Research on Social Needs Oriented Practice Teaching Reform Under the Large Class Training Mode

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Abstract—. **With the popularization of the large class training mode, more and more students have accepted the training of the major classes. While the large class training is improving the comprehensive quality of students, there are also the students' ignorance of the specialty, the blind course selection and practice exiting. At the same time, the social orientation of students is not exactly same, and students' expectations for the type of work in the future are also different. In order to solve the problem of low practical efficiency in the large class training mode as soon as possible, the practical teaching under the large class training mode is perfected and optimized to improve the effectiveness of practical teaching and meet the needs of the society better.**

*Index Terms—***Large class training; practical teaching; curriculum reform**

I. INTRODUCTION

In order to find the students' interest, improve the enthusiasm and initiative of students, and cultivate a more comprehensive student with full-scale development, the model of large class training is carried out in more and more schools [1-4]. Through large class training, it can reduce the problem of blind choice of professions due to the lack of detailed understanding of professional content in the college entrance examination. At the same time, it is of great importance and significance for students to improve their comprehensive quality because they can learn more comprehensive knowledge.

With the popularization of higher education, the expectation of the society for college students is also changing from elite to ordinary people, and the requirements for students are also diversified [5-6]. Therefore, in order to meet the multi-level needs of the society, in the training of students, especially the training of practical ability, we should be able to meet the different needs of the society. In order to solve the above problems, taking information management as an example, the practical teaching of the major training mode is optimized.

In the major training mode, it is necessary to realize the stage and stratification of the training goals as far as possible, so that students can achieve specific goals at any stage, especially the goals that match the needs of the society. Based on the social multi-level needs, the practical teaching objectives are designed in many levels, so that the practical content that can be completed at each stage from the

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beginning of school to graduation is consistent with the needs of the society.

Therefore, based on the goal of professional training and oriented by the needs of the social multi-level, the professional practical teaching aimed at all stages of the school can be determined, so that the corresponding position can be found in the society after the completion of the various stages of practice. When setting the level target, we should take full consideration of the two factors of the theoretical curriculum and social needs, which can make the goals of different levels integrate the theoretical knowledge that is mastered, and meet the needs of the society as far as possible.

II. CLASSIFICATION AND ANALYSIS OF PRACTICAL TEACHING IN THE COURSE

As the information management profession involves two major knowledge areas of management science and information technology, in the curriculum system, and in the direction of students' development, the social needs are mainly in these two directions [7-9]. As a result of large class training, students mainly take general classes or large class platform classes in the early stage, which makes them do not effectively understand the characteristics of the target specialty. Therefore, when carrying out the practice, students can't select the appropriate instructors accurately according to the interest. In order to solve the above problems, the two-dimensional quadrant is constructed. As shown in Table 1, one dimension is the IT technical and the other one is the management science. Then, the curriculum in the training program is classified in the two-dimensional quadrant. According to the classification form, students can judge the direction of individual interest according to the attribution of the completed course, and then can contact the corresponding instructors to guide their various practical activities.

Table 1 Course classification table

	(weak) IT Technology (strong)	
Management Science (weak)	A	B
(strong)	C	D

(1) A Quadrant:

Management: mainly introduces the basic theory of management, involves basic theories and methods related to business management, and make general introductions. The quadrant course is a basic theory course. In practice, it is

mostly carried out in the form of case analysis or group report. Related separate practice sessions include enterprise cognition practice and so on.

(2) B Quadrant:

JAVA program design, C language program design, database principle, data structure, computer network, are mainly software related courses. Master the basic ideas of object oriented and structured programming through JAVA and C language, master the related knowledge of the data expression and storage through data structure and database principle, and master the related knowledge of the network through the computer network.

This part of the course has a high requirement for practical ability, therefor in all the courses, a higher proportion of hands-on practice is designed to improve the practical ability in the course. At the same time, the practice of this quadrant also includes participating in various programming competitions and so on.

(3) C Quadrant:

Production management, operation management, logistics management, operation research, management decision-making method, ERP principle and application, courses of this quadrant are mainly about solving the problem of management science using mathematical model. The core is to solve all kinds of problems in the process of enterprise production through the optimization method. The relevant links in practice are mainly based on case analysis and group operation. At the same time, there are some related competitions, such as business operation simulation, and so on. By simulating the operation of enterprises, we can improve the practical ability to use the learned knowledge comprehensively. Related independent practice courses include ERP comprehensive experiments and so on.

(4) D Quadrant:

The management information system, information management science and data mining, this part mainly applies the knowledge of the management science and the computer comprehensively to solve practical problems. There are a lot of practical links in related courses. At the same time, in the practice of the related courses, with the full use of the scientific research project, some students will participate in the teacher's projects. Related individual practical courses include Management Information System Synthesis Experiment, Information Management and Information System Professional Course Comprehensive Experiment and WEB comprehensive experiments.

III.   CLASSIFICATION ANALYSIS OF SOCIAL DEMAND

Social needs are diversified and multi-level. Through the classification of social demands, students can make it easier to determine the direction of their future development according to the courses they are interested in. At the same time, it can also make students understand and master the related knowledge more deeply according to their expected

development direction in the future. Based on the different requirements for management science and IT technical knowledge, the social demands are also different. It can be divided into four quadrants, as shown in Table 2.

Table 2 Classification of social demands

	(weak) IT Technology (strong)	
Management Science (weak) (strong)	A	B
	C	D

(1) A quadrant: sales, implementation, mainly include management information system sales and the implementation of information. Related work does not require high level of theoretical knowledge, practical ability requirements are not very strong, but students must understand the relevant knowledge, and most importantly is to master the soft power.

(2) B Quadrant: software development and testing, mainly includes coding design. Work of this part overlaps with the computer profession, requirements for the knowledge of the management science is not high, but there is a high demand for hands-on practice, which mainly shows up as the degree of proficiency in the application of the program language. And this is also a major employment direction of the management profession.

(3) C Quadrant: management consultation, mainly according to the needs of the customer, putting forward the solution of information technology. This part requires that the theoretical knowledge of management science and IT learned can be used to design solutions for customers. And the work of this part does not require high manual programming skills, but requires students having the ability to solve practical problems, and put forward the solution.

(4) D Quadrant: system design and data analysis, the quadrant is the employment target of the information management profession, and has high demands on management science knowledge and IT skills, which requires not only being proficient in the knowledge of management science, but also having the ability to comprehensively apply the knowledge learned.

IV.   PRACTICE LINK TO GUIDE TEACHER MATCH

In the practice of guiding teachers to match, the main thing is to allow students to provide selected teachers and a sort of linguistic form for them, such as the highest, high, middle, low etc. The difference between the best rating and the student's rating of the teacher who eventually matched the student was the difference in satisfaction. The greater the difference in satisfaction, the lower the student satisfaction. So it is necessary to reduce the difference of satisfaction and improve the satisfaction of the students.

In the same way, the instructor can evaluate the students, such as the highest, high, middle, low and low levels, through

the understanding of the students and the students' understanding of the practical content. The highest value of satisfaction and the difference value of the evaluation value of the teacher's satisfaction with the instructing students are the difference of satisfaction, the higher the difference of satisfaction, the lower the teacher satisfaction, so it is necessary to reduce the difference of satisfaction and improve the satisfaction of the teachers.

At the same time, due to the teacher's energy and time limitation, in order to improve the effectiveness of the guidance of the practice link, the maximum number of students that can be guided may be set. Therefore, when teachers choose and match, they should consider the amount of guidance as a constraint and satisfy the highest satisfaction within the scope of meeting the constraints.

Bilateral matching is the most commonly used model that considers both parties' satisfaction [10]. It is difficult to achieve the highest value for both student satisfaction and teacher satisfaction in the actual assignment of instructors. Therefore, the optimization model can be established, aiming at the highest degree of students' satisfaction and teachers' satisfaction as the objective function, and using the number of students that the teacher can guide as the constraints. By solving the optimization model, we can obtain the matching of the instructor who meets the maximum satisfaction degree.

V. PRACTICE TEACHING MANAGEMENT MECHANISM

(1) The major conducts informal discussions on practical teaching from time to time and mainly discusses the content setting of practical teaching, practical teaching methods and students' feedback on practical teaching.

(2) The professional teachers are required to carry out the guidance of scientific and technological innovation and related competitions, and in combination with the role of the mentor and the teacher in charge, professional teachers are required to guide the relevant professional practice.

(3) Graduation design, etc. are planned in advance, from the beginning of the third semester of the junior semester, students are guided to select tutors. Through the participation of tutors' projects, the ability to use the learned knowledge is gradually and comprehensively applied. It is also conducive to the completion of tutor scientific research projects.

(4) Because of the establishment of the new laboratory, which has a good software and hardware guarantee, we encourage students to do the experiments and carry out various practical activities.

(5) It is recommended that a theoretical course with a large number of on-board courses be divided and divided into theoretical courses and individual practice courses, which are more targeted and improve the effect of practice.

VI. THE MAIN IDEAS OF THE FOLLOW-UP REFORM

At present, the main forms of practical teaching include scientific and technological innovation, theoretical courses, individual practice, professional competition, independent practice, and subject research with tutors. At present, though to some extent, they can cooperate with each other, there is still room for improvement.

(1) According to different types of social needs, detailed interviews are conducted with employers to understand the advantages and disadvantages of graduates in the knowledge structure, especially the practical ability, and then through the matching of dimensions, the design of the practical aspects of the corresponding courses is improved.

(2) According to the development trend of social demand, the effect of the practical aspects of the corresponding dimensions is further measured. For the links that need to be strengthened, the practice in school is supplemented through targeted design professional competitions and practice to further improve the effectiveness of the practice.

(3) Strengthen the professional education, let the students make a scientific and feasible plan for the career development as soon as possible, and then guide the students to participate in various practical activities through scientific and technological innovation, teaching in class, and the visit of enterprises, so that we can improve the quality and effectiveness of the students' practice during the school.

VII. Conclusion

In order to solve the problem of the decentralization of practice in the large class training mode, this paper sets up a two-dimensional quadrant based on knowledge ability, combs the social needs and curriculum content, and gives the way to set up the practical links of each dimension. At the same time, the optimization model considering the degree of student satisfaction and teacher satisfaction is given in view of the problem of teacher matching in practical teaching, which makes the overall satisfaction highest under the condition of satisfying the guidance quantity constraints. This paper also gives directions for future practice teaching reform.

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