Research on the Construction of Quality Assurance System Based on the Perspective of "High-Quality Development"

-- A Case Study of Wenzhou Polytechnic

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Abstract

Wenzhou Polytechnic aims to develop new technical and skilled talents that adapt to regional development, it is based on the perspective of "high-quality development", takes the opportunities of "Double High-Levels Plan Schools", "Action Plan of Quality Improvement and Talent Cultivation of Vocational Education(2020—2023)" and "battle against upgrading from junior college to undergraduate college", untangles the theoretical logic of "high-quality development" of the quality assurance system, constructs a framework and mechanism, proposes to arouse internal impetus, implement critical paths by driving precise management with the help of external driving force and data, and continues to create the quality atmosphere and improves the school's quality management level.

Keywords

Policy support; Framework and mechanism; Key path; Quality assurance system.

1. INTRODUCTION

In order to better fulfill the main responsibility for the quality of talent development and maximize the interested parties' satisfaction for the work of talent development; based on the perspective of "high-quality development", on the basis of the perspective of the "high-quality development", Wenzhou Polytechnic starts from the maximum satisfaction of various interested parties, improves the working mechanism, perfects the system, continuously strengthens the supervision before, during and after the event, aims to develop new technical craftsmen talents who adapt to regional development, takes the opportunities of "Double High-Levels Plan Schools", "Action Plan of Quality Improvement and Talent Cultivation of Vocational Education(2020—2023)"and "battle against upgrading from junior college to undergraduate college", founds a "hierarchical, standardized, institutionalized, and intelligent" quality assurance system with the characteristics of Wenzhou Polytechnic, continues to improve the quality awareness, professional competence and management level of the faculty, and then make the school's school-running level and talent development quality can spiral.

2. THEORETICAL LOGIC OF "HIGH-QUALITY DEVELOPMENT" OF QUALITY ASSURANCE SYSTEM

2.1. Policy Support

High-quality development is the theme of economic and social development in the new era, and the continuous improvement of education and teaching quality is the cornerstone of the sustainable development of higher vocational colleges. "Implementation Plan of National Vocational Education Reform" points out that the

the current vocational education is changing from the pursuit of scale expansion to the quality improvement, it should improve the quality evaluation mechanism in which the government, industry, enterprises and schools participate together, and improve the school-running quality; "Action Plan of Vocational Education Quality Improvement and Talent Development (2020-2023)" proposes to improve the internal governance structure of vocational schools, promotes the construction of the teaching diagnosis and improvement system, perfect the school-running quality supervision and evaluation mechanism, and give full play to the main role of schools in running schools. The National Vocational Education Conference proposes that vocational education should improve adaptability and attraction, improve the quality assurance system, set up the regular teaching diagnosis and improvement system, perfect the monitoring and evaluation system, firmly grasp the lifeline of education quality, firmly control the quality, and improve talent improvement quality. "Guideline on Promoting the High-Quality Development of Modern Vocational Education" proposes to improve the quality assurance system from setting vocational education standard, teaching diagnosis and improvement, vocational education monitoring and evaluation, implements the quality annual report publicity system, and further define the construction of the quality assurance system.

2.2. Literature Review

The Quality Assurance Agency for Higher Education (QAA) defines the higher education quality assurance system as the method which is used to maintain and improve all systems, resources, and information of the academic standards and school-running quality of higher education [1]. Lv Shaochun et al. analyzes the significance of the teaching quality assurance system, sums up the practical experience of Jiamusi University, and proposes to build the "two-track and four-cycle" internal teaching quality assurance system [2]. Fang Qiansheng et al. believes that "teaching quality depends on a sound organizational structure, systematic methods are used to controls the main factors affecting quality in the teaching process, and form a management system with clear goals, clear rights and responsibilities, and multiple linkages [3]. Zhang Maocong proposes that the college teaching quality assurance system is mainly composed of internal and external teaching quality assurance branch systems, a pattern in which the inside is the main, the outside is supplemented, the inside adapts to the outside, and the outside promotes the inside [4]. Liu Yao believes that the internal guarantee of education quality in higher vocational colleges in our country is mainly faced with four levels of dilemma: idea guarantee, input guarantee, process guarantee and output guarantee [5]. Lu Jieyuan believes that the internal teaching quality assurance system of colleges and universities still lacks scientific teaching quality standards, the quality control and monitoring is not effective enough, the talent development reform only up to a point, the quality culture construction is not deep enough, and the reward and punishment system is not perfect [6]. Guo Guangjun et al propose to enhance the integration level, coordination level, procedural level, process level and informatization level of quality assurance governance [7].

3. FRAMEWORK MECHANISM OF "HIGH-QUALITY DEVELOPMENT" OF QUALITY ASSURANCE SYSTEM

3.1. Organizational Structure

Wenzhou Polytechnic is based on the school-running position of "keeping pace with national development, linking with regional industries, seeing win-win operation with industry enterprises, and articulating with international top standards", concentrates on building the example schools of type development, model school of quality improvement and talent development, vocational education reform pioneer schools, and the "high-quality development"

quality assurance system of the example schools of higher vocational governance. The "four-level" quality assurance organization system, including committees - 6 special working groups - 9 teaching unit working groups - 41 professional working groups, is set up. The school leadership is the highest decision-making and command system, it studies and make major policies and measures on guaranteeing and improving the school-running quality, and does a good job of top-level layout; the functional departments form 6 special working groups according to their job responsibilities, including major and curriculum construction, faculty training, all-round development of students, information management, security work, inspection and assessment, and do a good job in standard setting, supervision and control, and security system operation at the levels of "college, major, curriculum, faculty, and students", etc.; according to the quality assurance documents and deployment issued by the school, 9 teaching units make their own work plans, organize and implement them; 41 majors, as professional working groups, are responsible for the innovation of the talent development model of their majors, implement the dynamic reform of the professional group and the regional industry development, revise the curriculum standards, compile new forms, the ideological and political textbooks, the integration between industry and education, teaching diagnosis and improvement, etc. As a result, the organizational structure with clear rights and responsibility boundaries and efficient operation of top-level layout, middle-level management, and grass-roots operation is formed.
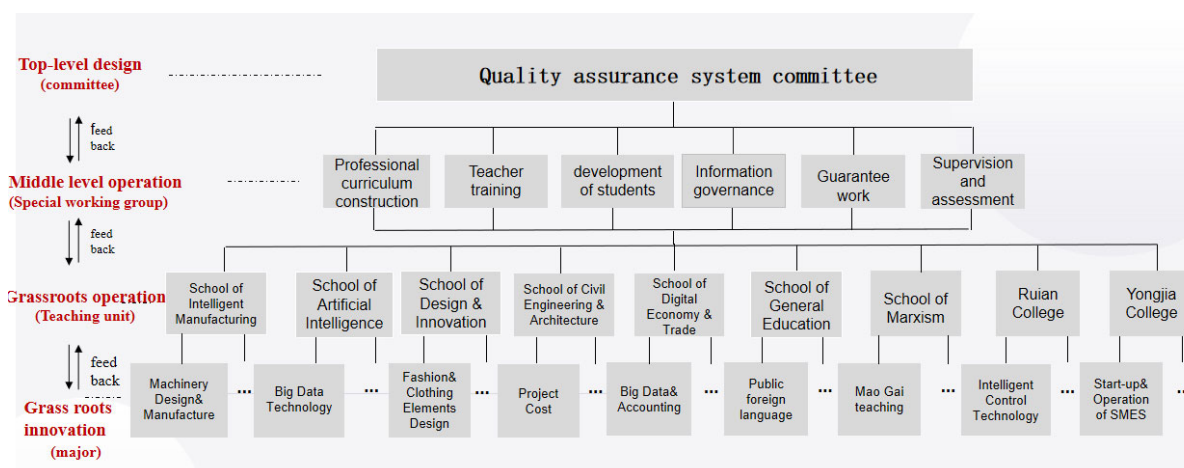

Figure 1. Organizational structure of the quality assurance system of Wenzhou Polytechnic

3.2.2. Standard System

Qu Xiajin believes that setting up perfect quality standards is a prerequisite for the effective operation of the internal quality assurance system in colleges and universities, it is an effective help for the construction of quality culture, and should examine talent development objectives, teaching standards, teaching management, teaching evaluation and other aspects[8]. On the basis of "14th Five-Year Plan" development plan and the general goal of "Double High-Levels Plan Schools" construction, the school follows the principle of "bottom line and unlimitedness coexist" around various quality subjects, forms a goal system that is consistent from top to bottom and echoes from left to right, and builds a "high quality development" target chain. On the basis of untangling the work standards of various department, a content-related and relatively independent standard system is built and a "high-quality development" standard chain is formed; on this basis, the quality control elements at all levels of various systems are determined, a quality control index system consisting of 5 dimensions, 13 angles, and 532 index points is set up, and make the operation of the quality assurance system well-founded and apposite.

Table 1. Quality control index system of school

dimension	perspective	Index content	index point
school level	school's perspective	basic school-running conditions, completion rate of annual target, investment per student, social reputation...	74
major level	school's perspective	the number of major groups, the number of industry-school-research cooperative enterprises, the number of national-level teaching teams, the national-level teaching resource database...	55
	teaching group's perspective	major links industry dynamic adjustment mechanism, the number of practice bases, donation value of enterprise (quasi), the number of pilots of the "1+x" certificate system, payment of scientific research and technical services...	56
	individual perspective of major	argument of the talent development plan, the number of trainee accepted by the practice base, the number of trained people of enterprise order, assessment results of major performance...	51
curriculum level	school's perspective	high-quality courses, online courses, country plans textbook construction, curriculum ideological and political construction...	19
	teaching group's perspective	the ratio of practical courses, the qualification rate of grades, the number of courses under 90 points in students' evaluation, the number of observation activities in demonstration class...	14
	individual perspective of curriculum	curriculum standards, teaching plans, assessment plans, monitoring and evaluation of curriculum, student evaluation of teaching...	18
teacher level	school's perspective	the double-teacher construction and training plan, the ratio of double-teacher, the ratio of counselors, the talent import mechanism...	45
	teaching group's perspective	teacher-student ratio of major, the number of full-time teachers, the number of part-time teachers, the number of doctors, the number of people for further education	40
	individual perspective of teacher	teaching workload, enterprise practice, assessment of teaching performance, assessment of teacher morality...	25
student level	school's perspective	employment rate, new students' registration rate, start-up rate, acquisition rate of vocational skill grade certificate...	46
	teaching group's perspective	the number of patents authorized by 100 students, the number of awards in skill competitions, the qualification rate of credit points, the qualification rate of physique test...	41
	individual perspective of student	credit point, social practice, acquisition condition of vocational qualification certificates, graduate salary...	48

3.3. System Construction

The quality assurance system is an important embodiment of the quality idea and school-running idea of colleges and universities, in order to fulfil the "high-quality development" goal chain and standardized implementation of the standard chain, the quality assurance series system is made based on the idea of system management, process management, traceable process t, and measurable performance, from the school management, major and curriculum construction, faculty training, and students' all-round development, the work of "saving, abolishing, amending, merging and establishing" is done for more than 400 normal documents, the quality assurance system has been systematically untangled, "Internal Quality Assurance System Diagnosis and Improvement Plan", " Construction Management Methods of Teaching

Quality Assurance System", "Major Construction Work Performance Assessment and Major Dynamic Adjustment Method" of Wenzhou Polytechnic", "Double-Teacher Faculty Construction Plan", "Management Regulations of Student ", "Teaching Quality Monitoring and Operation Management Methods of Secondary College", "Work Regulations of Teaching Supervision" and a series of related systems were made, on the basis of the "four mainstays and eight supports" framework, a sound, standardized and unified school quality assurance system was set up, make quality objectives feasible, quality standards are clear and specific, quality assurance processes are efficient and coordinated, quality assurance evaluation is objective and fair, quality assurance feedback is timely and effective, and the quality assurance system is continuously improved.

4. KEY PATHS OF "HIGH-QUALITY DEVELOPMENT" OF QUALITY ASSURANCE SYSTEM

4.1. Arouse Internal Impetus

(1) Improve the teaching quality of all staff

First, innovate the working mechanism of monitoring. Implement the two-level monitoring system of school and college, and conduct classified guidance and evaluation for teachers with different types and growth periods. For new teachers with less than one year of teaching experience and teachers whose teaching ability is temporarily weak, the training of young teachers is implemented; for teachers with teaching experience of more than one year but less than five years, the training of double-teacher teacher quality and teaching ability is implemented; teachers who have been teaching for 5 years, teaching research and innovation, teaching team formation, teaching competitions and other training are implemented. Second, carry out multi-form supervision work. Follow the student-oriented education wisdom, through student information officers, student evaluation, questionnaire, panel, dormitory visit, etc., collect information on the whole process of teaching, make supervision, early warning and accurate feedback on teaching and learning effects, continuously improve teaching quality.

(2) Promote the whole-course teaching diagnosis and improvement

First, construct self-diagnosis and improvement mechanism. "School Quality Control Index System" specifies the connotation, target value, standard value, early warning value and other specific quantitative values of each quality control point, the quality of various quality subjects takes this as the starting point of diagnosis and improvement, and sets the diagnosis and improvement cycle, according to the real-time supervision data in the quality generation process, check the problems, analyze the reasons, and propose improvement measures in accordance with the operation mode of the "8-shaped" quality improvement spiral unit. In the process of self-diagnosis and improvement, the unity of goal orientation and problem orientation is realized, and the internal impetus of continuous improvement is generated. Second, strengthen the incentive assessment mechanism. On the basis of the implementation of the annual work plan, the school implements performance assessment of functional departments, secondary teaching units, majors and teachers, etc., give incentives, early warning and handling based on the assessment results. the normal operation of self-diagnosis and improvement is ensured by regular assessment and strengthening the incentive system.

(3) Build modern university quality culture

Through the "high-quality development" operation of the quality assurance system, the quality cultural atmosphere is created, the thought of quality assurance is subtly infiltrated into the hearts of every manager, teacher, and student, and internalize them into the thoughts and behaviors of teachers and students in the whole school, stimulate quality subjects at all levels in schools to establish correct quality values, follow quality standards, strengthen sense of

responsibility, improve management level, condense them into modern university quality culture with characteristics of Wenzhou Polytechnic, promote the transformation of quality assurance work from institutional regulation to cultural awareness, thereby improving school's governance capacity, and make the wide teachers, students and staff have a strong sense of identity and gain.

4.2. Draw Support from External Impetus

(1) Monitoring evaluation and strong development

In order to implement the spirit of the National Education Conference, Education Supervision Committee of the State Council has carried out the evaluation work of vocational colleges nationwide since 2016, in 2021, the Zhejiang Provincial People's Government start the monitoring and evaluation work of higher vocational colleges in Zhejiang Province, urged schools to follow the educational laws, deepen educational reform, and optimize school governance, implement the main responsibility of running school, and continuously improve the school-running level and the capacity to serve the society. According to benchmarks and table, the schools make the evaluation work plan scientifically, sets up a three-level evaluation team composed of the Quality Office of Wenzhou Polytechnic, 6 special groups, and 33 responsible departments, with the clear division of labor and responsibilities. The responsible department imitates the relevant observation points, earnestly fulfil its duties, fills in the data truthfully and provides supporting materials, analyzes the status quo according to the evaluation standards, and summarizes the construction and development achievements and shortcomings of their respective work; the special team checks the authenticity of the materials and data, and accurately grasps various special evaluation elements and results; the school quality office integrates the results of each special self-assessment and the third-party evaluation opinions reported by the superior department, proposes improvement measures and comprehensively monitors and implements them, promote construction with supervision, promote the double-university construction, and quality improvement and talent development of the school, continuously improve the school-running quality.

(2) Strong guidance of quality annual report

Wang Hongmei et al. pointed out that higher vocational schools should set up the release system of annual report of talent development quality, and constantly improve the supervision system of the talent development quality[9]. Wenzhou Polytechnic forms the quality annual report compilation working group, untangles and analyzes the condition of six aspects, including school service contribution, student development, teaching reform, policy guarantee, international cooperation, and challenges, and released the school's annual report on the quality of vocational education and typical cases, openly accept the supervision of society. The National Joint Conference of President of National Higher Vocational Schools organizes evaluations and releases national quality annual reports based on the content of each school's annual quality reports and relevant data. On the basis of the objective status, typical practices, overall data and experience summary of higher education quality reflected in the National Quality Annual Report, the school conducts in-depth research on the school's advantages and disadvantages, reforms and innovates the management mechanism, explore "high-quality development" ways and methods of quality assurance adapted to the new stage of vocational education, and play a guiding role of the quality annual report in improving the quality of talent development.

4.3. Data Drive Precise Management

Sun Xueling believes that in the field of internal quality of colleges and universities, promoting the internal governance of teaching quality with digital intelligence is an important path to educational modernization [10]. Wenzhou Polytechnic has continuously improved the

level of informatization governance, first, the school deepens the implementation of the "data exchange center" project and completes the data link of major business systems. By building an extensible big data management platform and building an all-round big data management platform including data acquisition, data cleaning, data mining, data management and services, "big data warehouse" is built, which achieves data integration of various core business systems, gradually eliminates information islands, achieves "integration, share" of data, and support quality diagnosis and improvement work in real time; second, the school and Wenzhou Tianyu Technology Co., Ltd. jointly develop the quality diagnosis and improvement information platform with the characteristics of Wenzhou Polytechnic. Focus on the school level, major level, curriculum level, teacher level, student level and other elements of talent development work, realize accurate measurement based on quality control points, analyze the work efficiency of each system and level, which can objectively evaluate the school-running quality of school. Third, expand the functions of the quality diagnosis and improvement information platform, and transform and upgrade it into a digital governance wisdom platform. Through the real-time integration of three types of data, including various business systems, EXCEL form importing and manual filling, the platform data volume and information coverage are continuously enriched, and all-elements and digital supervision functions that can be evaluated, measurable, controllable and changeable are realized, analyze the work efficiency of each system at all levels, accurately evaluate the school-running quality of school, strongly support the institutionalization, standardization and normalization of quality work, and provide data basis for school leaders to make scientific decisions.

5. CONSTRUCTION EFFECT OF "HIGH-QUALITY DEVELOPMENT" OF QUALITY ASSURANCE SYSTEM

In 2021, the school has won many national and provincial commendations and awards with more weight and high quality. The school has become the only high-level vocational school with Chinese characteristics in southern Zhejiang and northern Fujian; won the 7th National Huang Yanpei Vocational Education Outstanding School Award; selected for national resource construction advantaged college, typical service and contribution college, and 100 excellent schools with student development index school, 100 excellent schools with teacher development index; selected for the second batch of national college Huang Danian-style teacher teams; "clothing CAD" course was selected for the ideological and political demonstration course of the Ministry of Education, and the course team was evaluated the famous ideological and political teaching teacher and teaching team of the course; the students won the gold medal of the vocational education track in the finals of the 7th China International "Internet +" College Student Innovation and Entrepreneurship Competition. In the monitoring and evaluation of higher vocational schools in Zhejiang Province in 2021, Wenzhu Polytechnic ranked second in the total score of the 47 schools participating in the province.

The continuous improvement of the educational and teaching quality is not only a long-term, formidable and complex task, but also an important step towards high-quality higher vocational undergraduate. The school "lead school", "reform" and "fight for upgrading from junior college to undergraduate college" with the "high quality development" of quality assurance system, firmly grasps the quality lifeline, further condenses the characteristics and improve quality standards, supplies high-quality talents to the society and promotes high-quality social and economic development.

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