A SURVEY OF PATENT STUDIES IN CHINA'S COLLEGES AND UNIVERSITIES

by
Zhang You Shui
Scientific and Technological Department
State Education Commission
Beijing, China

Chinese colleges and universities have great potential for scientific research and form an important force in the development of science. They undertake not only the task of training senior professionals but also the task of promoting science, technology and culture. Under the policy of education serving as a tool for socialist construction and scientific research catering to economic development, they have increasingly trained various kinds of talented people, provided many scientific achievements meeting various needs, and given a strong fillip to the construction of the four modernizations. In recent years, with the progress of the economic reform the Patent Law along with other decrees and regulations on the protection of intellectual property, have been promulgated which further mobilize the enthusiasm of most of the teachers and researchers. Thus scientific research in colleges and universities, including patent research work, is developing vigorously.

COLLEGES AND UNIVERSITIES ARE AN IMPORTANT FORCE OF SCIENTIFIC RESEARCH

There are, at present, 1061 colleges and universities across the country, nearly 700,000 researchers among whom over 500,000, about 76%, are scientists and engineers. About half of the senior researchers are in colleges and universities. In 1986, there were 200,000 people engaged in research and development in schools, making up 29% of the total researchers. There are many differences in the research work of various types of schools. Most of research and development is centered in schools which largely train post-graduate students. About 50 schools shoulder about 60% of the entire research work around the country.

Colleges and universities are very active in the vast field of scientific research, undertaking a large part of the research work. According to the general survey of science and technology made in 1985, 55% of the basic research, 56% of the applied research and 14% of the development projects are finished in colleges and universities. Colleges and universities thus occupy a decisive position in the scientific research field.

Singificant achievements have been achieved by colleges and universities in recent years. Statistically, in the period of the sixth five-year plan (1981-1985), colleges and universities were awarded 56 national natural science prizes, making up respectively 45%, 24.8% and 19% of the total prizes over the entire country. In 1986, 6812 scientific and technological achievements from schools were appraised, among which 912 achievements arrived at international levels; 3957 science works were published, accounting for 1230 million words; 80069 scientific prizes were won by schools, making up 42% of the total prizes.

A BRIEF ACCOUNT OF PATENT WORK IN COLLEGES AND UNIVERSITIES

The fact that China did not have its own patent system or other laws and regulations on the protection of intellectual property in the past affected the enthusiasm of scientific researchers and to some extent hindered the transfer of science and technology into productivity or other applications. In 1984, the Patent Law was passed, followed by other laws and regulations. These were well received throughout the country. Colleges and universities greatly supported these laws and regulations, actively bringing them into execution. The three years since the enactment of the Patent Law show that the patent system has met the needs of the reforms of economic system, the scientific and educational system, and has stimulated the development of these systems.

Since the promulagation of the Patent Law, colleges and universities have done much for patent applications. By July 1987, patents applied for by schools amounted to 3402, 9.6% of the total patents applied for across the country. 594 patents from schools have been approved, making up 10.3% of the total approved patents. Most of the patents from schools are inventions, forming a large percentage of the total inventions. For instance, among the first patent centificates, 44.4% of the total were conferred to schools.

In the last few years, the State Education Commission (SEC) and colleges and universities have done a lot for the implementation of the Patent Law.

1) Training patent cadres: The State Education Commission (SEC) has held nine classes on patent management, application, documentation and licensing, trained over three hundred patent managers, agents and lawyers, and sent a number of scholars abroad to learn patent management, application procedure and intellectual property education. They now form the basic team to do patent work in colleges and universities, and have laid a solid foundation for further improvement in patent education.

2) Disseminating and publicizing knowledge of patent law. Due to the fact that patent law is a new concept to most people, it is necessary to disseminate and publicize knowledge of patent law. In order to carry out Patent Law, the State Education Commission (SEC) made a lot of preparations in 1982 before the law's promulgation, by holding patent lectures for the teachers to give courses back in schools. After the law was enacted, the commission also stressed the dissemination through various ways such as special lectures, general courses and so on, so that most of the teachers, researchers and students might understand the Patent Law.

3) Setting up patent institutions in order to achieve efficiency in patent work: The State Education Commission (SEC) has set up institutions, engaged in patent management and patent service, in colleges and universities. The Science and Technology Management Centre of the State Education Commission (SEC) has established a Patent Achievements Office, in charge of the daily routine work of patent management. Many schools which do heavy scientific research, have set up patent offices, doing patent application and some service work, and which are also open to the public. Several schools, under their scientific research offices have also established "patent management departments" or "patent achievements departments" in charge of the schools' patent management.

4) Organizing the application and execution of patents: The State Education Commission (SEC), has held a special training program for Patent Agents from colleges and universities, in order to improve the patent application work. Since the Patent Law was issued, the government has reiterated many times that patent applications are for the purpose of execution. Many patents from colleges and universities have now been put into use. According to statistics from Qing Hua University, the utilization rate of their patents has reached nearly 30%.

5) Initiating studies on intellectual property: Some schools paid great attention to the study of intellectual property so as to develop the science of intellectual property management and to help do patent work. Some schools have even established special institutions. For example, Peking University called together many departments, organized many professionals and set up an Intellectual Property Research Office. In addition, a University Intellectual Property Council was set up under the sponsorship of a number of colleges and universities. This Council has assembled a large group of specialists and managers, to carry out in-depth studies on various aspects of intellectual property.

6) Making investigations and analyses: In accordance with related laws and regulations, some detailed patent management rules have been implemented in some colleges and universities.

It has been a short time since the Patent Law was put into effect, and since colleges and universities began their patent research, but these institutions, utilizing their comparatively strong force of researchers, have made a good start, under the guidance of the China Patent Office and other government offices. The foundation has been set up.

SOME MEASURES TO IMPROVE PATENT WORK IN COLLEGES AND UNIVERSITIES

With the introduction of reforms on economic, scientific and educational systems, scientific research in colleges and universities will surely improve, resulting in increased patent filings. In addition, colleges and universities will train professionals and serve society. It can be, therefore, predicted that the patent research work load of colleges and universities will be getting heavier and heavier as years pass by.

Promoting cooperation between different organizations, especially between schools and industry, will be an important trend of scientific development. The protection of each party's rights and interests will also be significant. In the past, there was no precise legal basis for settling disputes among parties. Since Patent Law and other related regulations were passed, there has been considerable improvement in solving disputes. Such disputes are still quite common, however, and further study may be required on mechanisms for dispute resolution.

A guiding principal, in China's economy is ownership by the whole people. Colleges and Universities are mainly owned by the state or regional governments. The current reform permits scientific and technical personnel in state-owned units to have their own part-time jobs after finishing their required work. Among their inventions, there are not only those developed during regular working hours, but also those done in their spare time.

China is still young in the patent field. The quantity and quality of the research force is still far from satisfying the need of patent development. With the above situation and problems in mind, colleges and universities should take up the following measures in addition to their daily patent work:

Strengthen education of personnel in intellectual property

As data from some foreign countries show, the effective implementation of patent law needs a large amount of patent professionals. In China, the Patent Law and Trademarks Law have been put into effect, while a Copyright Law is under consideration. Execution of these laws will certainly need a larger professional workforce. Therefore, to train qualified personnel in a planned way is an urgent priority. To achieve this will need great effort. Colleges and universities should send out qualified graduates in intellectual property to meet the needs of scientific and technological development. This kind of training work is new to schools. Colleges and universities should also introduce foreign expertise and practices in combination with their own practices of patent system, in order to set up a personnel training system with Chinese features. Currently, the State Education Commission (SEC) is planning to establish the Beijing Training Centre on Intellectual Property, which will be sponsored collectively by China People's University, Peking University and Qing Hua University, and which will gradually become a base for training related personnel for the country.

Strengthen studies in intellectual property

It is clear that further study of intellectual property and the practical problems arising from the execution of patent and other laws is necessary. Such study should be undertaken not only by research teams, but also by experienced workers, to combine theoretical studies with practice. Some schools have established special institutions for intellectual property studies. These institutions undertake studies in addition to their regular work. The University Intellectual Property Council will also invite many theorists and workers to undertake studies in intellectual property.

Strengthen both domestic and foreign cooperations and exchanges

Personnel training and intellectual property studies need domestic and foreign cooperation and exchange. Because China started late in this field, and lacks experience, it is most important to vigorously pursue foreign cooperation and exchange. China will follow the basic policies of reform, openness and invigoration on the premise of sticking to the four cardinal principles. The State Education Commission will enthusiastically promote earnest cooperation and exchange in intellectual property between the Chinese colleges and universities, and those of other countries, to learn what is good and beneficial. At the same time, it will also call on colleges and universities to fully cooperate with domestic institutions, to support each other and to facilitate countinuous academic and experience exchange.