

A Discussion on the Development Status and Predicament of Intellectual Property Higher Education in China

-- Taking the Intellectual Property Management Major in Higher Vocational Colleges as an Example

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Abstract: Remarkable achievements have been made in the training of intellectual property talents in Chinese colleges and universities, but the development of intellectual property education at higher vocational level is not optimistic. The reason is that the intellectual property management major in higher vocational colleges is deeply influenced by the undergraduate intellectual property major, which is divorced from the orientation of skill training, leading to many difficulties such as the fuzzy orientation of talent training, theoretical curriculum content, and difficulties in skill teaching. The intellectual property education in higher vocational colleges should return to the essence of vocational education, focus on the training of applied skills, strengthen the teachers' practical teaching ability, enrich the practical training teaching means, and finally solve the problem of the homoplasy of the between vocational and undergraduate intellectual property education.

Keywords: Intellectual Property; Higher Vocational Education; Talent Cultivation.

1. Introduction

On June 5, 2008, The State Council of China issued the Outline of the National Intellectual Property Strategy. The Outline pointed out that "the work on intellectual property should be strengthened. it should prompt large-scale cultivation of intellectual property professionals at all levels and of all types, and focus on the cultivation of intellectual property management and intermediary service talents urgently needed by enterprises." The Outline marks the beginning of China's intellectual property talent training from passive to active. Since then, on the basis of drawing on the experience of Western developed countries, and taking into account the particularity of talent demand of China's intellectual property industry, China's intellectual property higher education has formed a multi-level talent training mechanism, including higher vocational education, bachelor's degree, second bachelor's degree, double degree and double major, master's degree and doctor's degree [1]. At present, more than 90 colleges and universities offer undergraduate programs in intellectual property majors. The scale of IP education is constantly expanding, and the supply of IP talent is constantly increasing.

In 2022, the State Intellectual Property Office of China issued the 14th Five-Year Plan for Intellectual Property Talents, which states that "emphasis should be placed on cultivating the practical intellectual property talents". Higher vocational education is the specialized education for cultivating skilled talents needed for production, management and service. Thus, developing intellectual property education at the level of higher vocational colleges is an effective way to cultivate and provide practical and skilled intellectual property talents. However, the development of intellectual property education in higher vocational colleges is rather slow and tortuous. Since Zhejiang Industry and Trade Vocational College first set up intellectual property management major in higher vocational education level in 2014, only nine

colleges in China still maintain student enrollment until 2023, which shows that the number and development scale of majors is far lower than the undergraduate major of intellectual property.

In addition, the current research on intellectual property higher education mainly focuses on undergraduate and postgraduate levels, few scholars have sorted out and analyzed the special issues of intellectual property talent training in higher vocational colleges. What is the dilemma of the intellectual property management major in higher vocational colleges, what mode should be adopted for its talent training, and how to make it an important way to the supply of intellectual property practical talents are the unresolved problems in China's intellectual property higher education at present. In the following, the article analyzes the development status, existing problems, causes and countermeasures of intellectual property management major in higher vocational colleges, so as to provide a reference for the practice of training intellectual property talents in higher vocational education in China.

2. Current Situation of Intellectual Property Talent Training in Higher Vocational Colleges in China

At present, nine vocational colleges in China offer intellectual property management major, the first of which was established by Zhejiang Industry and Trade Vocational College in 2014. However, the history of the major of the remaining eight vocational colleges is relatively short, only four years. From the point of view of the school scale, the number of students of the major is not large, the average number of students in each school is around 200. In terms of major orientation, the major of intellectual property management in higher vocational colleges is deeply influenced by the philosophy of undergraduate intellectual property education. It is believed that the talent training

should focus on the "compound" attribute of intellectual property discipline, reflect the characteristics of vocational education by training applied skills, and take "practical work" and "auxiliary work" of intellectual property as the main employment direction of students.

However, universities often set up independent intellectual property schools to carry out major construction, which helps the intellectual property major to maintain independence in financial support, talent training, school-enterprise cooperation and other work. On the contrary, higher vocational colleges seldom set up intellectual property schools, and the intellectual property management major is mainly attached to the school of Management or the department of Law. As a newly established major, this pattern of dependence will not be conducive to the initial development of the major and the independence and autonomy of talent training, and may even have conflicts of interest with other majors in the same college. In addition, the establishment of some intellectual property management majors is the result of local policies, rather than vocational colleges' own intentions. Without a sufficient demonstration of the feasibility of establishing the major, if the higher vocational colleges themselves are not interested in intellectual property education, there will be the possibility that the major will be left in a state of laissez-faire [2]. At present, some higher vocational colleges have reduced enrollment or even suspended the intellectual property management major, which to some extent reflects the difficulties of intellectual property education in higher vocational colleges.

3. The Dilemma of Intellectual Property Talent Training in Chinese Higher Vocational Colleges

3.1. The Orientation of Talent Training Lacks Operability, and the Characteristics of Vocational Education are Difficult to Reflect

The disciplines of intellectual property have a large span and strong cross-integration, involving the knowledge reserves of several majors such as law, management, science and technology. Therefore, the mainstream view of higher education of intellectual property emphasizes that the talent cultivation must have the characteristics of "compound" [3]. In addition, intellectual property work is highly practical, such as intellectual property enterprise management, legal proceedings, agency affairs and other work requires practitioners to be skilled in dealing with a variety of practical issues, so training skilled intellectual property talents has become another main direction of intellectual property education in colleges and universities.

As a result, the cultivation orientation of intellectual property management major in higher vocational colleges continues the thought of undergraduate intellectual property major. It bases its theoretical basis on the comprehensiveness and intersections of intellectual property, emphasizes the ability of both "compound" and "applied", and is committed to cultivating talents who understand law, management, science and technology. Admittedly, the compound and applied quality of intellectual property talents is a direction worthy of encouragement. Such orientation has no objection to undergraduate or postgraduate education, but it is not

reasonable to insist on this idea at the higher vocational level. On the one hand, this one-sided pursuit of an "all-rounder" talent training goal is difficult to achieve in the vocational education of only three years; On the other hand, this positioning will make the issue of homoplasy between higher education and undergraduate IP education.

3.2. The Content of the Course is Partial to Legal Theory, and the Training of Application Skills may be Difficult to Achieve

The unique characteristics of "compound" and "application" of intellectual property make curriculum setting a difficult point. In the case of limited total credits, the combination of intellectual property and other fields such as law, science and engineering, and management will inevitably occupy the credits of core courses, which even makes the knowledge structure of the major scattered [4]. However, for a long time, the Ministry of Education of China has not issued standards for the intellectual property management major of higher vocational colleges for reference, which makes many higher vocational colleges refer to the practice of undergraduate intellectual property major in curriculum setting. However, the undergraduate intellectual property major belongs to the first-level discipline of law, which is deeply influenced by traditional legal education. In the core curriculum setting, it lays particular stress on the theory of intellectual property law, while practical courses take a low proportion. Obviously, the practice of setting courses based on undergraduate intellectual property major is not worth imitating, otherwise it will make higher vocational intellectual property management major and undergraduate intellectual property major constantly converge in talent training, and it will be difficult to realize the characteristics of vocational education emphasizing the cultivation of practical operational skills.

However, it is not easy for higher vocational intellectual property management majors to implement the training of composite and applied talents into the curriculum. On the one hand, limited by the three-year length of schooling and the total credits, the class hours of management, science and engineering, practical training and other courses are very limited. For this reason, some higher vocational colleges only set up a small number of management, science and technology courses as formalism, which becomes the major's "embellishment" courses, and it is of little significance. On the other hand, even if the courses such as mechanical Foundation, enterprise management, information retrieval and analysis are offered, the teachers are often not from the intellectual property major, and their teaching content rarely combines with the intellectual property knowledge background, which is far from the requirements of real work, but wastes the scarce credits. In addition, due to the small enrollment of majors, if students choose elective courses based on their personal interests, they will not be able to open courses due to the shortage of students, resulting in personalized curriculum settings that cannot be realized.

3.3. The Background of the Teacher is Mainly Law Major, so It is Difficult to be Competent for Practical Courses

Many teachers engaged in intellectual property research and teaching are law majors. This phenomenon is mainly due

to the fact that the undergraduate intellectual property major is a law discipline in China. Under the situation that the number of intellectual property teachers is still insufficient, it is a feasible choice for law teachers to participate in the construction of intellectual property major. However, such a mode of introducing teachers will not be conducive to higher vocational colleges, and it will inevitably have an impact on their practical teaching.

On the one hand, due to the differences in salary, scientific research conditions and educational direction, highly educated law or intellectual property talents will not take higher vocational colleges as the priority choice for employment, which will inevitably cause difficulties for the introduction of talents majoring in intellectual property management in higher vocational colleges. On the other hand, the existing teaching staff of intellectual property management major in higher vocational colleges are usually master's graduates of theoretical research, and they generally lack working experience in intellectual property practical departments. Few teachers have interdisciplinary backgrounds, especially those who are familiar with intellectual property law and are also proficient in economics or science. This is not only reflected in the background of teachers, but also the intellectual property textbooks written by these teachers are mostly theoretical, resulting in few textbooks applicable to intellectual property skill teaching in higher vocational colleges.

Due to the limitations of teachers' backgrounds and textbook content, graduates reported that the practical skills they learned in college, such as intellectual property application, patent retrieval analysis and patent writing, were out of line with the actual work. In order to solve such problems, some higher vocational colleges have adopted the model of part-time teachers, but most of the part-time teachers mainly provide a small number of lectures, and it is difficult for them to take charge of the whole course teaching for a semester. The reasons are not only due to the busy work of part-time staff but also due to the obstacles brought by the regulations of colleges and universities, such as low salaries and fixed teaching time. The result of the part-time teacher model is difficult to be satisfactory [5].

3.4. Students are Unable to Obtain Vocational Certificates and Have difficulty in Employment

The most valuable professional certificates in the intellectual property industry are patent agent qualification certificate and legal professional qualification certificate. According to the current application conditions of patent agent qualification certificate, candidates must have a science and engineering professional college degree or above. Applicants for the legal professional qualification certificate should have a bachelor's degree in law or above. However, intellectual property management major is a liberal arts major that belongs to the public administration and service category of higher vocational education, which directly makes intellectual property management graduates lose the opportunity to participate in the patent agent qualification certificate examination and legal professional qualification certificate examination. To make up for this shortage, some higher vocational colleges have begun to encourage students to take science and engineering degrees or law degrees by self-study examination, but due to the cost and time, this has not become the choice of most students. On the contrary,

according to the author's research, more than half of the fresh graduates prefer to upgrade from vocational college to law school, so as to obtain the opportunity to apply for the legal professional qualification certificate and engage in legal work in the future.

For the rest of the graduates majoring in intellectual property management who choose employment, they mainly engage in intellectual property consulting, trademark application agent, copyright registration agent and other basic simple work. However, they are not competent for trademark and copyright litigation, trademark objection and invalid procedure handling, intellectual property transaction and other works with large talent gaps, let alone patent work that need scientific and engineering knowledge. The root cause is that the current intellectual property industry has high requirements for practitioners' practical skills. In a large number of social recruitments, employers prefer undergraduate talents with legal professional qualifications, patent agent qualifications or science and engineering background, which forms a natural employment barrier for vocational college graduates [6]. Therefore, if vocational colleges fail to implement the objectives of application-oriented cultivation, it will be difficult for vocational college graduates to compete with undergraduate or science and engineering graduates in the job market, and eventually form an awkward situation of "great demand but difficult employment".

4. Reform of Intellectual Property Talent Training Mode in Chinese Higher Vocational Colleges

4.1. The Major should Return to the Orientation of Vocational Education and Strengthen the Training of Vocational Skills

First of all, there is an essential difference between higher vocational education and undergraduate education. The former focuses on the cultivation of applied skills, while the latter focuses on the study of subject theories. Thus, the major of intellectual property management in higher vocational colleges emphasizes the skill learning of IP application, protection, management, trading and other practical work, rather than the in-depth theoretical study of intellectual property discipline. Therefore, it is not realistic for higher vocational colleges to cultivate "compound" or "versatile" intellectual property talents. On the contrary, as a specialized education for training skilled talents, intellectual property management major should return to vocational orientation and be positioned to cultivate intellectual property practical talents who master a certain skill, so as to highlight the characteristics and pertinence of talent training, and finally distinguish higher vocational and undergraduate intellectual property education.

In September 2022, the Ministry of Education of China issued a new version of the Introduction of Vocational Education Majors, which for the first time introduced the training orientation, skill requirements and curriculum of the intellectual property management major. The document stresses that the intellectual property management major should cultivate high-quality skilled talents who can engage in all kinds of practical work, and it does not mention the requirement to cultivate "compound" talents. In addition, in

terms of skill teaching, the document puts forward teaching requirements for intellectual property protection skills, agency skills, management skills, document writing skills and other aspects. Therefore, it can be seen that strengthening application skills training is the proper way to higher vocational intellectual property education. In terms of the specific implementation, each higher vocational college can, according to its own advantages, adapt to local conditions, match the market demand, and form a training mode of intellectual property skills with its characteristics and emphasis.

4.2. The Major should Improve the Proportion of Practical Courses and Encourage Teachers to Practice in Enterprises

The Introduction of Vocational Education Majors also sets up eight core courses centering on intellectual property management practice, patent, trademark and copyright practice, IP standard implementation practice, IP document writing, etc., and puts forward practical training requirements centering on intellectual property management consultation, intellectual property protection practice, patent information retrieval and analysis, etc. The number of skill courses is more than half, and there are no science and engineering courses. It can be seen that vocational intellectual property education should take skill courses as the focus.

As to whether science and technology courses should be included in the elective courses, according to the Opinions on Accelerating the High-quality Development of Intellectual Property Service Industry issued by the State Intellectual Property Office of China in March 2023, it states that "Graduates majoring in intellectual property who have obtained certain credits of science and engineering courses are allowed to participate in the patent agent qualification examination". Therefore, in view of meeting the requirements of applying for patent agent qualification, the major can set up a certain number of science and engineering courses, but it should not set too many hours and credits, and should mainly focus on engineering drawing, light industrial product design, CAD software operation and other courses that are conducive to employment.

In addition, since it is difficult to solve the problem of compiling textbooks and introducing teachers in a short time, it is more practical to strengthen the training of "double-qualified" teachers. Vocational colleges should require full-time teachers majoring in intellectual property management to master practical skills by working full-time in practical departments in the form of enterprise practice during the winter and summer holidays, so as to be competent in the teaching of intellectual property skills courses. At the same time, for part-time teachers, the colleges should require them to be fully responsible for the teaching work of one semester or one course so that the part-time teacher mode can achieve practical results.

4.3. The Major should Enrich Teaching Methods, and Practical Courses can Simulate Real IP Work

In practical teaching, the simulation teaching model can be adopted, so that students can get real experience of intellectual property practice before the internship and employment.

First, simulating intellectual property application. Through

the special funds provided by the college, encouraging students to apply for patent, trademark registration and copyright registration of their course learning results, so as to transform practical training from simulation to reality. Second, simulating the handling of intellectual property disputes. In addition to simulating general intellectual property litigation, practical training should be focused on administrative handling procedures such as patent invalidation, trademark objection and trademark invalidation to improve students' experience in handling intellectual property cases. Third, innovate the mode of graduation thesis. The form of a graduation thesis can be expanded from the traditional thesis to the patent application document writing, patent information retrieval analysis report, enterprise intellectual property management analysis report, case agency report, etc. In this way, students' practical ability will be cultivated throughout the school learning.

5. Conclusion

Remarkable achievements have been made in the training of intellectual property talents in China's higher education. However, the intellectual property management major in higher vocational colleges has not been paid attention to for a long time and faces many practical difficulties in its construction. The major of intellectual property management in higher vocational education should clarify the necessary state and particularity of vocational education talent training, reconstruct the mode of teaching with a more practical vision, and insist on practical skills training as a foothold in the orientation of cultivation, so as to provide practical talents for the development of intellectual property in China.

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