Computer Teaching in Colleges and Universities—On the Orientation of Talent Training Objectives in Colleges and Universities

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Abstract. Universities should be based on the needs of society and industry, industrial progress and scientific and technological innovation, actively cultivate pioneering and creative computer talents, clarify their own talent training objectives and positioning, strengthen and accelerate the training of high-level technology application-oriented computer talents. Based on this, this paper first analyzes the basis of the orientation of university personnel training objectives, then studies the current problems and current situation of university personnel training, as well as the actual demand of computer industry for talent ability. Finally, this paper puts forward the strategy of improving university computer teaching based on the talent training goal and orientation.

Keywords: Computer Teaching, Talent Training Objectives, Colleges

1. Introduction

With the iterative development of social economy, the demand for talents in various industries is increasing, and the requirements and criteria of talents are also constantly improving. At present, the new science and technology represented by computer information technology has become one of the bases to promote and lead the development of human beings\(^\text{[1]}\). It is not only the engine for the development of a country and a nation, but also a place for all countries to compete for the commanding heights of science and technology. As the base and cradle of training all kinds of talents, especially computer talents, the university can not achieve sustainable, rapid and healthy development without the accurate positioning of its talent training objectives, but also a representation and reflection of the forefront and concentration of the whole society's talent outlook. It can be said that the positioning of computer talents training objectives reflects the basic specifications of talents, the value proposition of talent types and the concept of talent training.

At present, the speed of the change of new knowledge and technology in the field of information technology industry can be described as changing with each passing day. In this context, colleges and universities are required to actively adjust, innovate and change from the following aspects as shown in Figure 1, so as to ensure the training speed and scale of computer information talents, as well as the foresight and prediction of market demand, can meet the various abilities required by the society and
industry for talents. However, at present, the training of computer professionals in most universities is out of line with the needs of the society and the applicability of professional posts. Therefore, the teaching quality of computer major still has a lot of room for improvement.

In addition, as the current frontier industry of science and technology, the computer industry is not only an important strategic industry, but also a strategic resource. Sufficient and necessary talent supply is the basis for the sustainable and rapid development of the computer industry. The quantity and quality of computer talents directly affect the scale and level of information industry and its future development level. Therefore, universities should be based on the needs of society and industry, the needs of industrial progress and scientific and technological innovation, actively cultivate pioneering and creative computer talents, clarify their own personnel training objectives and positioning, and strengthen and accelerate the training of high-level technology application-oriented computer talents. Only in this way can the teaching objectives be effectively achieved and realized.

In a word, the goal and orientation of university personnel training is the key to talent cultivation, which determines the ability and development of students in several aspects as shown in Figure 2 below. The personnel training mechanism of colleges and universities has obvious regional and industrial characteristics, which is the starting point and end point of personnel training, and it should also be the inevitable choice for them to perform the function of personnel training. The orientation of talent training goal involves the whole process of talent training such as enrollment, training and employment, which reflects whether the existing conditions of university can support the realization of its goal[2]. Therefore, colleges and universities need to further combine the needs of social and economic development, accurately cut into the social foothold and clear the characteristic direction of talent training. In this process, universities should also follow the development law of higher education and fully combine their own resource conditions to realize the maximum realization of teaching objectives. Therefore, it is of great practical value to study computer teaching in universities from the perspective of talent training goal positioning.

2. The basis of the orientation of university personnel training goal

2.1. The basis of the orientation of university personnel training goal
The theoretical basis for the orientation of talent training objectives in universities mainly includes three levels: philosophy, pedagogy and psychology, as shown in Table 1 below. In terms of philosophical basis, it is mainly based on the theory of all-round development of human beings, that is, the theory of all-round development of human beings is closely related to the orientation of personnel training objectives [3]. The former lays the foundation for the latter, and the latter is an important guarantee for the development and Realization of the former. Secondly, on the basis of pedagogy, it is mainly based on the theory of talent classification and education classification. When the university carries on the personnel training goal localization, should be based on the talented person classification theory, formulates the talented person training goal which conforms to the school classification.

Table 1. The theoretical basis for the orientation of talent training objectives.

| Theoretical basis | Features | Functions |
|-------------------|----------|-----------|
| Philosophy        | Man's all round development | The guiding ideology basis of educational teleology |
| Pedagogy          | Talent classification and educational classification | Directly determines the differentiation of education types |
| Psychology        | Theory of Multiple Intelligences | The important psychological basis of educational reform |

In addition, in terms of psychological basis, it is mainly developed based on the theory of multiple intelligences. The relationship between the theory of multiple intelligences and the orientation of personnel training objectives is that the former lays an important psychological foundation for the latter, and the latter is an important means for the former to realize students' individualization and diversified development.

2.2. The realistic basis for the orientation of university personnel training goal
First of all, in the level of the objective needs of social and economic development, the society puts forward higher requirements for computer talents in several aspects as shown in Figure 3 below. These talents are required to have a deeper technical foundation, not only in the theoretical level, but also in the practical level to improve the social demand adaptability of talents. Secondly, in the level of students' individual development needs, students should not only improve their professional skills through the University platform, but also comprehensively improve their application ability, key ability and personality, so as to realize their comprehensive quality.

In addition, students should also realize the comprehensive development of innovation ability, spirit, morality and aesthetic taste [4]. Therefore, in the process of personnel training, universities must fully consider the individual needs of students and the changing rules of students' cognition, emotion and needs, so as to carry out targeted training target positioning and development.

Figure 3. Society higher requirements for computer talents.
3. Analysis and Research on the ability demand of computer industry for talents

3.1. The current situation and problems of computer professional training mode in university
First of all, the current university curriculum is lagging behind, the curriculum system and teaching content are out of date, and there is a big gap between the applicability, practicality, innovation of teaching and the needs of computer enterprises. Secondly, many universities have weak teachers, lack of guidance ability in vocational practice, unclear professional orientation and training objectives, unreasonable curriculum system and knowledge structure. In addition, the weak comprehensive practice links make the students' theoretical ability and practical ability seriously unbalanced, lack of school running characteristics, the personnel training mode is too fixed, and the practical ability is insufficient, and the practice training base is lack. These phenomena and problems cause the realization of its talent training goal to be greatly restricted.

3.2. Analysis and research on the ability demand of computer industry for talents
First of all, on the level of determining the professional ability needs of the industry for talents, it determines the professional ability index of the industry for computer talents based on the form of interview survey [5]. Secondly, through the summary of the interview results, it is found that the industry attaches great importance to the team cooperation ability of computer talents, followed by practical operation ability, professional ethics and physical and mental quality. In addition, through the summary of the comprehensive needs of talents' professional ability, it can be found that the industry focuses on professional theoretical knowledge, practical operation ability, adaptability and application ability. On the other hand, on the demand level of talent's method ability, its concern focuses on learning ability, innovation ability and problem-solving ability. Finally, on the social ability demand level of talents, the needs of the industry focus on professional ethics, sense of responsibility, team cooperation ability, language expression ability and physical and mental quality.

The ability demand of computer industry for talents are as shown in table 2 below.

| Aspects                  | Quality required                               |
|-------------------------|-----------------------------------------------|
| Professional ability    | Professional theoretical knowledge             |
| requirements            | Practical operation ability                    |
|                         | Adaptability                                  |
|                         | Application ability                            |
|                         | Learning ability                               |
| Method capability       | Innovation ability                             |
| requirements            | Problem solving ability                        |
|                         | Professional ethics                            |
|                         | responsibility                                |
| Social capability       | Teamwork ability                               |
| requirements            | Language expression ability                    |
|                         | Physical and mental quality                   |

3.3. The causes of the problems in the training of computer professionals
First of all, students have insufficient understanding of the importance and closeness of related disciplines knowledge, and teaching is divorced from the actual needs of enterprises, and the specialty and curriculum setting tend to be aging [6]. Secondly, the existing teaching mode is not suitable for the cultivation of application-oriented and innovative talents, especially the lack of the spirit of dedication to students, the sense of teamwork, the spirit of hard work, the integrity and moral norms, the ability of expression and communication, which leads to the low comprehensive quality of students. In addition, some university teachers have rich theoretical knowledge and experience, which are suitable
for theoretical teaching, but lack of practical experience and practical innovation and improvement of teaching methods, which is not conducive to the professional development of students.

4. Strategies for improving college computer teaching based on personnel training objectives and positioning

4.1. Target orientation of computer talents training in university
First of all, universities should determine their own talent training objectives based on their own teaching positioning, such as research-oriented, general education oriented, application-oriented and other different types of universities, the objectives and positioning of personnel training are different, so as to cultivate a diversified talent team. Secondly, at the level of target market selection, the training of computer talents in research universities should realize the internationalization and scientization of talents; the interdisciplinary universities should realize the innovation; the skilled universities should enhance the ability of skills application. In addition, at the level of their own positioning, research universities should be an important base for national high-level personnel training, and in terms of positioning objectives, they should cultivate general and compound talents, as well as applied and skilled talents.

4.2. Strategies for improving college computer teaching
First of all, universities should review the training objectives according to the social needs, actively open up new fields of students' diversified and comprehensive quality, and pay attention to the cultivation of students' social ability and method ability. Secondly, universities should integrate the curriculum system, optimize the curriculum structure, clarify the specialty orientation and personnel training characteristics, and make full use of network resources to carry out non teaching training. In addition, it is necessary to further strengthen the guidance of computer training, blend theory with practice, strengthen the management of computer room, and ensure the training teaching. Finally, the goal of university computer talent training is to improve the teaching quality, constantly improve the teaching level, and promote students to better match the needs of the social industry.

5. Conclusion
In summary, the goal orientation of university computer talents training involves the whole process of recruiting, training and employment, which reflects whether the existing conditions of university can support the realization of the goal. Therefore, colleges and universities need to further combine the needs of social and economic development in the goal orientation of personnel training. This paper analyzes the theoretical and practical basis of the positioning of university talent training objectives through the research on the basis of the positioning of university personnel training objectives. Through the analysis of the demand for talents in the computer industry, it studies the current problems and current situation of university personnel training, as well as the actual needs of the industry. Finally, through the research on the promotion strategy of university computer teaching Based on the talent training goal and positioning, the paper gives the promotion suggestions from the two aspects of talent training goal positioning and teaching promotion.

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