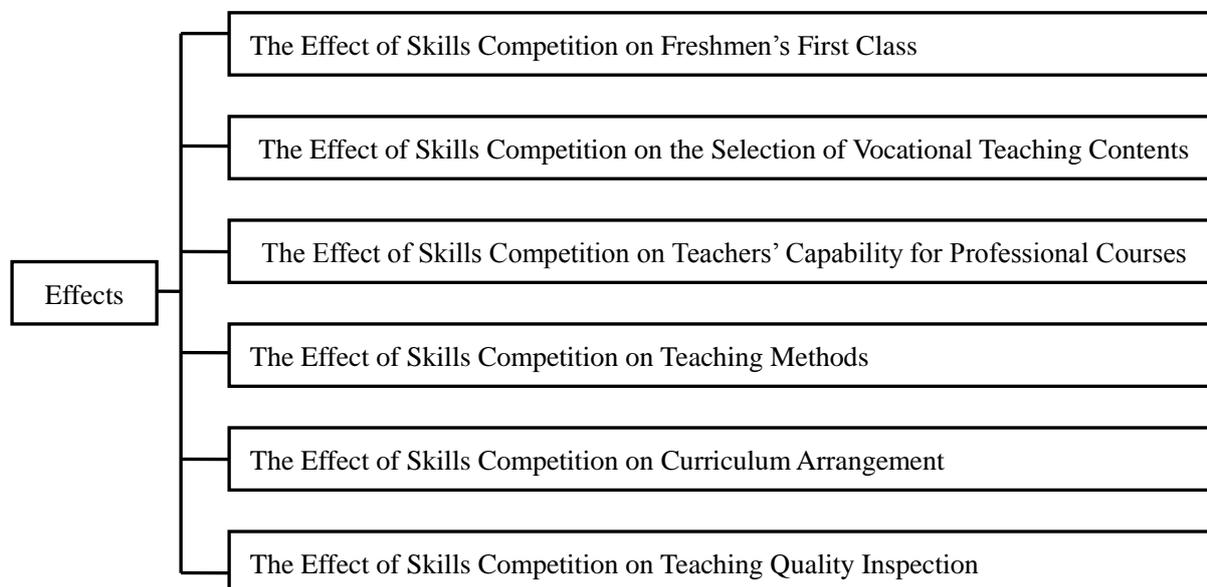


Fig. 1 The skills competition can make some difference effects for professional course

Generally, the skills competition can test two aspects of students. On one hand, students' mastery of theoretical knowledge and application of knowledge can be tested; on the other hand, students' team cooperation capability can be tested, during which we can see if they can develop large project by discussion and mutual help[2,3]. From the second aspect, we can companies have a high demand for vocational students' team cooperation capability, which requires corresponding reform in higher vocational colleges so as to meet their demand. Therefore, in the first class for freshmen, I divided students into groups. Each group has four students. I left them with tasks which required team cooperation so that students can get used to company work mode as soon as possible.

The Effect of Skills Competition on the Selection of Vocational Teaching Contents

According to the 2012 report on quality of talents in higher vocational education, higher vocational education plays an vital role in popularity of mass education since it provides important human resources for medium and small-sized enterprises. About 60% graduates from higher vocational colleges work in enterprises with 300 or less staff nationwide, within which 30% graduates work in micro and small enterprises with 50 or less staff. They have made active contributions to regional balanced development in third-class cities. Therefore, higher vocational education is irreplaceable. However, as we know, the goal of higher vocational education is to cultivate talents with skills, so does it mean these talents only need to master operational skills without mastering theoretical knowledge? Definitely wrong. In my opinion, theoretical teaching and practical operation should be combined together. Without theoretical knowledge as guidance, practical operation will be fixed without innovative. Likewise, theories without practical operation can't be better adapted to social service. Thus, selection of higher vocational teaching contents is especially important.

There are many theoretical disciplines in vocational teaching. Such kind of courses is lack of practicability, and they are difficult for practical teaching. As for students, they are reluctant to studying these theoretical courses without initiative since they think these courses are useless. However, actually, the theoretical courses are theoretical basis for later courses. We need to improve the situation urgently, for example, C programming language design[4,5]. During guidance of students, we found that many questions are selected from practical cases. The cases combined theoretical knowledge and practical application well, which lays basis for the selection of vocational teaching contents. To some extent, skills competition is just as a bridge connecting vocational colleges and companies. It not only offers graduates with sound opportunities, but it also provides basis for the selection of vocational teaching contents.

The Effect of Skills Competition on Teachers' Capability for Professional Courses

At present, skills competition almost covers all vocational colleges and all majors, forming a situation that "all disciplines have their own competitions, all colleges can participate in competitions, and all students can learn from the competitions". By skills competition, reform of teaching can be promoted, and meanwhile construction of double-type teachers and cooperation between schools and companies can be promoted.

The quality of teaching of one school is directly determined by its front-line teachers. According to the cultivation goal of talents, teachers in vocational colleges should be qualified double-type teachers with deep theoretical knowledge and excellent practical skills. Most teachers in higher vocational colleges are graduates who have no experience in enterprises. Though they have chance to work in enterprise during teaching, they can't master required skills comprehensively due to short practice time. Besides, not all professional teachers can have chance to practise in the front-line, which leads to unqualified and non-standard practical operation for most teachers. Their teaching level still stays on theoretical knowledge without reaching the employment standard of enterprises.

In general, skills competition is based on concrete projects in enterprises. Some topics of skills competition are even raised by enterprises since they will buy the most excellent achievement in the final, which can mobilize students' activeness and creativeness. Meanwhile, it can promote higher vocational teachers' professional theoretical level and practical operational ability[6].

The Effect of Skills Competition on Teaching Methods

Teachers' teaching methods are constantly improved with the development of society. Traditional teaching methods can be divided into expository method (based on language transmission), conversation method (based on oral information), discussion method (based on discussion of a certain question among students), practical work method (based on practical application of learned knowledge to solve practical problem), exercise method (based on repeated completion of certain action or solution of certain question), experiment method (based on students' practical operation to solve problems), visiting method (based on students' visit of companies' work process) and so on. All of these teaching methods are summaries from former experience, but they are not adaptable to nowadays vocational teaching.

During guiding students' participation in skills competition, I found that teaching methods are not fixed. Even for different contents of the same course, different teaching methods should be adopted to help students understand. However, traditional teaching methods can't be overlooked during the

pursuit of advanced teaching methods. After all, traditional teaching methods are brilliant experience from former people. They are feasible teaching methods through practical test, so they are still important for our study. That is to say, vocational teachers should not only master traditional teaching methods, but they should also master modern teaching methods. Through practice of skills competition, teachers can combine these teaching methods all together effectively so as to break through traditional teaching though with the employment of appropriate teaching methods[7].

The Effect of Skills Competition on Curriculum Arrangement

The arrangement of professional courses in higher vocational colleges is changing constantly, and people have always been exploring a certain curriculum system that is adaptable to vocational teaching. As time passes by, there's an constantly changing demand for vocational students' capability by society. That is to say, there's none professional curriculum system can be unchanged all the time. Therefore, this research should be conducted continuously[8]. In recent years, due to constant occurrence of kinds of skills competitions, teachers working on the front-line have concluded many valuable ideas for our reference. Meanwhile, curriculum arrangement in some higher vocational colleges has also changed.

The skills competitions have an orientation effect on the formulation of curriculum goals as well as selection of curriculum contents. Therefore, they can affect curriculum arrangement in higher vocational colleges. Affected by "*Blue Bridge Cup*" *National Professional Software Talents Design and Innovation Competition*, curriculum arrangement of C Programming Language Design in our college has been reformed. The text books of C Language Programming Design and Empirical Guidance Book for C Language Programming Design have been adapted with more emphasis on experiment courses as well as the effect of theoretical knowledge on practical skills, which can better serve teaching. At last, two-week practice classes are added to these two courses to solve students' questions comprehensively. Through practice, such kind of reform has not only improved quality of teaching, but it also provides guarantee for students' second participation in skills competitions[9].

The Effect of Skills Competition on Teaching Quality Inspection

During accepting higher vocational education, students should pass all disciplines organized by the school, and meanwhile they may be also required to pass some technical tests to prove their qualification for some posts. However, these assessment methods can't examine students' required skills comprehensively. Taking the major of computer software technology as an example, we can see students graduated from this major require certain initiative after employment. Since software they develop every time are different, students should possess good ability to adaptation, which requires them to possess a sound mastery of theoretical knowledge. With the rapid development of computer hardware technology, our society has an increasing demand for software projects as well as software projects' scale, leading to constantly changing development mode of software. The initial individualistic heroism mode has been transferred to today's team cooperation mode, requiring a higher demand for students' communication ability[10]. To sum up, the previous assessment methods can't explain the quality of teaching and learning regardless from the perspective of teachers or students. However, skills competition provides us with a just measurement, which can test quality of teaching scientifically and rationally from technique, innovation, adaptability, communication, psychology and so on.

Conclusion

With the concern of government, schools, enterprises as well as all related units, skills competitions covered all colleges and all majors have been held constantly, which have made great difference on teaching of professional courses in higher vocational colleges. In the paper, based on the effect of skills competition on freshmen's first class, selection of vocational teaching contents, teachers' capability for professional course, teaching methods, course arrangement and teaching quality inspection, it points out the necessity of skills competition, which is an effective platform for teachers' professional development; and meanwhile it is the basis for testing students' learning result, enhancing students' confidence and experiencing work process.

As organization of skills competition becomes more and more mature, its effect on professional courses is becoming obvious gradually. Thus, the front-line teachers in higher vocational colleges should constantly explore and summarize methods of teaching reform for professional courses so as to better serve the teaching.

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