

# Professional Comprehensive Reform of Information Management and Information System

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**Abstract**—Currently the overall implementation of information management and information system application-oriented training system is not sufficient. A series of strategy is proposed, including updated professional training mode, strengthen the construction of teaching team, improve course resources, strengthen the practice teaching, and improve a scientific teaching management system.

**Keywords**—professional comprehensive reform; information management and information system; application-oriented; professional training

## I. INTRODUCTION

Established by ministry of education in 1998, information management and information system is a new profession that aims to develop informatization society urgently as well as cultivate competent and practical people who are needed by society urgently majoring in development and maintenance of information systems, database technology, Internet technology, construction and management of informatization and other relevant profession. Students majoring in this profession are supposed to possess excellent mathematical and scientific basis, management theory, knowledge and application in information technology master methods and technology in planning analyzing, designing, actualizing and managing information systems as well as acquire abilities in developing, exploiting and studying information resources and systems.

## II. DIFFICULTY TO APPLICATION-ORIENTED TRAINING SYSTEM

Currently the overall implementation of information management and information systems application-oriented training system is not sufficient. There are the following deficiencies:

1. The reform of the personnel training mode needs to be deepened to meet the requirements of application-oriented personnel training. At present, talents species and specification is difficult to meet the needs of local economic and social development, the development of talent ratio is too low. The need to further implement and deepen multi-level triage personnel training system to meet the local industrial transformation, industrial upgrading demand for advanced information talents in technology, skills and engineering capabilities and other needs.

2. The teaching force needs to be strengthened; rational structure of the high-level teaching team needs to increase

efforts in building. In order to design new technology curriculum, adding new professional direction, to further improve the students' practical ability, the current teachers need to grow, the structure of knowledge need to improve, the level of expertise requires enhancing.

3. School-enterprise cooperation needs to be deepened; students' practical ability and project development capacity building should be improved. Currently, the practice condition of student engineering practical ability training is not perfect. The depth and breadth of cooperation between school-enterprises is still not enough. Besides, the training and practical jobs which are research-based and development-oriented cannot meet the actual needs of students. The effective way to improve students' engineering practical ability and project developing ability is to implement the talents training of joint operations, establish the joint training base, deepen the school-enterprise cooperation, cultivate talents with the help of the power and advantages of business, and introduce more scientific researches and real projects.

4. The construction of courses is relatively weak. Besides, the source of courses is fairly deficient. Thus not only does the teaching method need a reformation, but also the principles of management need to be settled. Lack in the source of courses, the construction of courses, a weak link between the management of information and the construction of information system, has less teaching cases in high quality as well as competitive courses, meaning that they need to strengthen construction. Being not adequately detailed in the research and practice of teaching methods, the application of the teaching methods such as discussion, case and enlightenment is still not detailed enough. There must be some revolution and practice because the process of teaching quality control isn't adequately standard and meticulous.

## III. MEASURES OF PROFESSIONAL COMPREHENSIVE REFORM

1. Updated professional training mode. According to the frontier of the professional development and industry changing require for information technology and skills. Implement the thinking of teaching students according to their personality, optimize the program on cultivating talents, deepen the program of model on cultivating talents, emphasize the multi-level and multi-specification characteristic on cultivating talents, stress the ability of engineering practice and employment competition, satisfy the local industry need for the

multi-specification talents, build a talents training mode, which is focus on innovation ability.

2. Strengthening the construction of teaching team in accordance with the idea of 'stability, cultivation, introduction'. Around the professional core curriculum, improve teacher training mechanism and incentive mechanism, to improve the quality of teachers as the center, to optimize the structure as the focus, to research and promote teaching, with excellent teachers as leaders, put forward advanced teaching ideas and clear teaching reform objectives, implementation plan, improve the team operation mechanism and incentive mechanism, construction teaching level, structure, teaching ideas advanced, teaching reform of the outstanding teaching team.

3. Improve course resources. Aiming at the frontier of professional development, facing the economic development requirements, drawing lessons from the domestic and foreign university curriculum reform development, according to the multi-level and multi-direction personal training requirements, optimizing the curriculum setting, the formation of the core courses of the characteristics of local colleges and universities, the implementation of curriculum construction and teaching resource construction, strengthen collaborative development, and promote open sharing, to form and to adapt the quality teaching resources to the talents cultivation target, the talent training plan and the innovative talents training mode.

4. Strengthen the practice teaching. Improve professional practice teaching system, combining with the professional features and requirements of personnel training, increase the proportion of practice teaching, reform practice teaching content, improve the practice teaching condition, innovative practice teaching modes, increase comprehensive, designing experiments. Implementation including professional course practice, comprehensive training, project development, science and technology competition and professional certification, multi-level practical teaching system, to improve students' practice ability. Attaches great importance to the cooperation between colleges and university-enterprise united talent training plan, through the course substitution, professional training, project cooperation methods such as the implementation of joint personnel training, improve students' ability in engineering project development and employment competitive power. In training students' professional knowledge and the ability to practice and at the same time, pay attention to cultivate students' ability of scientific system to solve the problem.

New measures should deepen teaching researches, update teaching concepts, introduce advanced teaching methods, rely on modern educational technology, build up curriculum networking groups, explore comprehensive heuristic professional courses in colleges and universities where the teaching of information, discussion, case-driven, analog-style teaching methods, etc. To have a discussion on introducing the undergraduates into laboratory to participate in scientific research directly, practice the teaching methods of entrepreneurial practice activity, and fully mobilize the enthusiasm of students, encourage independent learning. Promote interaction with research and teaching, produce a

number of distinctive local characteristics of the teaching reform achievements.

5. Improve a scientific teaching management system. Encourage teaching management research, focusing on the teaching management process problems to be solved, expand by publishing research in the form of teaching faculty research organization, to come up with practical and efficient teaching management system, and applied to teaching management. The goal of reform should be to design new incentives, design teachers guide students to carry out incentive systems research activities, including the selection of instructors, student selection, incentive and other specific mechanisms conducive to cultivating students' innovative spirit and ability to enhance the practical application. The establishment of quality assurance thesis process monitoring system, innovative topics of mechanisms, emphasizing open question in thesis advisor in the process of quality assurance, and improve the quality of thesis writing.

Improve teachers' evaluation system. Formation evaluation system includes student-evaluation and colleague-evaluation. Attaches great importance to the teaching and research work, research report, writing teaching and encouraging the teaching research and the practice of transformation. To establish and improve the system of classroom teaching management, teachers guide students to carry out scientific research activities system, graduation thesis quality safeguard system, teachers' evaluation system of teaching management system.

#### IV. GOALS OF PROFESSIONAL COMPREHENSIVE REFORM

1. The aim of professional comprehensive reform is to develop the talented person, being engaged in the information resources development of the library and serving, taking since the information expert, information guide, information governor, information adviser, system expert etc. role. In addition, it can promote the training mode and rewrite the program of professional personnel training. And deal with the problem, teaching team construction, curriculum construction, teaching reform, system construction and so on, to promote students' comprehensive development and train students with a solid professional foundation For this, the students have strong practical skills and employment advantages.

2. Cultivate a group of teachers with high teaching level. Let entrepreneurs come to college teaching. Training teachers' practical ability. Deepen teachers' academic research foundation.

3. Enhance the level of curriculum construction. Series of textbooks published professional practice teaching characteristics. Establish a combination of classroom teaching and case teaching, course and seminar, the combination of theoretical knowledge and practical ability training of the combination of curriculum structure system.

4. Optimization to improve the students' comprehensive quality as the goal of teaching methods. Dominated by teachers, students as the main body, through the teaching reform and practice of distinctive in forming the achievements of teaching reform. Enhance students' autonomous learning awareness and self-management ability.

5. Establish a sound and efficient and orderly, evaluation of science, incentive and restraint of the teaching management system. Think much of teaching research work, write research report about teaching and encourage practicing and transforming the research findings of teaching. Establish and improve the whole process management system of classroom teaching, the system of thesis' quality assurance, the evaluation system of the quality in classroom teaching and so on. Construct a reasonable teaching quality evaluation and feedback system.

6. Take positive action to strengthen the cooperation of colleges and enterprises. The construction of discipline and profession should be closely combined with the development of the economy and society, follow the rules of the construction of discipline and profession, try best to build the brand of profession, improve the level of the overall construction of discipline and drive the teaching as well as science and technology and promote the whole teaching level.

## V. CONCLUSION

Specialty construction is the fundamental to improve the quality of local undergraduate colleges and universities, to meet the needs of local industrial development of advanced engineering and technical personnel, is an important work affecting the overall situation and strategic significance. Thinking for the construction of the professional is as follow: optimize the talent training plan, training model innovation, strengthening engineering practice, construction of the high level of teachers, reform of teaching management, deepen teaching reform, improve the quality of teaching, pay attention to teach students in accordance with their aptitude, to fully mobilize the enthusiasm of the students learning enthusiasm, initiative and potential mining, attach importance to the mastery of basic knowledge of students, hands-on and innovation ability training and comprehensive quality raise.

The route of professional comprehensive reform of information management and information system is as follow: First of all, fully realizing its foundation's realistic starting point, carefully compacting the idea of comprehensive

reformation, and scientifically making the general goal of reformation so that form the harmonious development of the whole progressive system about cultivating the talents. Afterwards, cooperating the innovation with planning, to promote the information management and information system's comprehensive reformation in the round. Training the applied professional talents who have the good professional qualities, the spirit of creativity and the ability of practice.

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