Effectiveness of Design Process of Education Quality Assurance System based on EFQM Model

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ABSTRACT

The quality of higher education is an essential factor that relates to the long-term development of school's infrastructure, it is also the main target for education reform, because all education activities were done with the education quality as the center. With the situation of increasing demand for high quality talents in our society, the scale of higher education has increased gradually, how to maintain the high quality and high level of higher education has become an urgent problem for ensuring the effectiveness of education. This paper based on EFQM model, combing with some constitute elements such as education content, responsibility allocation, management mode, resource distribution, research result and analysis improvement, analyzing the function need and performance requirement of the higher education quality assurance system, and designing of the system's general framework and process, constructing the model of higher education quality assurance system and assessing the system's effectiveness and feasibility. This system comprehensively considers the complexity and practicality of the higher education, which has provided a powerful evaluation tool for effectiveness analysis of this design process. Study and analysis in this paper has proved the effectiveness of the higher education quality assurance system based on EFQM model as well as its flexibility and practicality, which can be used in our country's higher education quality assurance system, by which can give direction for education system reform and provide measures, in this way it can provide more high-quality talents which are conducive for national and social development.

Keywords: EFQM, higher education, effectiveness, quality assurance system

INTRODUCTION

The quality of higher education closely links to one country's development strategy and planning, after reviewing the development history of European and American countries, we can find that the improvement of higher education level can strengthen the capability level of talents for national economic construction (Hu, 2016; Guterman, 2017; Si and Qiao, 2017), and it also can promote social prosperity and progress, it can be said that higher education relates to the height of a country can achieve in the future. For this reason, it's especially important to ensure and improve the quality of higher education (Zhai and Chen, 2017; Lai et al., 2017).

Compared with the developed countries in Europe and the United States, China's higher education quality assessment and assurance system was developed late in time, which has begun in the 1980s. Since the reform and opening up, our country's higher education has been undertaking tremendous task and pressure. After experiencing the national economy booming people have gradually increased their expectations for higher education (Li, Xu, Liu, 2017; Liu, 2017), higher education has started its rapid development and had some tremendous changes. At present, our country's higher education has made great progress on diversification, most of which are in the aspects of education content, education form, education goal, teaching content in class and training form, etc. (Parks-Stamm et al., 2017).

Contribution of this paper to the literature

- Introduced a new quality evaluation pattern and changed the original result-oriented only scoring system into a quality scoring system which tied goal, process and result together.
- The higher education quality assurance system based on EFQM model can provide concrete correction plan as well as pointing out the problems.
- The high education quality assurance system based on EFQM model is more flexible and can be applied into the assessment system of universities with different types and characteristics.

Table 1. Summary of the Number of Literature

Keyword and Resources	Journal	M.A	PHD	Conference
Higher education quality research	37462	8067	621	317
Higher education quality assurance system	1012	190	27	24

Quality management activity is not a new thing in the area of higher education (Chen, 2017; Hardy and Totman, 2017), before the emergency of the modern quality assessment system, higher education institutions have already had their system for measuring the education quality which is a traditional and spontaneous quality management and is not standardized and representative. With the reform and opening up, some related theories and methods on enterprise quality assessment and guarantee have been introduced into the field of higher education, our country's contemporary quality assessment and management in higher education field has been developing since then (Jiang and He, 2017). After researches and continuous improvement, our country's higher education assessment system has gradually established its position in higher education management. The responsibility that is undertaken by higher education quality assessment system is becoming heavier and increasingly more challenging. With the deepening of our country's higher education reform, the quality and level of higher education are getting more and more attention by people from different fields (Huang, 2017; Hao et al., 2017).

During the social development, it's obvious saying that higher education quality management is becoming more and more important, our society requires a more systematic and scientific higher education quality assessment system. At present, all social communities have treated the higher education quality assessment and guarantee system as a key way to ensure the high level of higher education, hoping to guarantee the education quality through scientific and reasonable standards and thus to promote a rapid and high-level development of higher education (Rieber, 2017; Gunter and Reeves, 2017).

LITERATURE REVIEW

In recent years, our scholars in education filed are in the process of studying education quality assurance system, assurance form and assurance methods, keeping focus on researching the development trend of the higher education quality assurance system in European and American countries, especially paying attention and studying their leading education quality assurance ideology, form and specific methods, having received a lot of inspirations. The literature which is related to higher education quality assurance system has been generalized as follows **Table 1** (Judd and Elliott, 2017; Costa and Miranda, 2017; Harris, 2017).

With the literature review, the content which are related to higher education quality assurance system mainly include following sides:

In 2014, Wu Hongyan from Nanjing University gave a comprehensive and in-depth explanation of the development history of the quality evaluation system of higher education in western developed countries in the paper Inspiration from Foreign Models of Higher Education Quality Evaluation, the scale of higher education in Europe and the United States is huge, and their education forms are diversified, thus their education quality is so different and uneven. The world's leading universities are still mostly concentrated in the West, providing a large number of high-quality talent for Western economic production (Wu and Chen, 2012; Cobbinah and Bayaga, 2017). The leading economic position of Western countries has a close relationship with their perfect and stable higher education system (Han and Lee, 2017; Neto and Wilks, 2017).

At the beginning of the last century, the certification institutes usually used quantity as their measurement standards, those standards often included number of classroom and number of students that can have class at the same time, as well as the number of books in the library, teaching level of educators and annual funding for researches, etc. (Yin and Yuan, 2016; Garvey, 2017). The reason for using these certification standards is to ensure school has enough financial resources and qualified teachers to undertake high-quality educational activities.

The early development of standards for quality assurance is limited, which is alike the initial stage of the school certification, the assessment standards do not cover self-evaluation from college and universities, only having spot investigation to schools from time to time. Understandably, the judgement at that time focused on school itself,
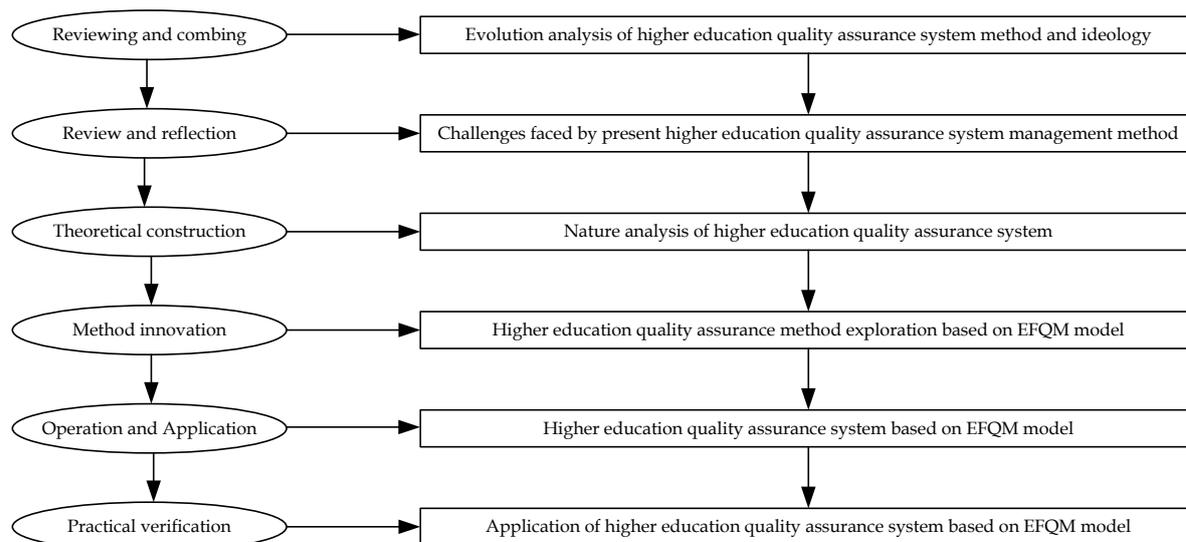
Figure 1. Research framework of the research

instead of concerning on students' level at now (Zhang, 2016; Guerrero and Roberts, 2017). The quantitative measurement standards has become more and more doubtful mainly due to the following reasons: First, the quantitative measurement standards mainly concern about specific and partial characteristics which are of little significance; Second, the quantitative measurement standards are lack of the diversified ability to deal with school-running objective and specific properties of each school (Benham et al., 2017).

In recent years, higher education quality assurance system abolished those standards which overly emphasized quantitative measurement, and began to implement overall pattern which pays attention to teaching and teaching purpose (Zhang et al., 2016). In order to implement the new standard, in the assessment of school scores, it should be in accordance with the overall review instead of overly concerned with some specific standards that school need to fulfill (Ahmed et al., 2017).

METHODS

The research framework of the research is shown as **Figure 1**. EFQM (European Foundation for Quality Management) represents the European Quality Management Foundation, namely the outstanding business model with the European Quality award. EFQM aims to enhance the strength of European companies and other institutions. EFQM has absorbed the strengths of European and American countries, and has set the direction and goal of improvement for European enterprises (De Abreu et al., 2017). EFQM has established quality awards and give it to organization which is excellent for quality management, and the quality management is the basic method for those organization's continuous improvement, namely the EFQM model. Comparing with the 9 elements or standards in EFQM model, we can have an effective self-evaluation on organization quality (Webber, 2017). Combining EFQM model with the assessment of education quality in schools, not only can ensure a fair assessment ability on school's education quality and level, but also can pay attention to the grading of the teaching process and level. By using EFQM model to have self-grading, it is also helpful for determine the next reform target. Since EFQM model is mostly used to assess the quality level and management situation of organizations like companies, some necessary corrections are needed when it is used in non-profit organizations like schools, especially when it is used in assessment of teaching level. The school's teaching level EFQM model used in this paper is shown in **Figure 2**, which includes nine contents: teaching goal, engine propulsion, aim and strategy, resources, process, school satisfaction, student satisfaction, social satisfaction and scientific research result, etc. These nine contents can also be divided into two groups, namely the engine propulsion part and instructional orientation part (Serneels et al., 2017).
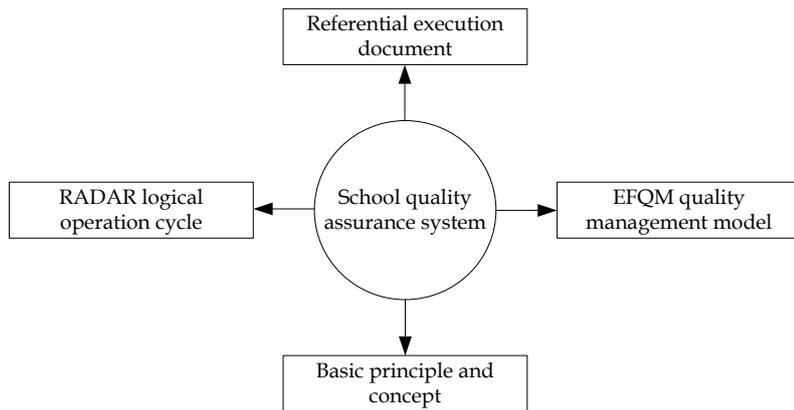
Figure 2. Basic Content Structure of EFGM Quality Management System

The grading part on education goal is composed of the following three components: according to students' needs, how to make, adjust and assess teaching goal; how to remove the content that will affect education level before the implementation of the education goal; whether the education goal is clear, measurable and can be implemented, it needs to be analogous and timely. The standard assessment part is composed of five parts: how to actively conduct education level activity; have effective communication and coordination with students for improving education level, and communicate with other organizations; how to judge the suggestions and recommendations given by society on education level; how to improve in accordance with the received suggestions; how to improve the education method and teaching policy periodically (Link et al., 2017). The scoring standards of education object management part includes: how to fully mobilize students' learning enthusiasm and exert their maximal potential; how to positively affect students' thoughts and thinking pattern. The scoring standards of learning and living habits part includes: how to fully and actively make use of the existing teaching materials, including the classroom equipment, test question database, etc.; how to collect and utilize the content related to teaching level in a planned way; How to effectively use resources from school and society to improve teaching level (Honig et al., 2017). The teaching quality assessment organization gradually began to require the school to conduct self-evaluation, and school should make a long-term self-evaluation of the subject curriculum and administrative management. The form of self-scoring adopted by teaching quality assessment institutes can help schools to provide thoughtful and meaningful materials, which is beneficial for encouraging schools to have deepening reform and development, meanwhile, it can help grading staff to have quick judgement about school's situation, it is helpful for representing teaching quality assessment institutes' respect toward school's independent right. However, self-scoring has brought some new problems for colleges and universities, only part of schools are able to have self-scoring; some are lack of motivation to do the self-scoring, complaining about self-scoring which will bring more works and pressure for school's staffs, otherwise, for some larger scale schools, they need to prepare several different quality assurance systems for multiple disciplines at the same time, meanwhile, most of schools' self-scoring cannot be used to compare with other schools' or among different majors, which is incomparable. Therefore, a part of teaching quality evaluation institutions have set different standards separately for having deepening cooperation with schools, motivating school to adopt different kinds of self-scoring form, and providing more flexible policies for schools to coordinate with school's self-assessment (Flaherty et al., (2017).

Another action from the teaching quality assessment agency is to conduct field research, which was reformed from the previous occasional school field survey. Most of the field research is conducted by professionals from other schools and related industries as the reviewers, so field trip actually is the same industry investigation. The main purpose of field trip is to ensure the reliability of the self-scoring that provided by every school, it ca help teaching quality assessment institutes to distinguish whether the school has accorded to the standards that required by the institutes to do the scoring, thus can provide the teaching quality assessment institutes with objective materials. The reviewer staffs of filed investigation played very important roles during the investigation process, in the non-national teaching quality evaluation organizations, most of field investigation reviewers are outstanding faculty members in this field and are of high proficiency.

RESULTS

The scoring standards of process composition includes: during the teaching process, how the improvement process of education level is conducted, regulated, corrected and tuned; during the process of education, how to effectively use and undertake the rules and regulations of education level stipulated by the school; depending on the previous scoring result of education level, how to set the direction of improvement and reform measurements;

In terms of this scoring term's education level summary, how to effectively record and provide to reviewers. The scoring standards of school satisfaction part includes: whether the education level has reached the expectation level before school's grading; the degree of appreciation of the teaching level of the teaching staffs within the major; School leaders and staff's satisfaction about teachers' teaching level. The scoring standards of student satisfaction part includes: whether the content taught in class have fulfilled the requirements of students; attendance status; Satisfaction level about teacher's teaching level. The scoring standards of social satisfaction part includes: whether the school has established systematic, clear and sustainable development guidelines, mobilizing the teaching staffs' potential; building up a group of professional teaching staff system, actively mobilizing teachers to participate in the decision-making process, and proving teacher with better teaching conditions and wages.

In the process of designing higher education quality assurance system in China, the advantages of EFQM quality management model are of good referential significance. The first point is its continuous development that can be used to guarantee the teaching level, is also should be combined with characteristics of higher education, to optimize the EFQM model, making it better adapting to particular characteristics of higher education, and also make higher education quality assurance system more stable and reliable. The second point is to encourage the adoption of scientific research result as assessment standard, for education receiver, namely students to realize the personal improvement. The fruit of higher education should be the self-improvement of students themselves, this should be the main factor for design teaching goal, and further enhancing the education mode which is centered with scientific research result. The third point is to promote teaching staffs' development, making the development of school reflects on the development of teaching staffs and on the changes of students. The fourth point is characterized by treating quality as the center of upper-level control, building the scientific research result-oriented higher education quality assurance system, perfecting each standard and making them more flexible and implementable.

DISCUSSION

In the actual process of learning and applying the EFQM model, in order to ensure validity and feasibility of the model's usage, the following situations should be noticed:

The progress form under the current education level scoring standards, due to the limitation of difference between the application scenario and original target, when EFQM scoring model is applied, there has no method to directly give unified judgement to scoring unit or scoring standards, the final scoring result will be affected inevitably. Therefore, setting up higher education quality assurance committee can make up the weakness, the higher education quality assurance committee which is composed of people from different industries and have different thinking modes can break up the original limitation, through different forms to construct a professional judge team, the higher education quality assurance committee can grade different education quality of different unit or majors that come from different schools. The final score advice can be given to the higher education quality assurance committee to generalize, and then ultimately determine schools' higher education quality level.

Changing the original thought, in the process of applying the EFQM scoring model, it needs to emphasize especially that judges should change their original working attitude which is only finding problems but not giving solution in the process of education quality assessment. However, in the process of grading the education quality, every judge should actively seek solutions. Considering the members in the judge team are coming from different industries and directions, which give them a great advantage in finding solutions. Thus, we can get the conclusion that when EFQM is used in the higher education quality assurance system, the emphasis should be put on the continuous improvement of education level.

In the process of constructing the higher education quality assurance system, it should emphasize the flexibility, applicability and standability of the quality standards, it should not be limited within the original standards which should only be used as the framework for regulating the quality assurance system, and stipulating and dividing in detail under the specific situations, leaving leeway for future applications.

CONCLUSION

Continuous improvement of the higher education quality is the fundamental task for sustainable development of colleges and universities. A reasonable and flexible education quality assurance system is the guarantee for the continuous improvement of education level. This paper is based on EFQM model, combining with some constituent elements such as education content, responsibility allocation, management mode, resources distribution, scientific research result and analysis improvement, etc., analyzed the systematic function and performance needs of the higher education quality assurance system, and designed this system's general framework and process, constructed the higher education quality assurance system model, and evaluated its effectiveness and flexibility.

By introducing the EFQM quality assessment model, it has changed the original only result-oriented scoring system into a quality scoring system which tied goal, process and result together, and combining EFQM model with the designing of the quality assurance system, making the higher education quality EFGM assessment model has a wider range of application in higher education quality assessment.

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