

Intellectual Property Management in Universities for Building a China ASEAN Education Community

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Abstract: The cooperation between China and ASEAN (the Association of Southeast Asian Nations) countries in education is constantly deepening, and the management of intellectual property rights has become an important component of university teaching and research work. This article used qualitative and quantitative research methods to collect data through in-depth interviews, questionnaire surveys, and other methods. Based on case studies, it explored the problems and opportunities currently faced by Chinese and ASEAN universities in intellectual property management. On this basis, an in-depth exploration was conducted on the common issues in intellectual property management among universities in various countries, and corresponding governance strategies were adopted for different situations in each country. In terms of satisfaction rating, Philippine universities ranked first with a highest score of 9.5, complemented by their extremely short resolution time, demonstrating high recognition in dispute resolution. It is hoped that through this research, the theoretical basis for building a more just and efficient intellectual property protection system can be provided, promoting exchanges and cooperation between China and ASEAN countries in higher education.

Keywords: China ASEAN Education Community, Intellectual Property Management in Universities, Satisfaction Rating, Technological Innovation

1. Introduction

Against the backdrop of deepening globalization, educational cooperation has become an important way to enhance understanding and technological exchange among countries. Among them, the cooperation between China and ASEAN countries in the field of education has become an important driving force for promoting regional economic and social development. However, in this process, the management of intellectual property rights in universities has encountered many difficulties, such as issues of ownership and protection of intellectual property rights, legal conflicts in cross-border cooperation, and so on. The above issues not only affect the efficiency of collaboration between enterprises, but also pose a threat to the security of innovative achievements and the interests of all parties within the enterprise. In response to this situation, this article intends to compare research on intellectual property management from the perspective of education cooperation between China and ASEAN, in order to make useful explorations in this area of development. This study has important theoretical and practical significance for further deepening education cooperation in the China ASEAN region, ensuring efficient management and protection of intellectual property rights, promoting regional scientific and technological innovation, and promoting sustainable development of scientific and technological achievements.

Using qualitative and quantitative research methods, combined with on-site interviews and questionnaire surveys, a detailed analysis is conducted on the current practices and issues of implementing intellectual property management in universities in China and ASEAN countries. On this basis, an analysis is conducted on the intellectual property management of Chinese higher education institutions, and it is also analyzed. This article aims to provide an optional management model for the sharing of educational resources and the transfer of scientific and technological achievements between China and ASEAN regions.

The research approach of this article is as follows. Firstly, it elaborates on the problems encountered by China ASEAN in intellectual property protection and adopts some suggestions. Secondly, through case studies, the success and shortcomings of current business management are presented. Finally,

based on the research findings, targeted strategies and suggestions for the development of enterprises are provided. The research results of this article provide theoretical basis and technical support for educational cooperation between China and ASEAN countries, as well as how to better use and protect intellectual property rights.

2. Related Work

The education cooperation between China and ASEAN countries is of great significance for the protection of intellectual property rights and is also conducive to the rational circulation and application of knowledge and technology. He Jun constructed a university intellectual property management system from the perspective of innovation driven development strategy [1]. Li Hui explored the strategies and implementation paths for the construction of intellectual property management systems in vocational colleges [2]. Liu Xiuwen explored the overall framework and application implementation of intellectual property information services in universities using the Peking University Library as an example [3]. Ran Congjing explored the construction of a university intellectual property information service platform under the intellectual property ecosystem [4]. Chen Yihua took the School of Information Science, Xinhua College, Sun Yat sen University as an example to study the development and construction of intellectual property innovation in universities under the new situation [5]. However, existing research mostly focuses on the legal system or policies of a particular country, and rarely considers issues such as intellectual property governance practices and legal adaptation in cross-border educational cooperation environments, resulting in limited application and universality of the theory.

Intellectual property is an important link for academic exchange between China and ASEAN countries, as well as for promoting cooperation in education and scientific research in China. This requires universities to effectively manage intellectual property while respecting the spirit of originality. Wang Liping conducted research on the construction of a user centered university intellectual property information service system [6]. Stepanova A evaluated research university knowledge products from the perspective of innovative marketing and management [7]. Nizah M A M explored the university led commercialization technology of intellectual property using Malaysian universities as a case study [8]. Betancourt A A explored social innovation and university intellectual property [9]. Jian Y studied intellectual property management in construction enterprises [10]. However, existing research has adopted basic theoretical and practical suggestions for the intellectual property protection strategy of enterprises, while there is a lack of targeted theoretical guidance and operational analysis for the cross-border business strategy of enterprises. In addition, research on international cooperation and dispute resolution mechanisms for intellectual property protection is relatively weak and requires further exploration.

3. Methods

3.1 Data Collection and Preliminary Analysis

This article adopts a combination of survey questionnaires and semi-structured interviews to collect some basic information about intellectual property management in Chinese and ASEAN universities, and uses specific questions. The investigation covers issues such as intellectual property registration, use, and dispute resolution, and delves into the actual problems and successful cases faced by enterprises in the business process. On this basis, this article also combines existing academic databases and policy documents to study some common issues in this article.

The efficiency of intellectual property application processing is used to measure the average time from application to approval, which can be calculated using the following formula:

$$E = \frac{\sum_{i=1}^n (T_{ai} - T_{si})}{n} \quad (1)$$

Among them, E represents the average efficiency of application processing; T_{ai} is the approval time for the i -th intellectual property right; T_{si} is the submission time for the i -th intellectual property right; n is the total number of intellectual property applications processed.

3.2 Legal Framework and Policy Adaptability

This article starts from the commonalities and differences in the intellectual property systems of China and ASEAN countries, combined with China's different educational cooperation needs, and provides corresponding policy recommendations to solve the above problems. On this basis, by comparing the differences in intellectual property protection, remedies, and legal risks in the implementation process among different countries, a feasible cross-border business strategy is adopted.

The efficiency of resolving intellectual property disputes is used to measure the average time required to resolve intellectual property disputes:

$$D = \frac{\sum_{j=1}^m (T_{rj} - T_{cj})}{m} \quad (2)$$

Among them, D represents the average efficiency of dispute resolution; T_{rj} is the resolution time for the j th dispute; T_{cj} is the time when the dispute was initiated; m is the total number of disputed cases.

3.3 Construction and Optimization of Intellectual Property Management System

This article combines the actual situation in the China ASEAN region and adopts a reference, actionable intellectual property regulatory system, which includes establishing a multilingual database to record and track applications, approvals, uses, and rights related to intellectual property. On this basis, further work can be carried out in areas such as intellectual property education and talent cultivation.

The effectiveness index of intellectual property protection can be calculated by comparing the reduction of infringement events:

$$P = \left(1 - \frac{N_{\text{after}}}{N_{\text{before}}}\right) \times 100\% \quad (3)$$

Among them, P represents the percentage improvement in the effectiveness of intellectual property protection, and N_{before} and N_{after} respectively represent the number of infringement incidents before and after the implementation of the new strategy.

3.4 Prevention and Resolution of Intellectual Property Disputes in Cross-cultural Cooperation

This article intends to take China ASEAN as an example, based on international law and combined with legal research from different countries, to explore the common causes of intellectual property disputes in the Middle East Alliance, and establish effective dispute prevention and resolution mechanisms in accordance with international law and relevant national laws [11]. However, differences in legal systems, cultural backgrounds, and economic development levels among countries have led to the occurrence of intellectual property disputes in international trade. These disputes generally refer to the disputes between copyright, patent usage rights, and trademark rights, as well as some unclear contracts that arise in cooperation and improper enrichment phenomena that arise in cooperation.

The satisfaction rating for intellectual property cooperation is:

$$S = \frac{\sum_{k=1}^p w_k \times s_k}{\sum_{k=1}^p w_k} \quad (4)$$

Among them, S represents the average score of cooperation satisfaction; s_k is the satisfaction score of the k th participant; w_k is the corresponding weight (which may be weighted based on the degree of influence of the participants or other criteria); p is the total number of participants in the rating.

4. Results and Discussion

4.1 Experimental Setup

Experimental environment and parameter settings: Universities from China and ASEAN participate in the experiment and implement new intellectual property management strategies in scientific research cooperation projects. The experimental parameters cover the application, approval, dispute resolution,

cooperation satisfaction, and strategic adaptability of intellectual property, and are quantitatively evaluated through various methods such as questionnaires, interviews, and official data.

Experimental evaluation indicators: Application efficiency: it is evaluated by comparing the average processing time of intellectual property applications before and after the implementation of the new strategy. Legal Adaptability: assessing the adaptability of strategies in different legal environments is primarily measured by analyzing the number and types of legal challenges. Dispute resolution efficiency: it is evaluated by the average time required for dispute resolution and satisfaction after resolution. Collaboration satisfaction: the interpersonal effectiveness of management strategies is evaluated through regular surveys of the satisfaction of both partners. Effectiveness of intellectual property protection: the frequency of intellectual property infringement incidents and their handling results during the cooperation period are evaluated.

4.2 Results

(1) Basic data on intellectual property management in different universities

The basic data of intellectual property management in different universities is shown in Figure 1.

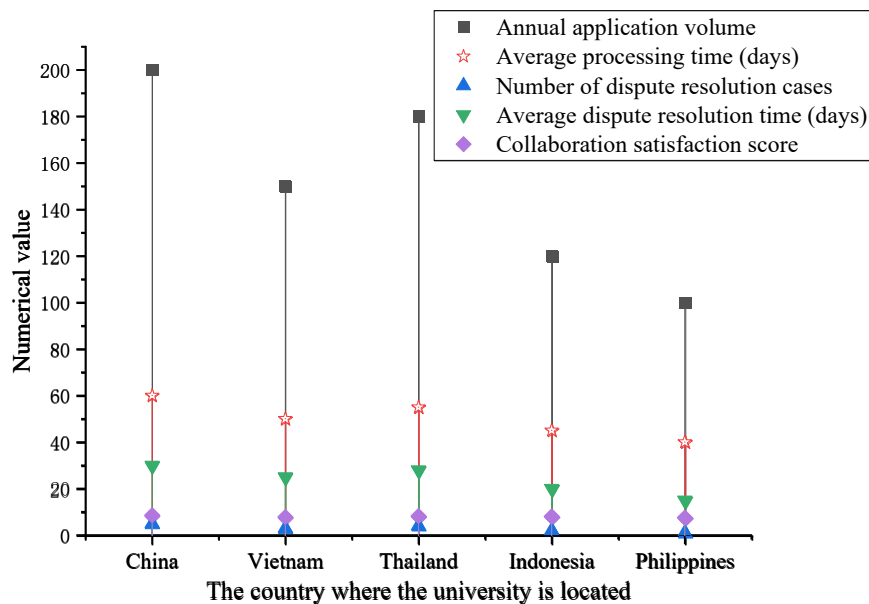


Figure 1: Basic data on intellectual property management in different universities

Chinese universities are the most active in terms of annual application numbers, reaching 200, demonstrating their strong strength in innovation and research and development. Thailand and Vietnam follow closely, with 180 and 150 applications respectively, while Indonesia and the Philippines have relatively low application volumes. Secondly, regarding the average processing time, there are differences in the efficiency of intellectual property application processing among universities in different countries. The average processing time in China is 60 days, which is longer than in Vietnam and Indonesia. This indicates that there is still room for improvement in the process optimization and efficiency improvement of China's intellectual property management system. In terms of dispute resolution, China has the highest number of cases, reaching 5, which may be related to its higher application volume.

(2) Comparison of application processing speed

The average processing time of Indonesian universities before the implementation of the strategy is relatively short, at 45 days, while after the implementation of the strategy, it is further shortened to 30 days, indicating the continuous optimization and progress of Indonesian universities in intellectual property management. The comparison results of application processing speed are shown in Figure 2.

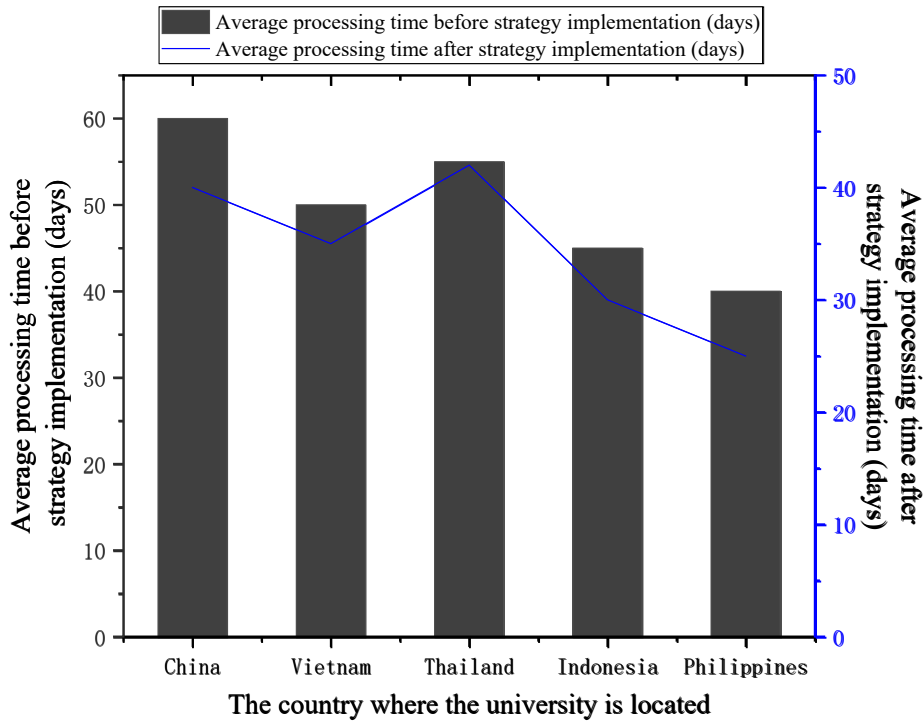


Figure 2: Comparison results of application processing speed

(3) Dispute resolution case study

The results of the dispute resolution case study are shown in Figure 3.

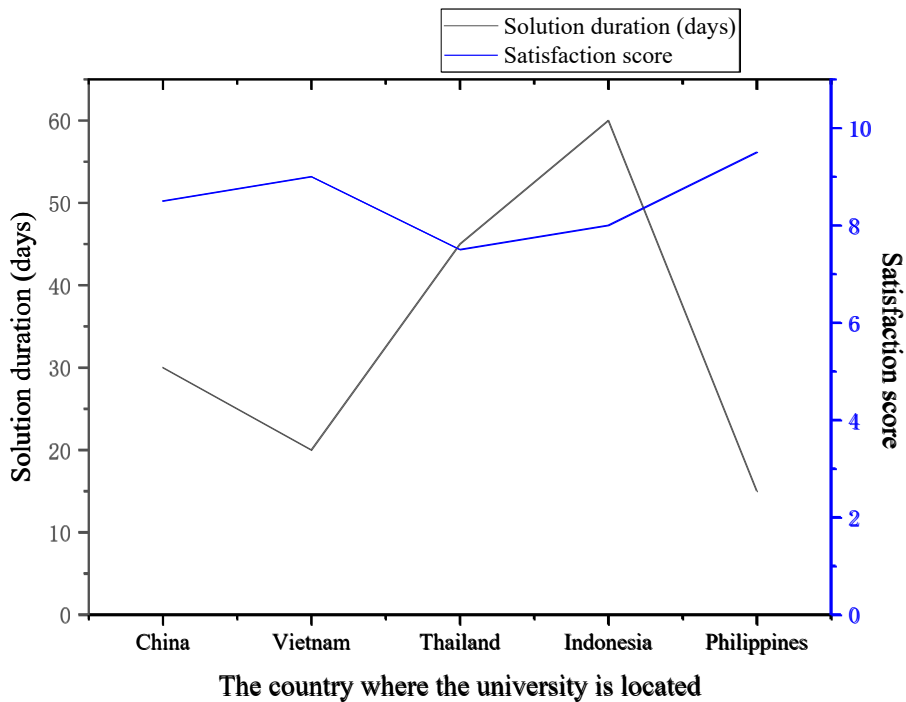


Figure 3: Dispute resolution case study results

Firstly, in terms of resolution time, there are significant differences in the resolution of intellectual property disputes among universities in different countries. Philippine universities rank first with the shortest processing time of 15 days, demonstrating extremely high processing efficiency. This may be due to its efficient dispute resolution mechanism and rapid response. In contrast, the resolution time for

Indonesian universities is 60 days, which appears longer and may require optimizing their dispute resolution process.

Secondly, in terms of satisfaction rating, Filipino universities rank first with a highest score of 9.5, complemented by their extremely short resolution time, demonstrating high recognition in dispute resolution. Vietnamese universities follow closely behind with a score of 9.0, performing exceptionally well. Although the resolution time for Chinese universities is relatively long, their satisfaction score is 8.5, indicating that their efforts in resolving disputes have been recognized. The satisfaction ratings of Thai and Indonesian universities are relatively low, with scores of 7.5 and 8.0 respectively, indicating that they need to further improve dispute resolution efficiency and increase user satisfaction.

The data analysis reveals the correlation between solution duration and satisfaction rating. Generally speaking, the shorter the resolution time, the higher the satisfaction score. Quick resolution of disputes can reduce the duration and uncertainty of disputes, and improve the satisfaction of parties involved. However, there are also exceptions, such as Chinese universities receiving high satisfaction ratings even when the resolution time is long, which may be related to the effective communication, detailed explanations, and compensation measures taken during the dispute resolution process.

In summary, by analyzing these data, the performance of universities in various countries in solving efficiency and satisfaction can be understood, and room for improvement can be identified. For universities, strengthening the construction and optimization of dispute resolution mechanisms, improving resolution efficiency and user satisfaction, is an important measure to protect intellectual property rights and promote scientific research innovation.

(4) Deep survey on cooperation satisfaction

The results of the in-depth survey on cooperation satisfaction are shown in Table 1.

Table 1: Results of in-depth survey on cooperation satisfaction

Serial number	Interviewed universities	Interview/questionnaire format	Satisfaction score	Improvement suggestions
1	A University in China	In depth interviews	8.5	Strengthen communication mechanisms
2	B University in Vietnam		9.0	Simplify processes and improve efficiency
3	C University in Thailand		7.8	Clarify the division of rights and responsibilities
4	D University in Indonesia	Questionnaire survey	8.2	Provide more training support
5	E University in the Philippines		8.8	Strengthen awareness of intellectual property protection
6	A University in China		8.0	No specific recommendations
7	B University in Vietnam		9.2	Introduce more successful case sharing
8	C University in Thailand		7.5	Simplify dispute resolution process
9	D University in Indonesia		8.7	Strengthen information sharing
10	E University in the Philippines	In depth interviews	9.5	Regularly evaluate the effectiveness of cooperation

In terms of satisfaction ratings, overall, the surveyed universities have a higher level of satisfaction with intellectual property management cooperation. B University in Vietnam and E University in the Philippines receive high scores of 9.0 and 9.5 respectively (in-depth interviews), indicating that these two universities have achieved significant results in intellectual property management cooperation. The satisfaction scores of A University in China and D University in Indonesia are also above 8, indicating that they have obtained a good experience in cooperation. The satisfaction score of C University in Thailand is slightly low and may require improvement in certain aspects.

(5) Long-term tracking evaluation

The long-term tracking evaluation data is shown in Table 2.

Table 2: Long term tracking evaluation data

Serial number	University name	Score for the effectiveness of intellectual property protection (1-10)	Strategy continuous adaptability score (1-10)
1	A University in China	8.5	9.0
2	B University in Vietnam	8.2	8.5
3	C University in Thailand	7.8	8.0
4	D University in Indonesia	8.0	8.8
5	E University in the Philippines	8.8	9.2
6	F University in Malaysia	8.3	8.7
7	G University in Singapore	9.0	9.5
8	H University in Myanmar	7.5	8.2
9	I University in Laos	7.7	8.3
10	J University in Cambodia	8.1	8.6

In the IP protection effectiveness score, G University of Singapore scores 9.0, while H University of Myanmar and I University of Laos score 7.5 and 7.7, respectively.

5. Conclusion

This article took China ASEAN as an example to analyze some of the problems that Chinese universities face in terms of intellectual property rights. On the basis of analyzing the current legal framework and policy adaptability, the countermeasures of China ASEAN University in terms of intellectual property protection were adopted. This article empirically tested the research results from four perspectives: patent application efficiency, legal adaptability, dispute resolution efficiency, and collaboration satisfaction. This article found that this strategy can significantly improve the efficiency of patent application processing and reduce delays caused by applicable laws. The average time for mediating disputes has been shortened, and the satisfaction of the parties to the dispute has also increased. However, this study has certain limitations. Firstly, due to constraints such as resources and

time, this article focuses on some universities and cannot fully reflect the current situation of universities in China and ASEAN countries. Secondly, research on legal adaptability relies more on existing legal materials and individual cases, which has certain limitations in addressing emerging legal issues. On this basis, this article does not conduct in-depth research on how corporate cultural differences affect the intellectual property management behavior of enterprises, thereby affecting the overall applicability of corporate strategy. The future research direction can be further expanded: the experimental scope can be expanded to more universities and wider regions to improve the universality and representativeness of the research. On this basis, in accordance with the changes in the international legal environment, the intellectual property protection strategy has been dynamically adjusted, making it flexible and forward-looking, providing strong support for education and scientific research in China ASEAN countries.

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