

Reconstruction of Curriculum System of Information Management Specialty from the Perspective of Post Ability Formation

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Abstract: In view of the problems existing in the current training process of information management and information system professionals, such as broad employment posts, but the corresponding post ability is not strong, and graduates can not work quickly, this topic reconstructs the curriculum system through post ability analysis, and puts forward the new training goal of professional ability in the three dimensions of ERP application, information system development and big data application, Implement project-based teaching guided by employment, and explore a new paradigm for talent training of information management specialty with the integration characteristics of "class post certificate competition", so as to improve the quality of talent training.

Keywords: Professional Competence, Curriculum System, Curriculum Standards, Project Teaching

1. Introduction

Information management specialty, full name: information management and information system specialty. Statistics developed and released by jobui.com show that in July 2021, 83.9k posts were recruited for information management, an increase of 53% over the same period last year[1]. It shows that the market demand for information management professionals is increasing, and the employment situation is relatively good. At the same time, the professional orientation of information management is also very broad. You can work in the information center and network management center of various party, government and military organs, various enterprises and institutions and financial institutions; Various information resource development and consulting institutions; Relevant higher professional education and scientific research institutions; Internet, computer software and related enterprise big data applications; ERP enterprise ERP implementation engineer or ERP implementation consultant, etc. Therefore, based on the employment needs of industries and enterprises, cultivating post oriented information management talents plays a very important role in improving the training quality of professionals.

2. Investigation on the Development Status of Information Management Specialty

2.1 Investigation on Post Distribution of Information Management Specialty

Search for relevant recruitment posts on websites such as Zhaopin, 51job and chinatalent.com with "information system", "ERP" and "big data" as keywords, and make statistics on the distribution characteristics of Posts and the job requirements of typical posts, so as to provide industry service-oriented post information.

2.1.1 Information System

Take "information system" as the keyword to conduct post search on the three large professional recruitment websites of Zhilian recruitment, 51job and China talent network. Take the top 100 posts in the search results for classified statistics, and get the post demand, as shown in Figure 1.

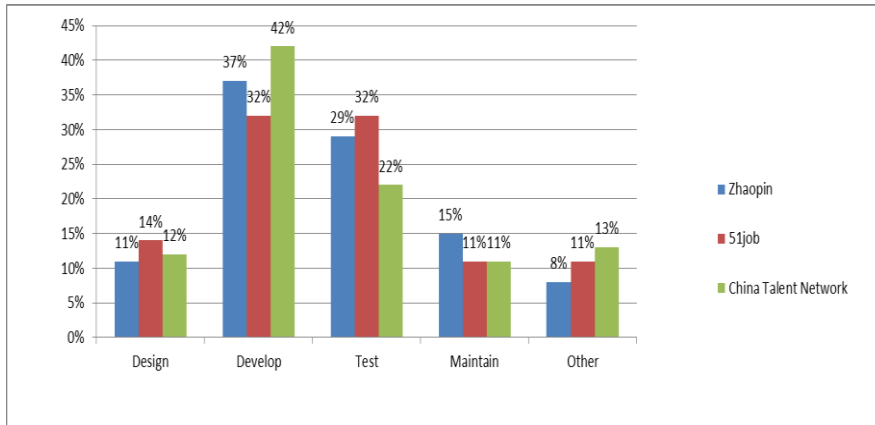


Fig.1 Post Demand of Information System

It can be seen from the above results that among the job requirements of information system, the requirements of information system developers and information system testers rank first and second respectively, and the requirements of other jobs are information system design, maintenance and others in turn.

The industries faced by the above 300 positions are classified and counted, and the industry distribution is shown in Figure 2.

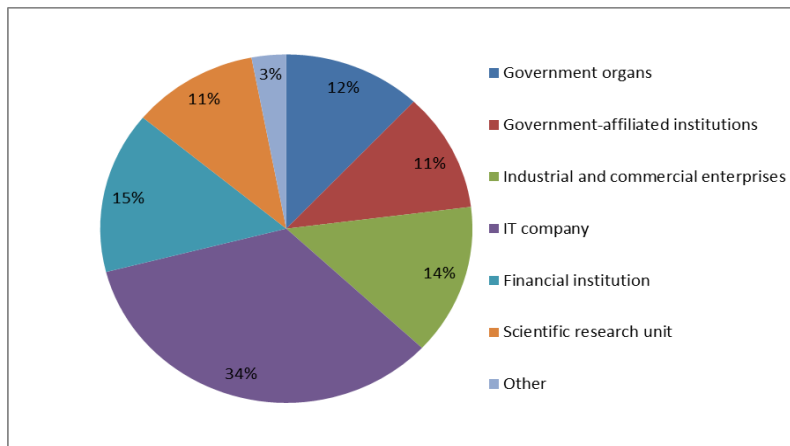


Fig.2 Industry Distribution Corresponding to Positions Related to Information System

2.1.2 ERP

Take “ERP” as the keyword to conduct post search on the three large professional recruitment websites of Zhilian recruitment, 51job and China talent network. Take the top 100 posts in the search results for classified statistics, and get the post demand, as shown in Figure 3.

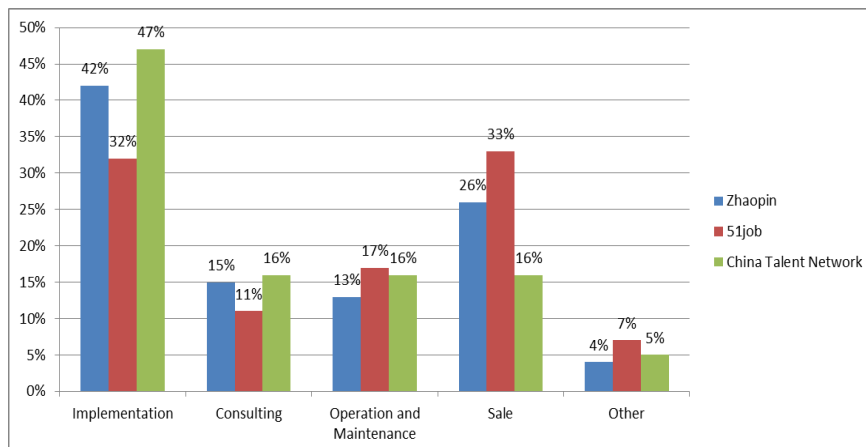


Fig.3 Post Demand of ERP

It can be seen from the above results that among the job demands of ERP, the demands of ERP implementation personnel and ERP product sales personnel rank first and second respectively, and the demands of other positions are ERP operation and maintenance personnel and ERP consulting personnel in turn.

The industries faced by the above 300 positions are classified and counted, and the industry distribution is shown in Figure 4.

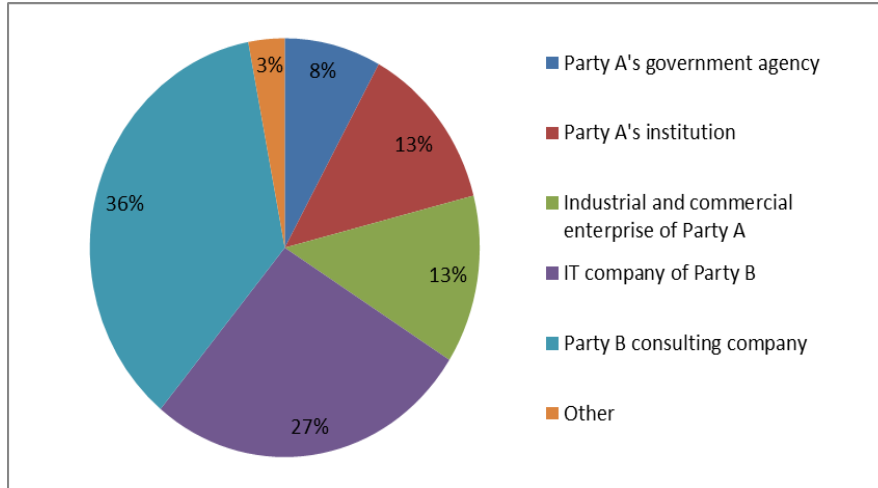


Fig.4 Industry Distribution Corresponding to Positions Related to ERP

2.1.3 Big data

Take “big data” as the keyword to conduct post search on the three large professional recruitment websites of Zhilian recruitment, 51job and China talent network. Take the top 100 posts in the search results for classified statistics, and get the post demand, as shown in Figure 5.

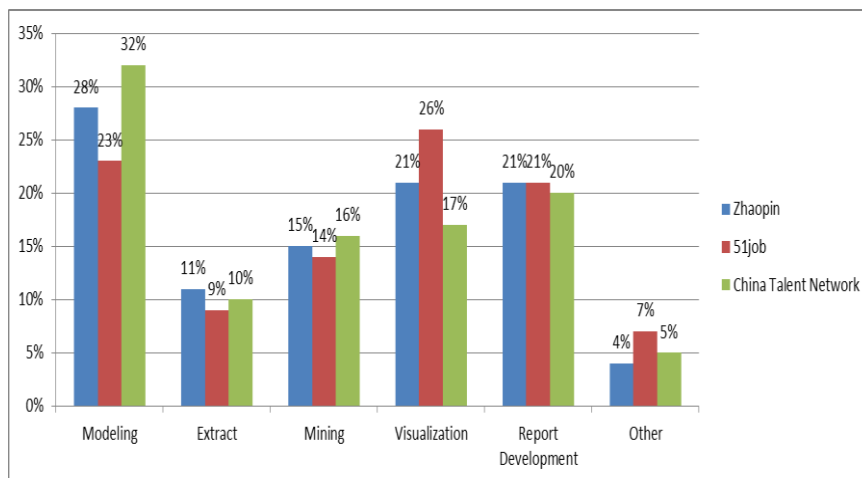


Fig.5 Post Demand of Big Data

It can be seen from the above results that among the job requirements of big data, the needs of data modelers, data visualizers and data report developers rank first, second and third respectively, and the needs of other jobs are data extraction, data mining and others in turn.

The industries faced by the above 300 positions are classified and counted, and the industry distribution is shown in Figure 6.

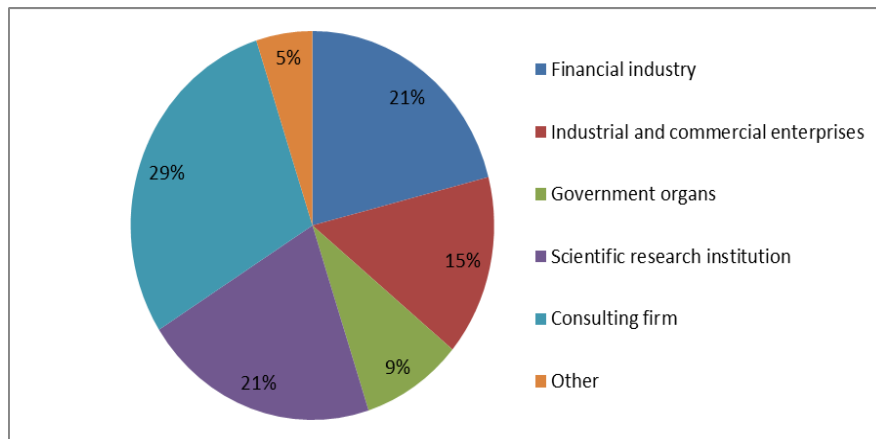


Fig.6 Industry Distribution Corresponding to Positions Related to Big Data

2.2 Investigation on Training Objectives of Information Management Specialty

According to the enrollment profile of each university website, we can clearly understand the training direction of information management specialty from the aspects of theory and application practice, and most of their training directions are the same. In terms of theoretical knowledge, they all focus on learning the basic knowledge of computer, information system research, management, design methods and information management; In terms of application practice, it is mainly engaged in information system development, design, analysis, management and evaluation, and the purpose is to cultivate high-quality comprehensive application talents[2]. However, each high-efficiency department is too consistent in the training direction of information management specialty, which is not conducive to the cultivation of talents. It will make the specialty too rigid in construction and do not have professional characteristics, making it difficult for students to have market competitiveness in the process of employment. Xi'an Jiaotong University, which ranks first in the national management specialty, set it as e-commerce when positioning the information management specialty; Inner Mongolia University of science and technology and Xi'an University of Electronic Science and technology pay more attention to the application of mathematics related knowledge in information management specialty, which is characterized by the cultivation of economic and financial talents[3]; Dalian Neusoft information college takes SAP as its feature to train ERP implementation and development talents.

2.3 Investigation on Curriculum System of Information Management Specialty

A total of 603 colleges and universities across the country have set up the major of "information management and information system", and 22 colleges and universities in Liaoning Province alone have set up this major [4]. In the process of specialty construction, most of them combine computer related applications with management according to the mode of "management+computer". Due to different types of colleges and universities, the emphasis on professional construction is also different. The liberal arts and science colleges represented by Renmin University of China pay attention to the research on management, and the engineering colleges represented by Harbin University of technology focus on the study of computer application. However, in fact, when formulating courses, all colleges and universities offer relevant courses in two aspects of computer and management, rather than learning in one direction.

3. Reconstruction of Curriculum System of Information Management Specialty

3.1 Determine the Training Objectives

This specialty cultivates the all-round development of morality, intelligence, physique, beauty and labor, practices the socialist core values, has good professional ethics and humanistic quality, master the basic theory of modern enterprise management and the basic knowledge of modern information technology, and has the ability to comprehensively use professional knowledge and relevant tools for the application and development of ERP platform[5]. It is a senior application-oriented talent who uses data analysis and other means to support organizational management decision-making, has a sense of

social responsibility, international vision, innovative spirit and strong practical ability, and is engaged in ERP system application, development and data analysis in software, information technology services and other industries.

3.2 Construction of Curriculum System

3.2.1 Analyze Post Ability and Reconstruct Curriculum System

Through investigation, the training link of information management professional ability is deconstructed and analyzed. Through the construction method of platform and modular curriculum system, the post ability training of “basic ability, core ability, expansion ability and comprehensive ability” in the “professional” dimension is realized. At the same time, it is combined with the joint training of “general knowledge”, “entrepreneurship and innovation” and “quality”, Realize the four-dimensional integrated talent training curriculum system integrated by “course post certificate competition”, as shown in Figure 7.

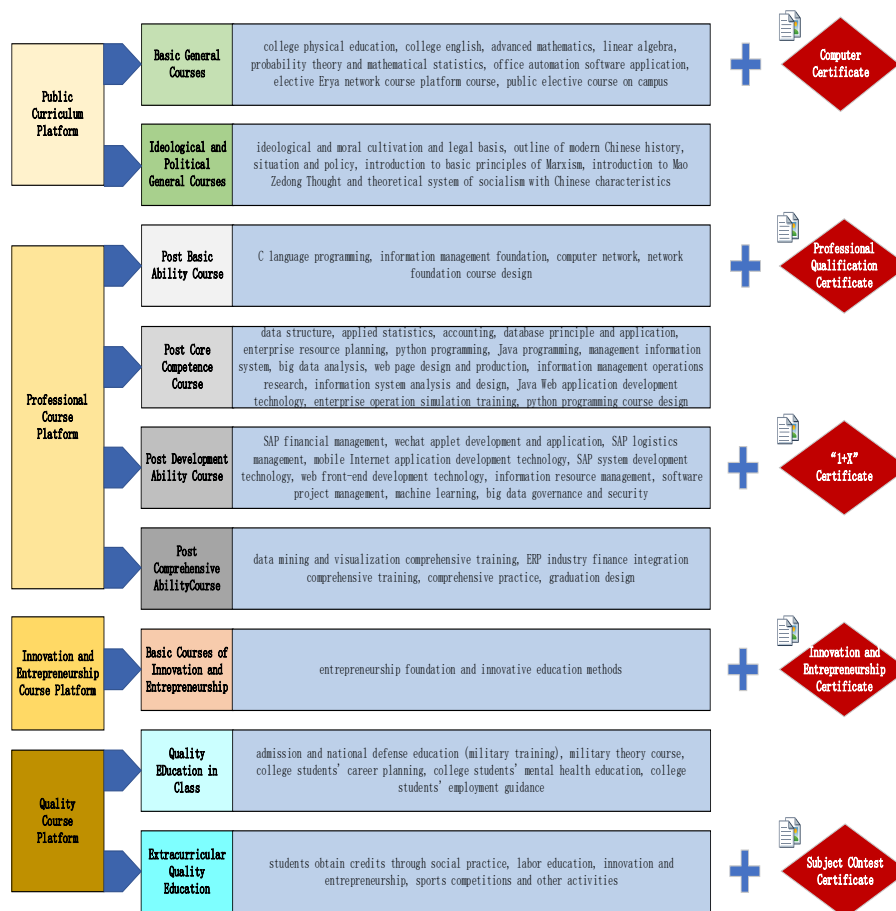


Fig.7 Curriculum System of “Course Post Certificate Competition”

3.2.2 Repositioning Curriculum Standards

The overall design idea is: the course is guided by typical work tasks, takes project teaching as the main teaching method, takes the output of learning results as the guidance, highlights “learning by doing, teaching by doing”, stimulates students' interest in learning, and achieves the purpose of cultivating professional knowledge, ability and quality. Based on the principle of “sufficient, advanced and practical”, in close combination with job requirements, strengthen practical ability training and improve students' job adaptability[6]. Taking the basic management of information management as an example, this paper describes the training objectives and content arrangement of the course.

(1) Curriculum Training Objectives

The training objectives of basic management courses of information management specialty are shown in Table 1.

Table 1 Curriculum Training Objectives

Course objectives	Course objective description
Objective 1	Understand the basic knowledge of strategic management, marketing management, financial management, production management, procurement management, decision management, management economics, information management, information system, etc.
Objective 2	Understand the business process of enterprise operation and management.
Objective 3	Understand the internal relationship between the basic knowledge of modern enterprise management and subsequent professional courses, as well as the purpose and significance of professional courses.
Objective 4	Understand the work content and ability of different positions.
Objective 5	Have patriotism, sense of group cooperation, good professional ethics and social adaptability.

(2) Teaching Content Arrangement and Support for Curriculum Objectives

The arrangement of teaching contents and the support to the course objectives are shown in Table 2.

Table 2 Teaching Content Arrangement and Support for Curriculum Objectives

Serial number	Content of courses	Class hours	Teaching method	Support course objectives
1	strategic management, marketing management, financial management, production management, procurement management, decision-making management, basic concepts of management economics, sand table cognition of enterprise operation and management	4	Lecture Demonstration Discussion Autonomous	Objective 1 Objective 4 Objective 5
2	enterprise sand table simulation operation rules	4	Lecture Demonstration Discussion Autonomous	Objective 1 Objective 2 Objective 4 Objective 5
3	use the electronic sand table to experience the enterprise business process, strategy formulation and team work operation, six-year operation, enterprise sand table simulation, business strategy refinement and experience summary, and see management through operation	28	Experiment Cooperation Guiding Autonomous	Objective 1 Objective 2 Objective 4 Objective 5
4	overview of information management and information system expertise	4	Lecture Discussion Autonomous	Objective 3 Objective 5

(3) Project Teaching Contents and Requirements

The teaching contents and requirements of the project are shown in Table 3.

Table 3 Project Teaching Contents and Requirements

Serial number	Project name	Project type	Project purpose and requirements	Project results	Class hours
1	enterprise operation sand table management process	verification type	1. Understand the rules of itmc enterprise management sand table simulation system. 2. Understand the process of enterprise sand table simulation operation.	project report	4
2	sand table enterprise strategic management	design type	1. Understand the impact of competitive environment on enterprise strategic adjustment. 2. Formulate sand table enterprise business strategic planning.	project report	4
3	sand table enterprise marketing management	design type	1. Understand the impact of R & D of new products, development of new markets, certification and advertising on obtaining market orders. 2. Formulate sand table enterprise marketing plan.	project report	4
4	sand table enterprise financial management	design type	1. Understand the calculation methods of cash flow statement, income statement and balance sheet in enterprise operation simulation. 2. Formulate sand table enterprise financial plan.	project report	4
5	sand table enterprise production management	design type	1. Understand the production planning method of enterprise business simulation. 2. Make sand table enterprise production plan.	project report	4
6	sand table enterprise procurement management	design type	1. Understand the procurement planning method of enterprise business simulation. 2. Formulate sand table enterprise procurement plan.	project report	4
7	sand table enterprise decision management	design type	1. Understand the impact of demand, production, cost and market factors on decision-making. 2. Formulate the decision-making scheme of enterprise sand table simulation operation.	project report	4

4. Practical Results of Training Information Management Professionals

4.1 Build a Curriculum System with Post Ability as the Core

Focusing on the professional ability requirements of Posts such as ERP implementation, information system development and big data application, taking into account the ability needs of industries and enterprises for information management and information system posts, form a "ERP" as the main line, SAP Technology empowerment, "1+X" certificate integration, reconstruct the curriculum system, and effectively ensure the realization of the training goal of applied talents with sustainable development ability.

4.2 Enrich Mixed Teaching Resources

Under the social situation of epidemic normalization, teachers actively expand teaching ideas, carry out online resource construction, build curriculum video, audio, courseware, teaching documents and other resources through the "learning through" teaching platform, carry out textbook construction, and develop high-quality textbooks suitable for the characteristics of their major[7].

4.3 Form a Teacher Growth Model of "Mutual Growth of Teaching Practice"

In the process of learning new industry technologies, formulating curriculum standards, building online resources, compiling professional teaching materials, guiding practice and carrying out subject research, the teaching team should continue to deepen the cooperative enterprises and strengthen professional practice; At the same time, actively encourage the development of various innovation and entrepreneurship discipline competitions, and further encourage teachers to strengthen their expertise according to their teaching expertise and make more achievements in their areas of expertise. While meeting the needs of precision teaching and improving the quality of teaching, a teacher growth model of "mutual growth of teaching practice" has been gradually formed.

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