

Research on the construction of MEM “project bidding and contract management” teaching case library

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Abstract. Case teaching is an important way to strengthen the training of practical ability of professional degree graduate students. With the rapid development of Master of Engineering Management (MEM) in China in recent years, the cases for the teaching of MEM curriculum need constantly renewed, further excavation, more collection and application, to form a systematic case library. Pushing forward the construction of case library in teaching of MEM professional degree graduate students help case teaching play full advantage. Taking the case library of “Project bidding and contract management” course for example, the paper expounds the relevant theoretical basis of teaching case library construction of professional degree postgraduate courses. And the paper puts forward some design principles and strategies of the construction of case library. Finally, the paper presents the application effects of “Project bidding and contract management” case library. It is hoped that the paper can provide some reference for improving the training quality of MEM professional degree graduate students.

1 Introduction

Engineering managers are playing an increasingly important role in modern engineering practice, in order to improve the training quality of MEM (Master of Engineering Management) professional degree graduate students, case teaching is widely used in MEM course teaching. Case teaching is based on typical cases, promotes the organic combination of theoretical teaching and practice, is an important way to strengthen the training of practical ability of professional degree graduate students. With the rapid development of Master of Engineering Management (MEM) in China in recent years, as a professional course of MEM, the cases required for the teaching of “Project Bidding and Contract Management” course need constantly renewed, further excavation, more collection and application, to form a systematic case library about project bidding and contract management for MEM teaching. Through the project bidding and contract management case library construction and teaching application, MEM professional degree graduate

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students can be effectively promoted in-depth understanding of industry and engineering tendering and contract management, be enhanced professional interest and practical ability.

2 The relevant theoretical basis

2.1 MEM (Master of engineering management) and “Project bidding and contract management” course

Master of Engineering Management (MEM) is a professional degree introduced in 2010 in China, Its purpose is to meet the urgent needs of engineering management talents for development of modern engineering business in China. It is the innovation of Engineering mode of engineering management personnel. The curriculum of Master of Engineering Management (MEM) should fully reflect the needs of knowledge and quality requirements for construction management practices, pay attention to the training of analytical ability and creatively solving actual problem^[1].

“Project bidding and contract management” course is a specialized course for MEM. It reveals general rule of engineering market, points out that market subjects should follow the basic principles, theory and method about project bidding and contract management.

2.2 Case teaching and case library

As a new teaching method, case teaching can guide students to discuss and analyze typical cases in real work life, raise students creative minds, develop students practical abilities. This is also one of the main purposes of introduce case teaching in MEM education in China^[2].

Case library is an organized and orderly teaching resource system by classification, collection, sorting and editing teaching case according to certain principles. A course case library is the collection of many different types of cases. Case library is mainly produced to meet the needs of case teaching^[3].

2.3 The necessity of construction of MEM “Project bidding and contract management” teaching case library

“Project bidding and contract management” course is a comprehensive course with mutual penetration of knowledge, it is difficult to study the course and stimulate interest in learning for some professional degree master students. Furthermore, case analysis are rare in previous courses, professional degree graduate students can't fully understand the knowledge of specialty. So it requires the construction of case library, professional degree graduate students can draw inferences through case study. The construction of case library can expand the breadth and depth of case application, promote the teaching process and effect about “Project Bidding and Contract Management” in various ways.

3 The design principles the construction of MEM “Project bidding and contract management” teaching case library

3.1 The case topic is typical or representative

The selected case events should be typical or representative events based on project bidding and contract management perspective. These events had significant or widespread effects,

and they can reflect some important phenomena or have research value and demonstration significance.

3.2 The case content should match the course objectives and teaching content

The case content should be carefully designed, from the perspective of improving students' comprehensive practical ability. The case content should pay attention to selecting materials with timeliness, rich content and strong practicality, be consistent with the course objectives. Through the organic combination with course theory and case analysis, students apply the basic principles of the course to analyze the events described in the case, and the process of case analysis should reflect the importance and difficulty of teaching content^[4].

3.3 The forms of case presentation are diversified

Case materials in different forms should be collected from various sources. In addition to text form, pictures, videos and audio works can also be selected. Case presentation form can be diversify. Interactive case resources can be developed to ensure that resources can be displayed on different media platforms.

4 The strategies of the construction of MEM” Project bidding and contract management” teaching case library

4.1 Establish case library management and update mechanism

A professional case library management and operation team should be established, which is Responsible for the development, maintenance and update of the case library. The teaching unit of using the case shall be responsible for the registration, filing of the case database, curriculum information development, case base update and so on. In conditions permitting, a case base online management platform should be established to complete a series of work such as uploading, reviewing, entering the database, searching, evaluating, which is is helpful to improve the efficiency of case library management.

The requirement of case time-efficient decides that case update is one of the most important parts of case library construction process. Case update mainly includes two tasks, one is case content update, the other is case elimination and case addition[5-6].

4.2 Establish case library co-construction and sharing mechanism

In recent years, because of the development orientation, personnel training objectives, teaching reform requirements and other aspects in different types of colleges and universities exist certain differences, the construction mode of teaching case library also presents the characteristics of diversity. It is necessary for different universities to exchange and share relevant experience in the construction of case library between different colleges and universities. Colleges and universities should try to set up the resource sharing platforms according to their own needs of teaching case library, sharing teaching case library construction idea and practice schemes. Each university retains the autonomous space of flexible application about teaching case library, and reaches agreement on case library construction. Thus, the construction of MEM professional degree graduate students teaching case library can be promote.

4.3 Set up network teaching platform of case library

With the development of modern information technology, application of big data and network platform, the case library can be used as the carrier, network teaching platform of case library should be set up, mainly includes three platforms: case teaching and management platform, case learning platform, teaching evaluation platform. Case teaching and management platform is used by teachers. It has the functions of releasing case study task list to students, pre-class test and in-class test, viewing student group report and grade, and online question answering. At the same time, teachers publish cases and instruction manuals of case, edit and modify the case on the platform. The information management level of case library should be improved through case teaching and management platform. Case learning platform is mainly for students to download learning resources, self-directed learning, group discussion, group report, intra-group self-evaluation and inter-group evaluation. Teaching evaluation platform can be divided into two aspects. On the one hand, the degree of achievement of students' learning goals can be judged. On the other hand, teachers and students can evaluate satisfaction of case uses, which provides reference for case library optimization recommendation and sharing^[7].

<p>Case teaching and management platform (for teachers)</p>	<p>Case learning platform (for students)</p>	<p>Teaching evaluation platform (for teachers and students)</p>
<ul style="list-style-type: none"> ■ Publish case ■ Assign teaching tasks ■ Provide stimulating thinking questions ■ Pre-class and in-class tests ■ On-line Instructor 	<ul style="list-style-type: none"> ■ Download learning resources ■ Self-learning ■ Group discussions ■ Group report ■ Intra-group self-evaluation ■ Inter-group evaluation 	<ul style="list-style-type: none"> ■ Judge the degree of achievement of learning goals ■ Evaluate satisfaction of case uses for students ■ Evaluate satisfaction of case uses for teachers

Fig. 1. Network teaching platform of case library.

5 The application effect of MEM “Project bidding and contract management” teaching case library

From student's perspective, the application of case library improves students' participation increases the process of thinking, exploring, analyzing, researching and summarizing. Students have more active creative thinking activities in the learning process. The breadth and depth of knowledge understanding can be strengthen. The application of case library guide students to discover problems independently, learn to analyze and solve problems.

From teacher's perspective, the professional quality and teaching level of teachers should be improved by the application effect of MEM “Project bidding and contract management” case library. Teachers are the organizers of case teaching, play a key role in case library teaching. These works such as case collection, case screening, teaching effectiveness evaluation have more demands from teachers. With the application of case library, teachers are required to conduct in-depth exploration of cases in engineering practice and scientific research, which can expand the teacher's knowledge system and deeply understand the course knowledge point. To a certain extent, the teaching ability of teachers should be improved through the application of teaching case library.

6 Conclusion

Case teaching plays a vital role in the training of MEM (Master of Engineering Management) professional degree graduate students, which promotes the practical ability of MEM professional degree graduate students. The construction of "Project bidding and contract management" teaching case library provides some reference for improving the training quality of MEM professional degree graduate students. The construction of case library is a systematic project, requires prolonged efforts. It is necessary to construct a set of effective supporting systems to promote the development and application of case library, for getting necessary and adequate support in terms of human, financial, and material resources and so on, thereby improving the practical ability and professional level of MEM professional degree graduate students.

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