

Innovation and Practice of Internal Quality Assurance System in Higher Education Institutions ----- Taking Jingzhou Vocational and Technical College as an Example

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Abstract: Continuously improving the internal quality assurance system and promoting the innovative development of higher vocational education is a challenge that every higher vocational institution must solve on the road of diagnosis and improvement. To address the current dilemma of building internal quality assurance systems in higher education institutions, this study utilizes a case study approach. This study takes Jingzhou Vocational and Technical College as the research object for research. Conclusion: The excellent diagnosis and reform model and the effectiveness of diagnosis and reform in this school can provide new strategic ideas for the practice of diagnosis and reform for the high-quality development of higher education in Hubei.

Keywords: diagnosis and improvement, internal quality assurance system, higher education research

Innovation and development are the inherent requirements for higher vocational colleges and universities to strengthen and prosper, while building a perfect internal quality assurance system and improving the quality of talent training is the way for higher vocational colleges and universities to achieve a new round of leap-forward development. In order to improve the internal quality assurance system of vocational education and establish a regular mechanism for vocational colleges to independently guarantee the quality of talent training, the General

Office of the Ministry of Education issued the Notice on the Establishment of Teaching Diagnosis and Improvement System of Vocational Colleges and Universities in 2015 to promote vocational colleges and universities to fulfill the main responsibility of talent training quality, which kicked off the diagnosis and improvement work of higher vocational colleges and universities nationwide. Then, in the same year, the Ministry of Education issued the programmatic document "Action Plan for Innovation and Development of Higher Vocational Education (2015-2018)" to promote the comprehensive deepening reform and development of higher vocational education, and the "Guidance Program for Diagnosis and Improvement of Internal Quality Assurance System of Higher Vocational Colleges and Universities (for trial implementation)". In this context, some higher vocational institutions at home and abroad have conducted a series of researches and explorations on internal quality assurance system, for example, Xi'an Aviation Vocational Technology College has taken the lead in introducing the ideas and methods of ISO9000 family quality management system in the daily training and appraisal work of vocational skills appraisal stations, and conducting a study on fine management and construction of internal quality assurance system for the daily work of training and appraisal. The quality assurance mechanism in the UK has shifted from the initial dual-track system to a single system with unified responsibility of QAA, with more emphasis on the interests of students in terms of service targets, and the choice of assessment methods is mainly based on the type of schools assessed and their quality status to enhance the scientific and credibility of their assessment results. However, the construction of the internal quality assurance system of most higher education institutions is still in the exploration stage, and there are deficiencies in the system construction, few high-level academic works, and the relevant academic papers are mainly the

empirical studies of front-line teachers and managers in higher education institutions. Therefore, how to build an internal quality assurance system in line with their own reality, seize the development opportunities and improve the quality of talent cultivation has become an urgent problem for each higher education institution to solve.

1. The connotation of internal quality assurance system in higher education institutions

At present, there are mainly three representative views on the definition of internal quality assurance system in higher vocational institutions as follows. (I) "Activity", which believes that the internal quality assurance system of higher vocational institutions is a purposeful and planned management activity within the system of higher vocational institutions in order to improve the trust of the society and achieve the goal of building a quality school. (II) "Mechanism", which emphasizes that the internal quality assurance system of higher vocational institutions is an organic combination of various elements and activities that affect the quality of vocational education, and is an effective way of monitoring, diagnosing and regulating implementation, and gradually forms a self-regulating mechanism in practice. (III) The "integration theory" believes that the construction of the internal quality assurance system of higher vocational institutions is a quality management complex formed in the process of self-correction and improvement with certain objectives and advanced quality management concepts as the guidance and quality diagnosis and feedback as the means.

The Ministry of Education's program for diagnosis and improvement of the internal quality assurance system of higher education institutions is guided by Deming's idea of quality management (referred to as PDCA cycle), which establishes a set of progressive and high-quality operation procedures through four procedures: P (plan), D (do), C (check), and A (action), and thus establishes a quality

improvement mechanism for the internal quality assurance system of higher education institutions that can set goals beforehand, monitor in real time, and diagnose and improve afterwards (Jiang, L. H., 2020). The quality improvement mechanism of the internal quality assurance system of higher education institutions is established through the four procedures of P (plan), D (do), C (check), and A (action).

In summary, this study considers that the internal quality assurance system of higher education institutions is a quality management complex that aims at high-quality development, guided by advanced quality management theories and concepts, with quality standards and norms for all work, quality diagnosis, feedback and improvement, and quality resource supply as the key elements to form a comprehensive assurance of talent training, scientific and technological research, service to society and cultural inheritance and innovation work in higher education institutions (Liu, Hu, & Shi, Wei-Pin, 2021).

2. The dilemma of constructing internal quality assurance system in higher vocational institutions at present

With the high importance attached to vocational education by the Ministry of Education of China and the increasingly strong demand of the society for vocational colleges and universities, the requirements of higher vocational colleges and universities for building a perfect internal quality assurance system have become more and more urgent, although major higher vocational colleges and universities have studied and understood the connotation of internal quality assurance system, there are still many difficulties and problems in the actual work of building and improving the internal quality assurance system of higher vocational colleges and universities. The problems mainly include the following aspects:

2.1. The leadership does not pay much attention to it, and the top-level design is deviated

As some school leaders do not know enough about the importance of diagnosis and improvement work, the functional departments are in a wait-and-see state, and the awareness of teachers and students of the main body of diagnosis and improvement and the sense of urgency of reform are relatively weak (Liu, Changxi, & Zeng, Zhen., 2018). However, some schools have the phenomenon of misplaced evaluation subjects, relying only on the functions of the academic affairs office for teaching evaluation good teaching management, ignoring the main role of students, teachers, and school management and other personnel, resulting in only passive acceptance of the school's tasks by subordinate personnel and the inability to build a complete internal quality assurance system. Meanwhile, some higher education institutions do not integrate the construction of internal quality assurance system into the overall development strategy of the school, and do not pay attention to the integration of their own schooling characteristics, only to cope with the inspection and evaluation of higher education departments. They neglect the daily quality culture construction, lack cultural competitiveness, only focus on results and scores, and do not penetrate the diagnosis and reform thinking into the daily work of all staff (Li Chaoyang., 2017).

2.2. The operation mechanism of diagnosis and reform is not sound

At present, some higher vocational colleges have established their own internal quality assurance system, but the organizational construction, elements and management are still not sound.

For example, although most higher vocational colleges have set up special diagnosis and improvement work committee, diagnosis and improvement office and other institutions according to the requirements of the notice, and have deployed special people to be responsible for the formulation of work plan and the coordination of diagnosis and improvement work, decomposition and inspection

of tasks, however, the actual staff is 2-4 people, and one person has several jobs, which leads to unclear division of tasks, lack of specialization and limited team capacity, making it difficult to layer the diagnosis and improvement work. It is difficult to put the work of diagnosis and reform into practice. There are even a few institutions of higher education that have not independently set up relevant quality assurance organizations, but still focus on the supervisory office or academic affairs office, and no special quality assurance organization is set up at the faculty level, which makes quality supervision disconnected from the actual work of faculties. Furthermore, although some institutions have built internal audit systems, they mainly focus on the professional and curriculum levels, ignoring the attention to the school, teacher and student levels and other elements.

Secondly, the orientation of the horizontal internal quality system is unclear, and the responsibilities of the vertical system of the internal audit system are unclear, and there is the problem of emphasizing diagnosis rather than improvement, which makes the diagnosis system unable to cover the whole school, and it is difficult to give feedback to improve the follow-up problems, which makes it difficult to sort out and improve the internal control system of the school, and it is difficult to improve the target management mechanism of the secondary units. Meanwhile, many institutions of higher education have the phenomenon of emphasizing the process rather than the result, and only pay attention to the teaching process, but neglect the teaching process. At the same time, many institutions of higher education emphasize the process rather than the result, and pay attention to the teaching process, but neglect the construction of education quality assurance elements in the teaching process, which makes it difficult to establish a normal talent training mechanism (Li Chaoyang, 2017).

2.3. Copying the model, and the consultation and reform is just a formality

In order to pass the review and inspection of even diagnosis and reform, some higher education institutions directly copy the basic structure of internal quality assurance system of "five columns, five horizontals and one platform" of Professor Yuan Hongzhi, but in actual work, they are formalistic, and the documents are issued only to respond to the higher inspection, and the diagnosis and improvement work is only formal, and the construction effect of internal quality assurance system is poor. The effect of internal quality assurance system construction is poor. Some schools even take ISO9000 as the fundamental standard of educational quality management, imitate and copy the excellent internal quality assurance systems of other pilot institutions, and implement fetishism, without respecting the law of development of education and the order of students' physical and mental development, ignoring the role of teachers and students in diagnosis and improvement, without specific analysis in the context of their own institutions, and without their own innovation, resulting in the diagnosis and improvement plan. As a result, the diagnosis and improvement programs are basically the same, the diagnosis and improvement actions are stereotyped and rigid, and it is difficult to form an effective internal quality assurance system (Yang Daijun, & Mo Liping, 2019).

2.4. Low effectiveness of information technology platform construction

With the advent of the information era, the construction of information management platform plays an irreplaceable role in the diagnosis and improvement of the internal quality assurance system of higher education institutions. The advantage of all-round integration of statistics and convenient multi-functionality of the informatization platform enables us to monitor and warn the collected core information in a timely manner and make timely and reasonable adjustments according to the data results in order to implement the internal quality

assurance system program more effectively. It can be seen that the level of information construction of a school is the bottleneck and key to restrict the consultation and work. At present, most of China's higher education institutions have invested their efforts in the development and procurement of information technology hardware and software, but some schools' information technology platform is still relatively lagging behind and cannot keep up with the school's internal quality assurance construction is the direction and speed, although time and effort are spent on the information technology platform, but the actual operation effect is very little. Some institutions directly purchased other institutions of higher education to develop mature information technology platform software, but due to the inevitable differences between schools, the software settings are difficult to meet the needs of the school's own development, resulting in low utilization of information technology platform, gradually deserted. At the same time, some higher education institutions lack corresponding management mechanism and management system for the construction of information platform, and lack effective interface with other information application systems within the school, so that the data of each system cannot be shared and no scientific, systematic and effective management is formed, which makes it difficult to hold those who do not perform well accountable, and it is difficult to dynamically monitor the collection and acquisition of school-based talent training data. The above problems make the construction of campus and service control of higher education institutions still a long way to go.

3. Method

This study adopted the literature review method to sort out the diagnosis and improvement of the internal quality assurance system of each university, followed by the case study method to conduct a special research with Jingzhou Institute of Technology as the research object.

Jingzhou Institute of Technology is a full-time public higher education institution approved by Hubei Provincial People's Government and recorded by the State Ministry of Education, and is a demonstration base for cultivating highly skilled talents in Hubei Province, a pilot unit for developing tourism talents in Hubei Province, and one of the first batch of "3+2" pilot universities in the province. It is one of the first 10 colleges and universities in the province to conduct "3+2" pilot joint talent training. At present, there are more than 16,000 teachers and students, and it has received excellent comments in the acceptance of Hubei Provincial Diagnosis and Reform, so it has a strong representation in the study.

This study fielded the characteristic consultation and reform implementation program of Jingzhou Vocational and Technical College and explored the consultation and reform practices at five levels: school, major, curriculum, teachers, and students in this school.

4. The construction of Jingzhou Vocational and Technical College's characteristic diagnosis and reform system

The school consultation and reform work is carried out in an orderly manner according to the Implementation Plan for the Construction and Operation of the Internal Quality Assurance System of Jingzhou Vocational and Technical College, which has gone through "five stages", built a "1421" internal quality assurance system, formed a The four-step diagnosis and reform promotion mode of "learning, building, doing and evaluating" has been adopted, three kinds of diagnosis and reform methods of "routine + cycle + special" have been adopted, and the practical working method of diagnosis and reform featuring "Jingjiao Prescription Diagnosis and Reform Method" has been explored and created by itself. The consultation and reform practical work method has been established, and the consultation and reform operation mechanism of "responsibility

grading, goal decomposition, standard quantification, plan disclosure, process monitoring, timely correction, post-event diagnosis, engine driven, platform support, continuous improvement and spiral enhancement" has been established, which has improved the quality of education and teaching, passed the provincial consultation and reform review with high quality and achieved the expected results of the consultation and reform. It has achieved the expected results of the consultation and reform.

4.1. The establishment of the "1421" internal quality assurance system

According to the basic framework of "55821" of internal quality assurance system, the university has explored and built the "1421" internal quality assurance system, which is quality-oriented, interlocking, engine-driven and platform-supported. The first "1" refers to the consultation and reform should always be carried out around the core of "improving the level of education and teaching management and talent training quality"; "4" refers to the creation of the internal quality management responsibility chain. The second "1" refers to the gradual establishment of school-based consultation and reform information platform.

(I) Strengthen leadership, form an organizational system and establish a responsibility chain. Establish a quality assurance organization consisting of four levels: school - special diagnosis and reform working group - departments - majors (courses, teachers, students) under the leadership of the party committee of the school and the principal, clarify the responsibilities of diagnosis and reform at all levels, build a chain of responsibility for diagnosis and reform, and transfer the responsibility for diagnosis and reform at all levels.

(II) Improve the planning, form a target system and establish a target chain. Based on a comprehensive analysis of the current situation of the school's development using the SWOT analysis method

and the Ministry of Education's Action Plan for Innovative Development, the "1+7+9+X" goal chain is constructed from the school's plan, departmental special plans, subplans of the second-level colleges and annual work plans from top to bottom and interconnected. "9" refers to the sub-plans of the nine second-level colleges; "X" refers to the annual work plans of each department.

(III) Refine the standards, form a standard system, and establish a standard chain. In accordance with the SMART principle, develop and improve the standard system that matches the target system, form a standard chain that is in line with the target chain, be clear, specific and detectable, build school work standards, establish and improve professional and curriculum standards, teacher development standards and comprehensive student quality standards. According to the needs of the internal quality assurance system of the school, in accordance with the requirements of optimizing the design of work procedures and regulating quality management behavior, the school has comprehensively sorted out matters of personnel, finance, teaching, student affairs, logistics, scientific research, school-enterprise cooperation, information services, asset management, international exchange and cooperation, discipline inspection and supervision, etc. Through "abolishing, revising and establishing", a total of 22 obsolete systems were abolished, 24 systems were revised and 33 new systems were established, building a "1+5+X" system of the university. Among them, "1" refers to the school constitution, "5" refers to the five levels of quality management system of the school, and "X" refers to the quality management-related systems of other departments, forming a school Quality assurance system chain.

4.2. Create a four-step diagnosis and reform promotion model of "learning, building, doing and evaluation

(I)"Learning": learning and understanding is the premise. In response to the problem that the diagnosis and reform is a new thing, and it is difficult for the staff to fully understand it at once and they are afraid of it, the school not only organizes the study and training according to the regular method, but also tries to compose a series of "diagnosis and reform limerick" which is popular among everyone, so as to guide the teachers and students to actively study the diagnosis and reform with interest and ensure that they understand it thoroughly. To ensure that the diagnosis and reform is done with understanding.

(II)"Build": building a spiral is the key. According to the 8-word quality spiral of the diagnosis and reform, combined with the actual school, through the scientific construction of the school, professional, curriculum, teachers, students five levels of the 8-word quality spiral, to clarify the specific path of the implementation of the diagnosis and reform, operational processes and internal requirements, to ensure a comprehensive grasp of the diagnosis and reform of the law of the premise of clear to do the diagnosis and reform, as shown in Figure 4.

Specific operation: based on the work objectives and standards, formulate an annual work plan and organize the implementation in strict accordance with the plan; at the same time, monitor the process through routine management and relevant information platforms such as information management system and status data platform to provide timely warning and correction; after the implementation, carry out diagnosis against the preset objectives, standards and the results achieved; then conduct learning, innovation and improvement according to the diagnosis; and Finally, new development goals are formed and we enter the next round of higher level diagnosis and improvement.

(III)"Do": Doing the actual diagnosis and reform is the focus. According to the nature of different tasks, the school has flexibly adopted three ways to

implement the diagnosis and reform to ensure that the diagnosis and reform is grounded and effective.

First, for the routine management, we adopt the "integration into the daily routine diagnosis and improvement", forming a day of reflection, a weekly meeting, a summary in January, a summary in half a year, a cycle of routine diagnosis and improvement model.

Secondly, for the key work or construction projects of the school, "focus on the key to do special diagnosis and improvement", and its diagnosis and improvement cycle is synchronized with the project construction cycle. For example, the school has carried out special diagnosis and improvement for the creation of quality school, skills competition, school satisfaction, student brand building, quality culture building, dual-teacher teacher team building, Civic Science course building, safe campus building, brand employment and so on.

Third, for the five levels of quality management, "innovative methods to do the cycle of diagnosis and reform". For the actual operation of the diagnosis and reform level generally feel "invisible and incomprehensible" "no way to start" the problem, the school after repeated research "8-word quality spiral", while drawing on the doctor in the diagnosis and treatment After repeatedly studying the "8-word quality spiral" and drawing on the working model of doctors who prescribe diagnosis, medication and treatment for patients, the school explored and created the "Jingjiao Prescription Diagnosis and Reform Method", which is a periodic diagnosis and reform of five levels. Among them, the school, professional and teacher level is a yearly consultation and reform, the student level is a semesterly consultation and reform, and the curriculum level is a semesterly consultation and reform.

The "Jingjiao prescribing diagnosis and reform method" consists of "diagnosis and reform prescription paper", "eight-step self-questioning

diagnosis and reform method" and "self-diagnosis and reform recipe ". As the carrier of the consultation and reform implementation, the consultation and reform prescription paper refines the content of each link of the 8-word quality spiral in the form of a table, which is divided into eight-step process of work status, development goal and standard, work design and program, implementation process monitoring and early warning, implementation effect, diagnostic opinion, improvement plan and measures, and consultation and reform assessment, and the memo column provides detailed explanation of the content and filling and operation requirements of each step. When a consultation cycle is started, the top-down consultation method and self-diagnosis recipe are followed from top to bottom, and the content of the consultation prescription paper is filled out item by item while the consultation is implemented as required.

(IV)"Evaluation": assessment and evaluation is the guarantee. The university combines the diagnosis and improvement work with assessment and incentive, and has formulated the implementation and assessment methods for diagnosis and improvement at the school, professional, curriculum, teacher and student levels, and implements assessment of the diagnosis and improvement work in strict accordance with the system in layers and categories. The evaluation results are included in the annual secondary distribution of departments and linked with departmental evaluation and personal development, reflecting the change from mainly external supervision to mainly self-diagnosis and improvement, which provides a strong guarantee for the smooth promotion of the diagnosis and improvement.

4.3. Engine driven

(I)The school leadership attaches great importance to the diagnosis and reform. The university has established the diagnosis and reform work as a "handy" project, forming a working pattern of the

leadership of the party committee, the president is in charge, the leaders in charge are in charge of the pieces, the person in charge of each department is specifically responsible, and all teachers and students participate in the work pattern. The school leaders took the lead to actively participate in the national and provincial diagnosis and reform special study for more than 70 times; middle-level cadres and those in charge of the diagnosis and reform work actively participated in the diagnosis and reform special training for more than 120 times; all secondary colleges participated in the training.

(II)Deepen the "two reforms" to support the diagnosis and reform. In order to ensure the smooth progress of the diagnosis and reform work and continuously improve the quality of all work, at the end of 2016, the university launched "two reforms", namely the reform of the institutional and personnel system and the reform of the distribution system. The reform of the institutional personnel system is problem-oriented and focuses on solving the bottleneck problems that restrict the construction and development of the school, resetting departments and faculties according to the principle of streamlining and efficiency, re-approving positions and posts according to the workload size, guiding the personnel to be reasonably diverted according to the principle of giving priority to teaching, so as to achieve the right fit of people and posts, making the best use of people and talents. The distribution plan focuses on establishing a school incentive performance pay system oriented to the quality of internal construction, highlighting the premise of performance assessment to improve the secondary distribution, increasing the weight of secondary distribution, breaking the egalitarianism and "big pot rice", encouraging more work, more pay for better work.

(III)Continuously cultivate the school quality culture to help promote the diagnosis and reform. In addition to establishing an assessment and incentive

system that is compatible with the internal quality assurance system, the school has also built a school quality culture system consisting of material quality culture, behavioral quality culture, institutional quality culture and spiritual quality culture to cultivate a fertile ground for a quality culture of moral education.

Through the construction of the red culture theme park, the Xiang'e West Revolutionary History Exhibition Hall, and the series of slogans and logos of the quality culture of diagnosis and reform, we strengthen the construction of material quality culture; through the creation of the "Golden Course of Jingjian", the construction of "One College One Product", the holding of the teaching ability competition, the participation in the student The quality culture activities such as "Quality Culture Hundred Refinement Project" are carried out to establish the good image of teachers as teachers and educators, students as diligent learners and honest and trustworthy, and employees as dedicated and dedicated to their work, and to strengthen the construction of behavioral quality culture; through establishing rules and regulations, governing the school according to the law and managing according to the rules, and implementing the "three whole education", guide all teachers and students to improve quality awareness, strengthen the system quality culture construction; by drawing on the absorption of regional characteristics of Jingchu culture, Three Kingdoms culture and other excellent traditional culture, organic integration of modern enterprise culture and modern craftsmanship, strengthen the quality culture publicity and education, enhance the quality concept identity of teachers and students, strengthen the spirit of Quality culture construction.

(IV) Teachers, students and staff of the school actively participate in the consultation and reform. Through learning the diagnosis and reform, participating in the diagnosis and reform, and supporting the diagnosis and reform, the quality

consciousness of the whole school staff and students will be enhanced continuously, and the concept, thinking and method of the diagnosis and reform will be consciously kept in mind and integrated into their own work, so as to improve the high satisfaction and sense of achievement of the school's diagnosis and reform work by the staff and students.

5. Discussion

(I) Jingzhou Vocational Technology College has carried out a series of explorations for the diagnosis and reform: "1421 internal quality assurance system", "limerick", "8-word quality improvement spiral", "Jingjiao prescription" diagnosis and reform method, "eight-step self-questioning diagnosis and reform method" and other special diagnosis and reform implementation plans, The "1421 internal quality assurance system", the "limerick", the "8-character quality improvement spiral", the "Jingjiao Prescription" diagnosis and reform method, the "eight-step self-questioning diagnosis and reform method" and other special diagnosis and reform implementation plans, the distinctive "learning, building, doing and evaluating" four-step diagnosis and reform promotion new model are very useful for each school to carry out internal quality diagnosis and improvement. The distinctive four-step diagnosis and reform promotion model of "learning, building, doing and evaluating" is of great value for schools to conduct internal quality diagnosis and improvement.

(II) There are still shortcomings and defects in the diagnosis and improvement of the internal quality assurance system of Jingzhou Vocational and Technical College, for example, the data is not open and shared in real time, some staff members are not strong in data awareness and weak in data analysis, and the diagnosis and improvement still has problems such as blind people feeling the elephant. This shows that there is no single model that is foolproof.

6. Conclusion

The development of higher vocational

institutions where to go, how to build a high-quality talent training institutions according to their own characteristics to suit the development of the times and meet the needs of society, still need to be constantly diagnosed and improved by the state and the community. However, the innovative points of

the diagnosis and improvement of the internal quality assurance system of Jingzhou Vocational Technology College and the new model are a new research idea for higher vocational colleges to improve the quality of school operation and build a suitable internal quality assurance system for themselves.

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