

УПРАВЛЕНИЕ В КОММЕРЧЕСКОМ СЕКТОРЕ

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СОЗДАНИЕ ТРАНСГРАНИЧНОЙ СИСТЕМЫ ОБЕСПЕЧЕНИЯ КАЧЕСТВА ВЫСШЕГО ОБРАЗОВАНИЯ: ТЕОРЕТИЧЕСКАЯ ОСНОВА TQM*

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Аннотация. В последние годы трансграничное высшее образование достигло большого прогресса, и создание его системы обеспечения качества является ключом к быстрому развитию трансграничного высшего образования. На основе комплексного управления качеством (TQM) анализируется важность и необходимость создания системы обеспечения качества трансграничного высшего образования, а также обсуждаются применимость и осуществимость применения TQM к трансграничному высшему образованию с теоретической и практической точек зрения. На этой основе была создана система обеспечения качества трансграничного высшего образования, включающая шесть модулей: международная среда и отношения, удовлетворенность клиентов, всестороннее участие, управление процессами, непрерывное улучшение и совершенствование качества. Обеспечить теоретическую поддержку и справочную информацию для обеспечения качества трансграничного высшего образования.

Ключевые слова: трансграничное высшее образование, обеспечение качества, TQM.

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CONSTRUCTION OF CROSS-BORDER HIGHER EDUCATION QUALITY ASSURANCE SYSTEM: THE THEORETICAL FRAMEWORK OF TQM*

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Abstract. In recent years, cross-border higher education has made great progress, and the construction of its quality assurance system is the key to the rapid development of cross-border higher education. Based on the comprehensive quality management (TQM), the importance and necessity of constructing the cross-border higher education quality assurance system are analyzed, and the applicability and feasibility of TQM application to cross-border higher education are discussed from theoretical and practical aspects. On this basis, a cross-border higher education quality assurance system has been constructed, including six modules: international environment and relationship, customer satisfaction, full participation, process management, continuous quality improvement, and quality excellence. To provide theoretical support and reference for the quality assurance of cross-border higher education.

Keywords: cross-border higher education; quality assurance; TQM.

Introduction

Driven by the competition for international status in the world university rankings, cross-border higher education has developed rapidly in recent years^[1]. The demand for cross-border education will grow from 1.8 million international students in 2000 to 7.2 million in 2025^[2]. Cross-border education is often related to internationalization and globalization and is interchangeable with transnational education, overseas education, and borderless education^[3]. The Guide to the Quality Assurance of Cross-border Higher Education states that cross-border higher education is the higher education for teachers, students, programs, institutions, education providers, or curriculum materials across jurisdictional borders. It includes a variety of models, from face-to-face to distance learning^[4]. Cross-border education is part of the development of collaboration programs, academic exchange programs, and business activities, focusing on student mobility, program mobility, and the mobility of educational providers or institutions^[5]. The cross-border flow of educational programs can be described as face-to-face or distance learning or a combined model of transnational education or training courses and programs, and its main popular models include franchising, dual

programs, double degrees, and various cohesion models. The cross-border movement of education providers has been described as a cross-border physical or virtual movement of education providers (institutions, organizations, companies), to provide educational or training programs and/or services to students and other clients. These education providers can be divided into two categories: traditional higher education institutions engaged in teaching, research, and social services, and new education providers based on business, focusing on teaching and providing educational services^[6]. In addition to the three basic flows of personnel, projects, and institutional flow, transnational higher education has also been exploring new models. In recent years, a new cross-border higher education cooperation model, cross-border university, has been increasingly developed^[7].

The rapid growth of the cross-border mobility of students, programs, and institutions gives us new opportunities for higher education, yet it also poses some risks. The most important challenge in cross-border education is how to ensure academic quality and realize the rationality of granting qualifications^[6]. More and more countries and institutions are realizing the importance of quality assurance for cross-border higher education. UNESCO (UNESCO) and the Organization for Economic Cooperation and Development (OECD) have jointly developed the Guide to the Quality Delivery of Cross-border Higher Education. It includes six stakeholders in higher education: government, higher education institutions/education providers, students, quality assurance and accreditation bodies, academic accreditation bodies, and professional committees^[6]. The purpose of the guide is to protect students and other stakeholders from low-quality education and fake education and encourage the quality development of cross-border higher education to meet human, social, economic, and cultural needs^[4]. UNESCO, in collaboration with the Asia-Pacific Regional Network for Higher Education Quality (APQN), has developed the Toolkit for Establishing Cross-border Education Standards, which aims to establish a regular framework for cross-border education to help the input of educational resources, matters related to exporting countries, models, interests, and practices. The UNESCO Centre for Higher Education (UNESCO / CEPES) and the European Commission (European Council) have developed the Good Implementation Guidelines for the Delivery of Transnational Education. These guidelines are helpful for educational policy-makers^[6].

Countries are also making continuous efforts to ensure the quality of cross-border higher education. As major exporting countries of transnational higher education, Australia and the UK have been committed to developing and improving the «implementation guidelines» since the reputation of their universities^[8]. The UK's transnational higher education quality assurance system is multi-level, including institutions of higher learning, independent evaluation agencies, professional certification agencies, and the news media^[9]. Australia's education quality assurance system has been gradually established in the 1950s and has been improved by now. Australia's own higher education quality assurance system is five-in-one, which consists of the federal government, state government, University Quality Assurance Agency (AUQA), Australian Academic Qualifications Framework Agency (AQF) and universities^[10].

Although all countries and organizations have formulated relevant policies, guidelines, and guidelines on the quality of cross-border higher education, the quality assurance system of cross-border higher education still faces great challenges. There is a broad consensus on quality assurance: a) many countries are both education exporters and importers, thus considering the bilateral role of countries; b) different countries have different principles, so global quality standards must consider diversification (including national objectives, protecting local systems); c) the national

framework and rule system of quality assurance have not developed well in many countries, or incompatible with evaluation methods proposed by external international evaluation agencies^[11].

After more than 30 years of education opening to the outside world, China's cross-border education has also made great achievements. In 2014, China became the world's largest cross-border education resource country, the world's largest exporting country, and the world's third-largest country receiving international students. It is necessary to strengthen the construction of cross-border education quality assurance to promote and standardize the development of Sino-foreign cooperation. The guarantee of the quality of cross-border education should become the common responsibility of government quality assurance institutions and various educational institutions at all levels^[12]. At the same time, China's cross-border higher education also faces great challenges^[3].

Based on this background, it is of great theoretical and practical significance to explore the quality assurance of cross-border higher education. First of all, quality assurance is an important means for the implementation of cross-border higher education and the main way to standardize various cross-border education forms. In the environment of fierce competition in international education, quality assurance is particularly important. Secondly, the establishment of the cross-border higher education quality assurance system can ensure the rights and interests of all stakeholders in cross-border higher education, ensure that students can enjoy fair educational resources, and protect the interests of educational service providers. Finally, the quality assurance of cross-border higher education can improve the credibility of higher education, eliminate false and deceptive behaviors, prevent the spread of «diploma factories», and improve the public's acceptance of cross-border higher education.

This paper takes the comprehensive quality management method (Total quality management, TQM) as the analysis framework, and aims to explore the construction of a quality assurance system of cross-border higher education and achieve continuous quality improvement in the implementation process of cross-border higher education.

2. COMPREHENSIVE QUALITY MANAGEMENT (TOTAL QUALITY MANAGEMENT, TQM): THEORETICAL FRAMEWORK

(1) Quality and higher education quality assurance

Quality is defined differently by different scholars, and these definitions do not help because they must be individual-related, often associated with design excellence (design excellence)^[13]. For a product, excellent quality means zero blemishes and durability. For education, quality reflects the service state and service level. For example, the excellent quality provided by administrative personnel is high efficiency and zero error, and the excellent quality provided by teachers is the high efficiency and effectiveness of knowledge transmission. Therefore, when we discuss quality, we should distinguish its objects, and different objects have different quality demands. Overall, quality is a measurable action based on clear goals rather than experience or opinion, and superior quality means «consistent with demand»^[14]. The most commonly used dimensions in quality management are leadership, personnel management, planning, information and analysis, process management, supplier management, focusing on stakeholders, and design^[15].

Quality assurance of higher education refers to the continuous evaluation process (assessment, supervision, guarantee, maintenance, and improvement). Quality assurance focuses on re-

sponsibility and improvement, providing information and identification through continuous processes and established standards, including internal quality assurance and external quality assurance^[16]. Currently, the international common use of the methods of quality assurance in higher education includes assessment, audit, certification, accreditation, and code of conduct^[9].

(2) Comprehensive quality management

TQM was a management method that originated in the 50s and was favored in the early 80s^[17]. There are many definitions of TQM, and scholars have defined TQM from different perspectives. Roosevelt believes TQM as a strategic structure to evaluate and optimize continuous improvement practices in all areas of business^[18]. Corrigan believes TQM as a management philosophy that builds a customer-oriented learning organization through continuous improvement in organizational and process efficiency and effectiveness^[19]. Kanji believes that TQM is a culture in which organizations achieve customer satisfaction through continuous improvement^[20]. Neves believes that TQM's principles include long-term, customer focus, highest management commitment, systematic thinking, providing quality training and tools, increased employee engagement, developing evaluation and reporting systems, improving management-employee communication, and continuous improvement^[21]. Chen believes that TQM performance mainly includes TQM cultural advice, customer relationship management, business relationship management, support activity planning, knowledge management, financial performance, and unique competitiveness^[22]. Bayraktar believes that the most attractive features of TQM are continuous learning in the creation, leadership, and flexibility in the environment, sharing of organizational goals, and the organization's processes that directly focus on customers^[23].

Some scholars have combined with previous studies, and summarized the key indicators and core elements of TQM. Houston summarizes several key concepts of TQM's philosophy^[24]. Bayraktar believes that the existing literature defines 12 aspects of TQM and continuous improvement projects: leadership commitment, TQM adoption, TQM communication, customer relationships, benchmarking, training, open organization, employee authorization, zero-defect thinking, flexible manufacturing, process improvement and evaluation^[23].

Although scholars have different perspectives on TQM, they all involve several key points: leadership, customers, process, continuous improvement, and full participation. In essence, TQM's main principle is to reduce or eliminate waste from systems or processes, which is the same in both manufacturing and service environments^[25]. An important point to implement TQM is «ecological balance», that is, factors should be balanced in all aspects, including structure, culture, human resources policies, and management methods, which must adapt to the external environment^[13].

3. CONSTRUCTION OF CROSS-BORDER HIGHER EDUCATION QUALITY ASSURANCE SYSTEM UNDER THE FRAMEWORK OF TQM ANALYSIS

On the basis of understanding the relevant concepts and main characteristics of TQM, this paper uses the analytical framework to construct the quality assurance system of cross-border higher education. The idea is as follows: Determine the terminology of TQM application in higher education, sort out the key points of TQM application in higher education, combine the characteristics of cross-border higher education, and develop a quality assurance system in line with the cross-border higher education.

(1) TQM is applied to the terminology in higher education

TQM was originally applied to the commercial field, therefore, the terms such as customers, suppliers, and others involved are different in higher education. Identifying terminology associations in two different domains helps to understand the composition and application of the TQM analysis framework. The specific meanings are shown in Table 1.

Table 1 – **The meanings between terms in TQM and vocabulary in higher education**

TQM	higher education
Client	Students, stakeholders (parents, the public)
Supplier	Educational service providers (universities, various educational institutions)
Lead	Senior managers (management level), teachers (teaching level)
Employees, employees	Teachers, teaching assistants and staff members engaged in higher education
Products and services	Students and social services
Waste	Lack of efficient allocation of educational resources

The effectiveness of educational quality depends on the correct cognition of college clients. Higher education has two main categories of clients, students, and other stakeholders, such as parents, business, society, etc^[26]. From the perspective of higher education clients, students are ranked first, followed by employers, society, teaching staff, and families^[27]. Suppliers are providers of education services, either in universities or in various educational institutions. The main task of leadership is to help people do a good job, and in educational institutions, the role of the teacher is considered a leader, not just a mentor^[28]. At the management level, leaders are senior managers at all levels, such as the government, educational management institutions, quality supervision and evaluation institutions, and higher education institutions. For employees, that is, people employed in educational services, such as teachers, staff, and staff also have dual identities, he is both an employee and an internal customer of the organization. Waste is a phenomenon of unreasonable use of resources. TQM in management emphasizes eliminating waste. Some scholars have defined eight kinds of waste in higher education: 1) uncoordinated teaching, tutoring, and testing; 2) Graduates cannot find jobs, lack lifelong learning ability; 3) Arrange no courses that students cannot pass; 4) The course does not contribute to the concept of customer value; 5) Poor planning and mistakes in teaching, coaching, and testing; 6) Poor planning; 7) Teachers 'and students' downstream activities have been waiting; 8) Curriculum design and support activities cannot meet the needs of customers inside and outside of higher education institutions^[17].

(2) Key points of TQM application in higher education

The comprehensive quality management of higher education involves eight aspects: students, teachers, curriculum, leadership, material potential, the relationship between colleges and the community, and the independence and diversity of colleges and universities. Among them, student satisfaction is a key factor in the success of higher education, and it must also be the focus of TQM practice^[29]. There are seven steps to implement TQM in universities: senior management commitment, clear communication channels, self-evaluation plan, teamwork and training, self-evaluation of understanding the selection process, and action plan^[25]. The educational standard applies seven

business standards, with the framework adapted to the needs of all organizations, also including educational organizations^[30]. Venkatraman has developed an analytical framework for TQM, including leadership and quality culture, continuous improvement and innovation in the educational process, employee engagement and development, rapid response and information management, customer-oriented quality, and internal and external partner development^[31].

(3) Construction of The Quality Assurance System for Cross-border Higher Education

Although cross-border higher education belongs to the category of higher education, it has its uniqueness. First, cross-border higher education involves more stakeholders. It includes not only regular domestic stakeholders (government, higher education institutions, students, teachers, social public, etc.) but also foreign stakeholders. Second, the environment of cross-border higher education is more complex. Cross-border higher education should comply with the bilateral or multilateral national policies and regulations of cooperation, and its implementation should be consistent with the country's political, economic, and cultural development needs. Finally, the quality assurance requirements are higher. As cross-border higher education involves a wide range and has many links, if the quality assurance mechanism is not sound and the certification institutions are not professional, various serious problems will appear, which will not only affect the teaching effect and reduce customer satisfaction but also affect the reputation of higher education institutions in the world.

Based on the above analysis, this paper constructs a cross-border higher education quality assurance system based on TQM. The quality assurance analysis framework includes six modules: international environment and relationship, customer satisfaction, full participation, process management, continuous quality improvement, and excellent quality. It covers not only the key points of TQM application in higher education but also highlights the characteristics of cross-border higher education. The quality assurance system is a closed loop, from the core goal as the starting point, combined with the international environment, through full participation in PDCA to achieve continuous quality improvement, form excellent quality, and then return to the foothold of customer satisfaction.

① International environment and relations

This module defines the environment of the organization and its relationship with the environment. As mentioned above, cross-border higher education adapts to the international environment and achieves a balanced state, so it is very important to understand the environment of the organization. These environments include the political, economic, and cultural environments. Organizations can determine the feasibility of conducting cross-border education by analyzing the environment.

② Customer satisfaction

Customer satisfaction is the most important and most mentioned dimension of all TQM applications. Customers include all stakeholders, and the core goal of providing cross-border higher education quality assurance is to focus on student satisfaction. From the macro cross-border higher education policy to the micro-teaching, facilities and services should be based on the needs of students, to meet the students' needs for knowledge, and improve their ability to participate in international competition. This is not only the starting point of the quality assurance system, but also the foothold. It should be noted that customers include both external customers and internal customers,

and internal customers are the teaching staff and educational service providers within the organization, namely, to meet the needs of both external customers and the needs of employees.

③ Full participation

Full participation is another important guarantee for the implementation of TQM, and the continuous improvement of quality depends on full participation. The full staff here includes not only administrators, and teachers, but also institutional policies and rules, as well as customers (students and other stakeholders). First, the quality assurance system takes customer satisfaction as the starting point and foothold, so the design of the education process should be based on it, and the customer is the source of full participation. Second, education providers are the implementers of quality assurance, so the personnel should perform their duties to implement the responsibility system. Finally, the policy formulation should not only take into account the international environment but also pay attention to the problems and challenges faced by education providers when implementing cross-border higher education. Full participation is the only way to achieve continuous quality improvement.

④ Process management

Process management is the core content of quality assurance. This paper uses the PDCA method (plan, do, check, action) to analyze the process management and quality results. If there is a good plan (P), the quality will continue to improve, then the necessary activities will complete the plan (D), and the results need to be tested (C). According to the results, the actions will be conducted (A) to improve the process^[32]. This is a cyclical process, the last round of action provides the basis for the next round of planning, the final effect is continuous quality improvement, and finally the formation of quality excellence.

The plan mainly includes the macro level (government policy, framework, code of conduct) and the micro level (strategic plan, leadership). Special emphasis is placed on cross-border higher education, so plans should fully consider that a country is both an exporter and an importer of education. An effective plan is the guarantee of the realization of goals, and effectiveness refers to the plan being targeted, operable, and guiding. The plan should clearly explain the provided teaching quality, resource allocation, teaching mode, students' accessible ability, academic certification, and other issues, and universities should ensure consistency between the quality of cross-border education and the quality of domestic institutions. Leadership is one of the key elements in TQM practice. One of the main reasons for TQM implementation failure is their low commitment and lack of leadership. Leadership commitment refers to the understanding and support of senior managers for TQM implementation. Leaders should realize the importance of TQM, understand the implementation principle of TQM, clarify the need for full participation, and realize that continuous quality improvement is the result of long-term efforts.

Check is the verification and evaluation of the implementation results. In cross-border higher education, inspection is a process of reviewing and evaluating education quality including internal security and external security. Internal security is a process of self-examination and an important part of the quality assurance of cross-border higher education. Internal security is the process of self-evaluation and self-examination in colleges and universities, which involves the supervision and management of the teaching process by senior leaders, various committees (academic committee, teaching committee, quality supervision committee), and other departments. External safeguards include evaluation, quality certification, accreditation, and benchmarking. External eval-

uation is the collection of data and information on the core activities^[16]. In addition to the evaluation conducted by special institutions, there are also some organizations ranking world universities, which is also a reflection of the quality evaluation of cross-border higher education. Quality certification and accreditation are both the results of quality assurance, and more and more countries are beginning to seek accreditation to attract students from all over the world. Both internal and external inspections are carried out by the relevant regulations, agreements, and guidelines formulated by the World Organization or various countries and regions. It can be seen that the formulation of norms and standards is the premise of realizing quality assurance, and the practice of these norms is the key to ensure the operation of the quality assurance system. Benchmarking is a measure of best practices^[16]. Benchmarking has also become a way of external quality assurance, through learning, to optimize the process of cross-border higher education and achieve the purpose of quality excellence.

Action is to correct and improve the problems after the inspection. Actions mainly include communication, teamwork, information sharing, and responsibility systems. Communication enables all personnel involved in the quality system to achieve information communication and share quality objectives. Teamwork is to maximize the interests of the organization. Information sharing is the result of communication and an important way to make information transparent and full participation. The responsibility system is the responsibility distribution of inspection results, and the clear division of responsibilities contributes to the achievement of organizational goals. Through the link of action, the occurrence and existing problems in the internal inspection and external inspection are sorted out, and the information is shared within the scope of all staff. Through clear responsibility and teamwork, the quality problems are corrected, and then enter a new round of planning.

Continuous quality improvement is the process of continuous quality improvement. It is achieved by full participation in PDCA, and thus achieves optimal quality results and quality excellence.

Quality excellence is the final result of continuous quality improvement. After repeated PDCA, continuous improvement can be achieved. The implementation process can be accomplished by eliminating waste, improving customer satisfaction, cultural construction, and optimal implementation. As mentioned above, waste is the lack of reasonable allocation of educational resources, which leads to low efficiency and high costs. Therefore, in the operation of quality assurance, the first step should eliminate various waste behaviors. The elimination of waste will increase customer satisfaction, and then gain a higher social reputation. TQM culture has been continuously established, which permeates full participation and continuous quality improvement into every level of education, promotes the application of TQM in cross-border higher education, and improves the quality of cross-border higher education. Best practice is the process and mechanism to achieve the optimal practice results, which promotes the continuous upgrading of the quality level, and eventually the formation of the quality of excellence, back to the core goal of customer satisfaction.

4. CONCLUSION

This paper tries to construct a cross-border higher education quality assurance system based on TQM, which consists of six modules: international environment and relationship, customer satisfaction, full participation, process management, continuous quality improvement, and excellent quality. Customer satisfaction is the starting point, with PDCA as the quality assurance tool,

through full participation and process management, to achieve continuous quality improvement and quality excellence. This analytical framework is a new attempt to apply TQM to cross-border higher education, but there are also some research shortcomings. First, this framework is only a theoretical discussion, and whether it is scientific in practice needs to be further verified. Second, the cross-border higher education system is complex, and the situation of each country and each project is completely different. Therefore, the framework only analyzes the overall situation, but not the actual situation of a certain country, and the actual situation of the country should be considered.

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