The Construction of an Evaluation Index System for Assessing Practical Teaching Quality in Higher Vocational Education

Chun-ping TANG* and Yue-xiao ZHOU
Chongqing Technology and Business Institute, Chongqing 400052, Chongqing, China
*Corresponding author

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Abstract. Constructing an evaluation index system of practical teaching quality (PTQ) is regarded as one of the keys in the evaluation of practical teaching quality (PTQ) in civil engineering major and the realization of the cultivation objective of this major. Based on the characteristics of higher vocational education (HVE), this research presents the basic principle of establishing an index system of assessing PTQ in HVE and proposes an evaluation index system and evaluation criterion which are proven to be more scientific and reasonable. The system is expected to be applied in a certain extent.

Introduction
Teaching quality is essential to HVE and also a core index reflecting competitiveness of higher education. It is able to directly associate with the survival and development of each college. PTQ that reflects education level and capability of higher vocational colleges also plays a key role in monitoring PTQ of each college. The research and improvement of a PTQ evaluation system have become a research focus and key issue in the innovation of quality management in higher vocational colleges. They are also seen as the challenge faced by HVE. The ways to integrate the characteristics of HVE, and keep improving the quality management and evaluation system in practical teaching are regarded as the keys of enlarging the scale and rising teaching quality of HVE. They are also given the first priority by various higher vocational colleges [1]. However present higher vocational colleges in China fail to have a more systematic evaluation index system of PTQ when they improve the PTQ and practical teaching performance [2]. Aiming to solve this problem, it is urgent to build a concrete and practical evaluation index system of PTQ as soon as possible.

Basic Principle of Constructing PTQ Evaluation System
Civil engineering is a great practical major. As the cultivation of applied talents mainly focuses on the goals of achieving professional capability, practical teaching should be highly emphasized in teaching system of HVE. The PTQ evaluation system is built and applied aiming at the performance assessment of activities including experimental trainings, specialized practice, and post practices in the colleges, meanwhile, constructing evaluation standard system and assessment mechanism of an overall practical teaching modes should also performed. To solve the problems for establishing the shortage of indexes based on the evaluated results, the practical teaching modes can be improved [3].

Practical teaching calls for concrete implementation of contents, forms and managements of various links, which can therefore become items with great operability. By integrating the PTQ monitoring mechanism used by xx university in recent year[4], four basic principles governing the rule of constructing PTQ evaluation system are proposed. These principles include scientificity, practicability, systematization and feasibility.

Hence, the evaluation indexes need to be set by sufficiently considering their feasibility; they should be defined clearly, while evaluation criteria require being objective, comprehensive and are subjected to overall goal of practical teaching.
The Concrete Design of the PTQ Evaluation System

Practical teaching, as a complex system, its quality is affected by various factors involving internal, external, subjective and objective factors, which are correlated with each other and restrict each other.

By considering this regards, a PTQ evaluation system aiming at the teaching characteristics of civil engineering is designed, as illustrated in Figure 1.

Practical Teaching Background

The understanding, determination, identification and fulfillment of practical teaching objectives should be taken into account. Given the set of practical teaching needs to be consistent with talents cultivation objectives, the orientation and characteristic of higher vocational colleges, the PTQ evaluation system should be constructed through knowing the characteristics of civil engineering major, employers’ criteria concerning the practical teaching skill of students in higher vocational colleges, and stipulating scientific evaluation and examination plans. By improving practical teaching part of civil engineering major using a PTQ evaluation system, whether the setting and execution of practical teaching have lived up to the expected goals is checked.

The Practical Teaching Equipments

The number, utilization and types of practical teaching bases should be considered. In this work, the examination mainly focuses on whether the number of practical teaching bases is big enough, whether the proportion of students’ number and teaching bases and the annually average number of students employed by practical bases are suitable, whether equipments used in practical teaching bases is
sufficient, whether the variety of practical teaching bases and the requirements of teaching outline and plans are presented.

The Practical Teaching Process

PTQ evaluation, as a complex issue, consists of the evaluation of process and results, while PTQ evaluation of HVE is supposed to concentrate on the evaluation of process as follows. By carrying out analysis and survey, the evaluation factors are determined by combining real situations of our colleges. On this basis, the evaluation indexes which are quantified are set by excluding the influences of artificial factors. By doing so, PTQ evaluation index system is formed[5].

Practical Teaching Performance

At present, higher vocational colleges remain at initial stage of teaching evaluation in two main aspects: Out-of-school evaluation and the assessment inside the colleges. Out-of-school evaluation is primarily carried out by superior authorities, education experts outside colleges, and active participation of entrepreneurs.

According to the talents cultivation criteria of HVE and requirements of employers, the teaching quality and performance of HVE are evaluated routinely and aperiodically. The priority is given by the assessment of students in terms of skills and comprehensive capabilities acquired in HVE; while the evaluation within colleges is implemented by teaching administrative department, department of educational administration, supervision department of colleges, as well as the joint efforts or individual effort of different concrete implementation teaching departments on the evaluation of each link. Meanwhile, the students under education are likely to regularly participate in the assessment of teaching.

1) The evaluation targets

The targets of PTQ evaluation system vary with the different practice modes. The practical teaching of college mainly takes teachers, practice tutors, instructors, and students as evaluation targets. The targets of comprehensive practical teaching activities may include practical teaching leader group of schools or department, while out-of-school practices comprise the teachers and practice tutors of practical teaching bases except the evaluation targets aforementioned. The evaluation group is shown in Figure 2. The leader group of managing PTQ of schools.
2) The evaluation basis and criteria

The key of the PTQ evaluation system lies in the practical teaching evaluation criteria. The contents of practical teaching system including various forms such as cognition practice and post practice of civil engineering, consist of: practical teaching documents, the construction of practical teaching bases, practice contents and implementation, practice management, the overall evaluation of teachers on practical teaching process and its performances, the evaluation of students on the achievements of practices, and satisfaction of employers to students.

The Issues Regarding the Construction and Application of the PTQ Evaluation System

As students are seen as the products of colleges, education departments of higher vocational colleges are suggested to apply the idea that modern enterprises control the quality of products. The understanding into the quality of products should be enriched gradually: this calls for realizing design and manufacture of zero defect for products based on the design, manufacture, examination and application of products[6]. In this way, teaching quality needs to be monitored and evaluated substantially by changing its focus: on the basis of each link of teaching process, the quality control of students is usually carried out throughout the process what starts with talents cultivation plan. Now the focus now is shifted on the construction of PTQ evaluation system under the instruction of new teaching quality in an attempt to control the quality of teaching quality at each link.

Practical teaching modes show varieties involving training courses of civil engineering major, comprehensive practical teaching training link which includes colleges training and out-of-school practices. Each index and main observation points of PTQ need to be adjusted in time in addition to the application of aforementioned PTQ system into concrete practical teaching. Besides, the commonness and personality of the practical teaching for ordinary higher vocational colleges have to be both considered and emphasized when determining evaluation factors and index weights of PTQ in HVE.

For overall assessment of PTQ, the factors concluding quality of students, curriculum design, training projects and training bases should be considered comprehensively according to objective criteria such as the evaluation of indexes. There are multiple factors affecting the PTQ of HVE, and playing integrative functions. However, each factor has different influences on the PTQ: these factors can be objectively classified into primary and secondary factors. Hence, the construction of the PTQ evaluation index system should take the evaluation indexes that exert main effect on the PTQ, as core, while weights of evaluation are determined by sufficiently considering the influencing degree of each factor on the PTQ in HVE.

Conclusion

Higher vocational colleges require having in-depth study on teaching quality issues with an aim to implement and improve their teaching quality. Meanwhile various problems regarding the teaching evaluation of higher vocational colleges need to be well solved by considering their real situations. The construction of scientific and sufficient teaching evaluation system and design of scientific dynamic evaluation indexes will be performed to improve the evaluation degree. Furthermore, the evaluating results are got feedback and utilized effectively to organize an advanced teaching quality evaluation groups. The network evaluation system of teaching is constructed and more attentions have been paid on teaching link. Besides, vocational characteristics of teaching should be projected, while the effective connection between the theories and practices of teaching evaluation is found out to realize the close linkage of theory and teaching links. By doing so, teachers and students can precisely recognize their teaching levels and learning abilities respectively. By keep deepening teaching reform, the ideal teaching evaluation performance can be achieved, and the teaching of HVE is expected to develop in a sustainable and healthy way.
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References


